

**THE IMPACT OF CULTURAL LOCALIZATION ON
PLAYER EXPERIENCE IN VIDEO GAME**

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(Declaration)

I, Chloe Hew Kha Yee declare that this thesis report entitled “The Impact of Cultural Localization on Player Experience in Video Game” is my own original work except for the citation from the references. The report has not been accepted or submitted to any party and will only be submitted to Degree of Bachelor of Science (Honours) Game Design under the University Tunku Abdul Rahman.

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Date: 20 Dec 2025

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Abstract

This final year project focuses on the development of a culturally inspired digital game that integrates Malaysian cultural elements to enhance player immersion and engagement. The study explores the concept of cultural localization in game design, where traditional food, local environments, visual aesthetics, and cultural practices are incorporated into gameplay to create a more relatable and meaningful player experience.

The main objective of this research is to examine how cultural representation within games can influence player interest, emotional connection, and overall immersion. By embedding Malaysian cultural identity into the game design, the project aims to demonstrate the importance of authenticity and familiarity in interactive entertainment.

The development process includes game design, asset creation, and implementation of culturally relevant elements within the gameplay mechanics. Feedback and testing were conducted to evaluate player response and engagement levels. The results indicate that culturally localized content can significantly improve player enjoyment and strengthen the sense of immersion within the game world.

In conclusion, it can be noted that the cultural elements play an important role in game design and player immersion. This approach makes games more interesting for players from a particular country and increases their engagement.

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1.0 INTRODUCTION

1.1 BACKGROUND

Mamak Dreams is a 3D simulation game which includes customer support and small business growth in mamak food establishments within Malaysia. Simulation games are games that involve models of real-world activities or systems which enable players to experience real-world roles in a playful way.

Player played as Ali, he was fired by his job. He went back to his kampung then he starts his own Mamak stall business, his dream is to open a Mamak restaurant. Player in Mamak Dreams need to prepare and cook traditional dishes such as Mi Goreng, Teh Ais, and Roti Canai in a Mamak stall at kampung and serve them to the customers within the time limit based on their skills and the quality of the service provided.

In Mamak Dreams, players gain in-game money through the effective serving of customers, used for unlocking level 2 and level 3. This can motivate the player to serve more customers and increases their service speeds. This represents the growth and development of small food stalls into fully owned mamak restaurants. Deadline systems are ways of constructing simulation games to help keep players motivated and engaged over a long period.

The game has a day and night cycle is another feature that adds to the realism experience of the game. Changes in the environment over time assist in making the game more realistic by adding to the immersion of the player in the virtual environment.

1.2 AIM

The aim of this report is to analyze how cultural localization affects the player experience in video games. This study focus on the cultural elements like food, story, environment and others how to influence players' immersion, enjoyment in localized video games.

1.3 PROJECT SCOPE

1.3.1 GOAL & OBJECTIVES

This project aims to explore the impact of cultural localization on player experience by designing and developing a game called Mamak Dreams, themed around the Malaysian mamak culture. The project wants to show how using localized elements in game mechanics, visuals and environments can make players more engaged, immersed and happy.

To achieve this goal, this project will design and develop a 3D simulation game that shows Malaysian mamak culture through interactive food preparation and customer service. Cultural localization will be reflected in the cultural adaptation of mamak food, environment, and visual effects.

Also, the game will include the simulation system including cook system, customer management system, deadline system, day/night cycle system etc. to make the game fun and entertaining. This project will also investigate the player experience by analyzing the reactions the players have to the cultural localization aspects of the game (engagement, immersion and fun) and how the familiarity of the game culture influences the players' overall perception of the game.

1.4 BACKGROUND OF THE RESEARCH TOPIC

Cultural localization in video games involves tailoring the product to fit the culture, lifestyle and identity of a particular audience. The games use the local cultural elements, such as food, language, environment, and traditions, can make the gaming experience more familiar to players, leading to a more immersive and enjoyable experience.

1.4.1 PROBLEM STATEMENT

Although cultural localization is generally recognized as a very crucial aspect in enhancing the gaming experience, most simulation games tend to incorporate generic or Westernized settings that do not appeal to local players to a great extent. The absence of culturally embedded settings might lower emotional engagement and limit players' immersion, especially if they are from the targeted cultures.

Furthermore, current research on the impact of local cultural factors (such as local cuisine, familiar business environments, and specific time-based activity cycles) on the experience of localized simulation games appears to be lacking or insufficient. Simultaneously, in game development within a Malaysian context, there seems to be a lack of academic research on how to appropriately localize mamak stall culture in games and the impact of such localization on the gaming experience. Therefore, this study aims to explore the impact of cultural localization on player experience through the implementation of localized cultural elements within a game environment.

1.4.2 RESEARCH OBJECTIVES

1. To examine the effect of cultural localization on player immersion and enjoyment in video games
2. To evaluate players' perceptions of cultural authenticity video games with localized cultural elements.

1.4.3 RESEARCH QUESTIONS

1. How does the use of cultural elements impact the experience of the player in the game?
2. What is the players' experience of enjoyment and authenticity of the culturally localized gameplay elements of the game?

1.5 RESPONSIBILITIES AND ROLE

The game Mamak Dreams is by a three-person team called Creative Yield Studio consisting of one game development student and two game design students. Following group discussions, tasks were assigned based on each member's individual strengths, skills, and interests. This allocation method ensured clear responsibilities and enabled each team member to effectively contribute to the overall development of the project.

Members	Role	Responsible
Chloe Hew Kha Yee (GS)	Game Artist	Character 3D Models All Character Movement Animation All Ingredients, Foods and beverages 3D Models 2D Arts (Recipes and Icons) Game Props 3D Models Storyboards Ending Cutscenes Game Trailer
Irish Lee Xin Yan (GS)	Game Artist	Level Design 3D Game Props Model for Decoration 3D Levels Environment 3D Assets for Game Mechanic 3D food (Nasi Lemak) 3D Rats and Animation 2D Assets for All Menu

		Layout All Menu in Unity 2D In Game Icon 3D Animation Cutscenes Editor Sound Audio Design Group Logo, Business Card, Posters
Sim Wee Puo (GV)	Lead Game Programmer	Player controls and movement functions Interactive system Ui functions Cooking mechanics Serving mechanics Day change mechanics Day night mechanics Customer ai Animal ai (dog and cat) Cooking animation Game particle system (water) Game economic system Game database management system Tutorial Game audio system

1.6 GANTT CHART

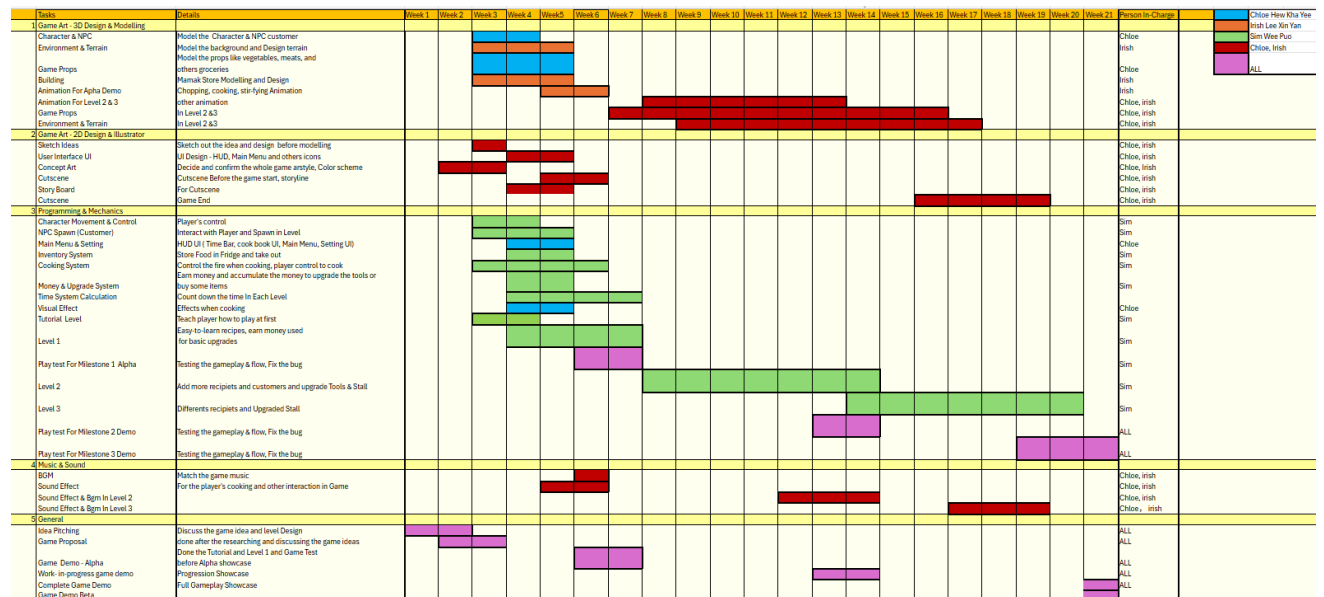


Figure 1.6.1 show Gantt Chart of Creative Yield Studio

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

The game industry has expanded rapidly over the past ten years, and simulation games can now be identified as one of the most common types of video games. The primary advantage behind the emergence of simulation games lies in their ability to simulate real-life activities. The expansion of the video game industry across the world has led to the realization of the significance of cultural localization.

Cultural localization is an area that is gaining much attention within the world gaming industry. Aim to enhance immersion and enjoyment as far as players are concerned. Cultural localization is done by incorporating game content, such as language, symbols, cuisine, habits, and social practices, to make players' involvement more relevant to their culture (Chandel & Deming, 2011). Unlike other forms of translation, it helps capture familiar cultural aspects, especially those familiar to players, thus creating emotional involvement. In accordance with earlier studies, players thus experience increased immersion and enjoyment when game content is relevant to their normal cultural backgrounds (Isbister, 2016). Examples of culture related to player authenticity include their daily habits, diet, and social situations.

Simulation games are particularly effective platforms for cultural localization because they are designed to replicate real-life activities and environments (Bogost, 2007). The connection between the simulation games and reality is enhanced by filling them with aspects that make their world less unique from those of the players and the movies, thus bringing them closer to reality.

2.2 CULTURAL LOCALIZATION IN VIDEO GAMES

Cultural localization in video games is not only about translating text anymore. It is about getting the cultural identity right. This includes things like food, social norms, daily customs and environment. In modern game development, developers target player groups from diverse cultural backgrounds, they have to ensure that players from different regions can understand the game world and try to build the emotional connection. Therefore, localization not only improves usability but also enhances player immersion and emotional linkage.

2.2.1 METHODS OF CULTURAL LOCALIZATION IN GAME

According to Chandler and Deming (2012), effective localization involves modifying narrative elements, visual representation, gameplay systems, user interfaces, language, and audio design to align with cultural expectations and meanings. Thus, localization can be done in several ways when designing a game. These ways include changing the language, visuals, audio, gameplay and story.

Content Localization

A fundamental method of cultural localization is content localization, which involves the inclusion of culturally specific objects, food, characters, customs, and narratives within the game world. Consalvo (2016) argues that culturally meaningful representations in games can strengthen players' sense of recognition and belonging, especially when local culture is depicted authentically rather than stereotypically.

In cooking stimulation games, content localization let players to interact directly with cultural elements, transforming culture from a visual backdrop into an active component of gameplay. For example, some Malaysia classic dishes like Nasi Lemak, Roti Canai, Teh Tarik and Hokkien Mee can provide players with a more relatable gameplay experience also introducing of Malaysian food culture to the international audiences. As Venba and Never Alone are the most relatable of the content localization, the whole gameplay has the strong theme about their cultural and what they want to express through the video games.

Linguistic Localization

Language localization is the process of adapting content in a way that resonates with different audiences, not just linguistically, but culturally (admin., 2024). Effective language localization has been found to go beyond simple literal translation, encompassing adjustments to humor, expressions, slang and cultural references to reflect authentic language behavior in the target culture (Bernal-Merino, 2015). For example, Genshin Impact (miHoYo, 2020) uses different dialogue styles and expressions in Chinese, Japanese, and English versions to be better suit the cultural communication styles of different audiences.

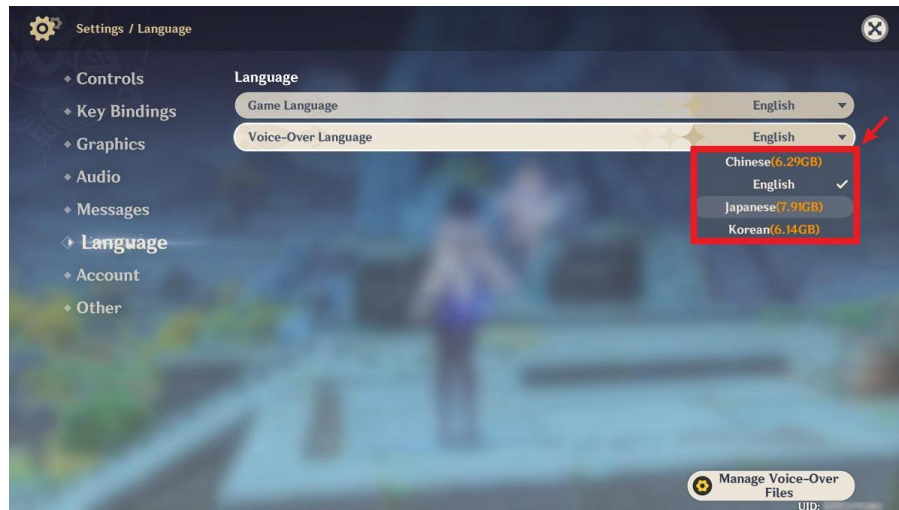


Figure 2.2.1.1 shows Genshin Impact supports multiple localized language and voice-over options for global audiences.

This is especially important in Malaysia, where the multilingualism of the Malaysian context allows for the frequent switching from one language to another in a single conversation, in this case from Bahasa Malaysia to English, Mandarin, Tamil, or regional dialect, which is known as Manglish (Malaysian English) and has its own grammar, vocabulary, and cultural identity (David & Govindasamy, 2005). A culturally based Malaysian game would therefore not just switch from one language, Bahasa Malaysia, to another, the standard form of the language, but also include the natural switching between languages used in Malaysian everyday speech, like Venba does between other languages Tamil and English, giving the game authenticity that cannot be achieved by just translating content (O'Hagan & Mangiron, 2013).

Visual and Environmental Localization

Visual localization is about making visual elements fit a culture, included things like environmental design, architecture, symbols, clothing, and aesthetic elements to fit a particular culture. According to O'Hagan and Mangiron (2013), visual localization is not limited to translating text on the screen, but also includes modifying visual details that are culturally significant to different audiences.

Visual symbols and colors can be interpreted differently in different cultures. Red symbolizes good fortune and wealth in Chinese and Malaysian cultures, while in most Western societies, red usually means danger or warning (Würtz, 2005). Therefore, when designing their games, the developers must be very careful because there are visual elements in their designs that may not go well with the target culture. It is important that the visual elements used by the developers in their games are culturally appropriate.

An example is Ghost of Tsushima, which incorporates traditional Japanese architecture, samurai clothing, shrines, and natural landscapes inspired by feudal Japan to create a culturally authentic environment. These visual elements given the player strong emotion and feel connected to the game world.



Figure 2.2.1.2 Shows Ghost of Tsushima - Japanese Architecture in Gameplay

Audio Localization

Audio localization refers to modifying a game's audio elements such as music, sound effects, voice acting and background sounds to match the audio traditions of the target culture. Collins (2008) states that audio design in games is one of the most effective but often overlooked elements of player immersion because sound is a part of the subconscious, setting the emotional mood and cultural context. One of the most immersion-breaking localization failures of commercial games mentioned were poor execution of audio localization where characters speak with flat or foreign accent of the target language (Bernal-Merino, 2015). For example, Ghost of Tsushima offers players to play in Japanese with Japanese voice acting, and traditional Japanese-inspired music adds to the Japanese culture surrounding the gameplay experience.

Gameplay and Mechanic Localization

Gameplay system localization focuses on translating the mechanics and in-game systems of a game to fit cultural habits, social norms and daily practices of a certain community. O'Hagan and Mangiron (2013) state that the developers modify things like time systems, festivals, social interactions and daily activities to make it more natural and relatable for players of other cultures.

One of them is the Animal Crossing title by Nintendo titled Animal Crossing: New Horizons. The game includes a real time clock and a seasonal system similar to the one used in real life, taking into consideration the seasons and what happens during them. Seasonal cycles, gift-giving, and neighbourly relations are examples of aspects of Japanese social culture, which are different depending on the different hemispheres of the Earth. Such gameplay systems contribute to a peaceful and culturally enriching experience for gamers.



Figure 2.2.1.3 shows Animal Crossing – Hemisphere Game mechanic

2.2.2 IMPORTANCE OF CULTURAL LOCALIZATION

One of the major aspects of cultural localization is the fact that it affects positively the immersion of players in video games. When the content of the game reflects the culture of the player and his or her experience, he or she is able to get involved in the game easier. Language, cuisine, landscape, and social behavior help to create an illusion of reality. Therefore, players feel emotionally attached to the game, thus getting greater pleasure from playing it (Isbister, 2016).

Cultural localization is another important aspect of cultural information because it can improve the authenticity and culture representation. If a game is an accurate portrayal of a culture, then the participants of that culture feel recognized and respected in that game. Meanwhile, the players in other areas can experience and learn about other cultures through an interactive way. This helps to foster cultural appreciation and to help games become a vehicle for cross-cultural learning and exchange (Chandler & Deming, 2012).

Furthermore, cultural localization is significant to make your product more accessible to the global market. With cultural adaptation, there are fewer cultural barriers for international players to cross when playing games, and this makes the games easier to understand and enjoy. This helps developers to gain access to a larger population in various areas, creating broader acceptance and commercial success of the game in the global market place.

However, there are certain drawbacks associated with cultural localization. Inappropriate adaptation or depiction of cultural elements may lead to misunderstanding, stereotyping or lack of immersion. Consequently, it is necessary for the developer to be culturally sensitive when developing the game while at the same time keeping its comprehension and gameplay features in order not to upset or bore the player (Würtz, 2005).

2.3 CASE STUDY

2.3.1 PERSONA 5

Isbister (2016) notes that culturally relevant elements are more likely to raise emotion since game mechanics create congruity with the players lived experience. A Japanese role-playing game Persona 5 (Atlus, 2016) as an example, it draws its inspiration from the urban culture of Tokyo youth. This game is deeply embedded the youth culture in the game background and mechanics such as the school calendar, part-time job mechanics, train commute mechanics, and social link rituals mirror the rhythms of everyday Japanese adolescent life. For the Japanese players, such game aspects do not offer any novelty since they portray elements of the social pressures and responsibilities that they face every day. However, during the localization process for the Western audience, most of these culturally-specific elements remained intact (O'Hagan & Mangiron, 2013). It may be noted here that the Western players found them appealing because of their unique nature (Bernal-Merino, 2015). This finding reinforces the idea that emotional resonance in games does not depend entirely on cultural familiarity, but rather to a large extent on the depth and authenticity of cultural elements integrated into the core game system (Isbister, 2016).



Figure 2.3.1.1 Shows the part-time job mechanics in Persona 5

2.3.2 NEVER ALONE

It coincides with the modern design philosophy, which prioritizes representation and emotional impact rather than technical complexity. An example that illustrates this point effectively is *Never Alone* (Kisima Ingitchuna, E-Line Media, 2014). The game was designed in close partnership with the Iñupiaq people from Alaska, and their indigenous mythology and ecological knowledge is woven into the gameplay mechanics—snow storms behave based on the beliefs of the Iñupiaq people, while owls are the characters serving as spiritual guides and wisdom keepers drawn from cultural tradition. In other words, there was no localization of the game, but authentic cultural identity was established from the very beginning of the game. The result was not only culturally appropriate but also emotionally resonant for those who played it.



Figure 2.3.2.1 Shows the Owl as the spiritual guides in *Never Alone*

2.3.3 ANIMAL CROSSING

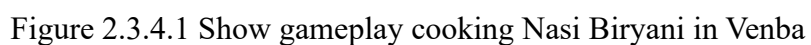
Another case study of comparison concerns the localization of *Animal Crossing: New Horizons* by Nintendo Company Limited (2020). The game's festivals, NPC dialogue, and seasonal events to make them more relevant to local cultures and climates, such as reversed seasons for Southern Hemisphere players, the Festivale event based on South American carnival traditions, the seasonal item set of the Tomato Festival, referencing Spain's La Tomatina, and a cowboy-themed seasonal collection based on North American Western iconography (Nintendo, 2020; Consalvo, 2006). But the general design of the game, although superficially adapted, was still deeply embedded in Japanese culture.



Figure 2.3.3.1 Shows Tomato Festival in Animal Crossing

The island settings included torii-style bridges and stone pathways based on traditional Japanese garden design (Gordenker, 2018). The seasonal calendar maintained events associated with Japanese spiritual tradition, including Obon is the Buddhist lantern festival, which was available to all players globally without cultural translation (Ashkenazi & Jacob, 2003). Importantly, the game's fundamental behavioral systems, including *ma* is a philosophy of leisurely daily pacing (Nitschke, 1993), *ikigai* is pursuit of meaningful everyday routine (García & Miralles, 2016), and *omiyage* is the reciprocal gift-giving custom (Rupp, 2003) remained completely intact in every regional version. This emphasizes a key paradox of contemporary localization practice: the game was localized on the level of content but not on the level of worldview, producing a form of cultural asymmetry where culturally specific festivals and seasonal items exist only as decoration on top of a Japanese philosophical foundation that was never localized itself for its global audience (Consalvo, 2006).

In comparison, most research related to video game localization deals with localization of the games for global markets. However, there is a significant gap between such localization of games and cultural game development (Bernal-Merino, 2015). One cannot draw parallels between localization of an item created outside of the cultural environment and designing a game in accordance with that culture. For example, *Venba* (Visai Games, 2023), the story-driven game with narrative cooking using authentic dishes of South India. Developed specifically for Tamil immigrants, uses authentic South Indian recipes as the core gameplay mechanic and code-switching dialogue between Tamil and English reflecting the lived linguistic reality of the diaspora community (Nguyen, 2023).



2.4 PLAYER EXPERIENCE AND IMMERSION IN GAMES

The player experience involves extent of immersion, player enjoyment, emotional involvement and perceived challenge. Ermi and Mäyrä (2005) describe the immersion process as having three aspects: sensory, challenge-based, and imaginative, which are all affected by the individual player's cognition, emotions and motivations, and influenced by the wider social context in which the player operates. The social connections around the whole model are, of course, the social settings that the localization has to work within or around – which is why this framework is so relevant to cultural localization in game design. If the design of game structures (story, space and audiovisual construction) is in line with the cultural background of the player, all three types of immersion are triggered at the same time, which leads to maximum emotional involvement (Isbister, 2016). This is particularly true of the case of *Venba* (Visai Games, 2023) and *Never Alone* (E-Line Media, 2014), in which cultural production within the community provides a constant nourishment of the imaginative immersion of the player in the game.

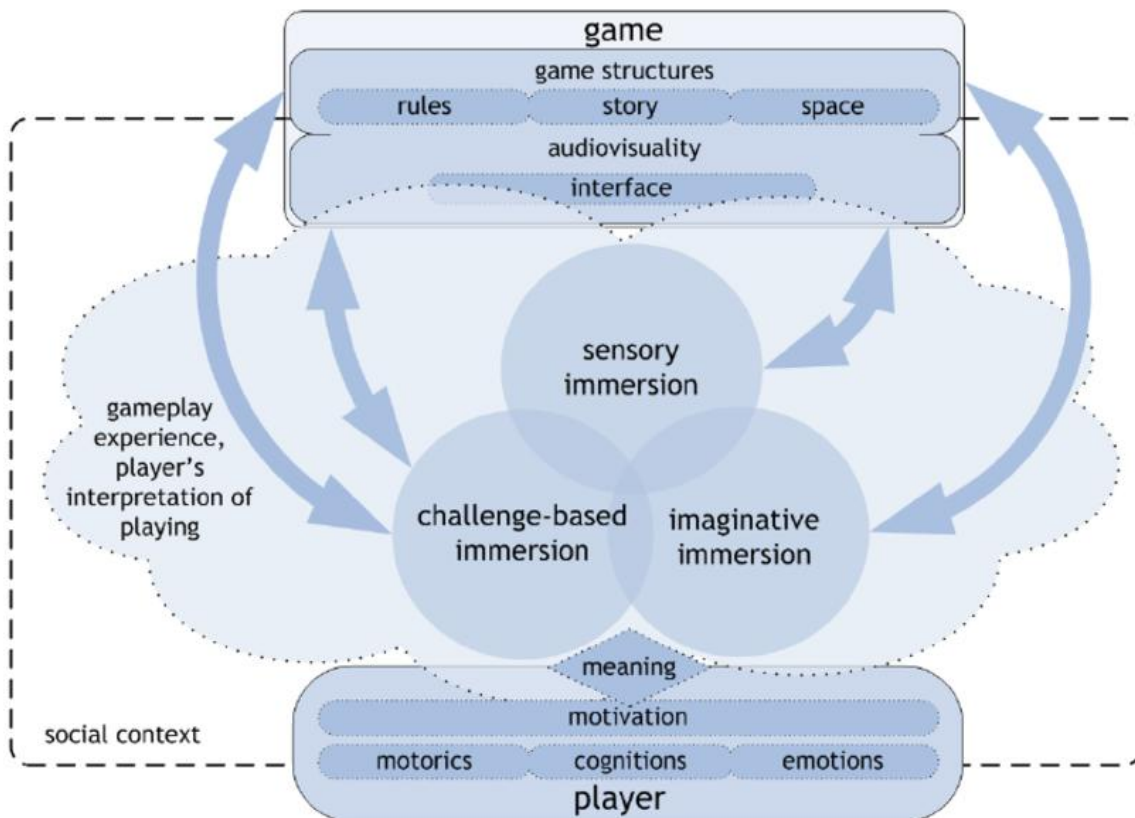


Figure Shows Player Immersion Model Diagram by Ermi, Laura & Mäyrä, Frans. (2005)

Sweetser and Wyeth (2005) presented the GameFlow model that describe the most important factors that will provide enjoyment for the players, such as clear goals, feedback, challenge balance, and immersion. They are not about culture, but do offer a decent platform for noticing

how the gameplay systems have an impact on engagement. It's clear from this framework that knowing your own culture isn't just aiding in the making and playing of games, but that it can enhance the experience of being immersed in the game. Here, the social environment and the school that the Japanese players find inside the game represent what happens in their real lives, meeting the challenges posed by the GameFlow model along with the skills of the player in Persona 5 (Atlus, 2016). Emotional engagement is highest when players are confronted with familiar social cues and culturally relevant content, Isbister writes (2016). This, in turn, reinforces the idea that there may be a need for cultural localization to further immerse the players and make the game more enjoyable, particularly in the simulation games that simulate real-life activities.

2.5 IMPACT OF CULTURAL LOCALIZATION ON PLAYER EXPERIENCE

Cultural localization affects the level of immersion experienced by players. By making the game world more familiar for the player, localization minimizes the difference between his/her real world and the game world, increasing the feeling of immersion and engagement. The level of immersion is usually determined by player experience surveys using specific immersion-related questions.

Another thing that cultural localization affects is how much players enjoy a game and feel emotionally connected to it. When people play a game they feel more involved. Have more fun if they see things that remind them of their own culture or feel like they are in a place that matters to them. This is because when a game includes things that're relevant to a players culture it makes them feel like they are a part of the game. Players are usually happy when the game shows things that're like their own life and culture. Cultural localization helps make the game more enjoyable and relatable to players. It makes players feel like the game is made for them.

Moreover, cultural localization affects authenticity and game quality. The presence of authentic culture in games makes players perceive the world of the game as authentic and respectful towards the represented culture. Thus, the level of trust towards the game becomes higher. Authenticity is evaluated based on player perception of the game's reality and cultural accuracy.

In general, cultural localization enhances a number of aspects related to player experience, such as immersion, enjoyment, emotion, and authenticity. All of these aspects are frequently considered when evaluating player experience in survey research studies (Sweetser & Wyeth, 2005).

2.6 CHALLENGES OF CULTURAL LOCALIZATION

Despite all the benefits of games, creating games that are suitable for various cultures is not an easy thing. The first problem that arises here is the misinterpretation of culture. It refers to the case where the developer uses inappropriate symbols or customs. Thus, such mistakes may irritate the player or spoil his/her impression about the game.

The second issue is the balancing of two factors – globalization and localization. It means that the developer should find the proper balance between global consistency and localization because excessive localization may change the meaning of the game, whereas lack of it will make players less interested in the game.

Moreover, creating games suitable for various cultures is costly and time-consuming. It requires money, efforts, and talent that knows about other cultures. Besides, it may require experts who will help to translate, consult, and check the game in various regions. It is obvious that such process complicates the creation of games even for small game studios.

2.7 RESEARCH GAP

While localization of cultures has received much attention in global game studies, there is little research available that has studied the cultural localization in the context of small markets like in the west or in East Asia Korea (O'Hagan & Mangiron, 2013). Research on the effect of cultural localization on player experience in Southeast Asian contexts, especially in the Malaysian cultural context, is still scarce.

In addition to the geographical distance, the literature available on the subject focuses mostly on the technical or linguistic aspects of localization, on how to translate texts, adapt interfaces, and adjust the level of cultural content of the game at the surface (Bernal-Merino, 2015). The impact of cultural localization on immersion, enjoyment and emotional engagement is still under-researched, and less research has examined how cultural features can be integrated into the game's mechanics and systems in ways that are meaningful beyond their presentation in visual and narrative contexts (Jennett et al., 2008).

Thus, the purpose of this study is to fill this void and explore how cultural localization affects player experience in a culturally-infused game context for immersion, enjoyment and perceived authenticity.

2.8 SUMMARY

In this chapter, important literature related to cultural localization in video games was analyzed, such as its influence, problems, and gaps. From the analysis of previous literature, it can be concluded that cultural localization is significant as far as it is one of the factors that increase player immersion, emotional engagement, and satisfaction (Isbister, 2016; Sweetser & Wyeth, 2005).

At the same time, according to literature, there are various problems related to cultural localization, such as cultural misrepresentation, balancing global/local requirements, and high costs (O'Hagan & Mangiron, 2013). Nevertheless, cultural localization is still an integral part of modern game design.

Thus, from the analysis of literature, it can be stated that there is still a need for further research concerning the influence of cultural localization on players' experience in underrepresented cultures.

3.0 SYSTEM SPECIFICATION/ REQUIREMENTS

3.1 GAME SYSTEM

3.1.1 INTRODUCTION

Mamak Dreams is a simulation game with cooking and business elements based on Malaysian mamak cuisine. The game mechanics are built on cooking, customer serving, time management and business expansion, creating a fun simulation experience for the player. In this game, the player becomes Ali, who trying to start a Mamak business and he targets to turn his small Mamak stall business to a restaurant.

Gameplay mechanics include cooking, customer service, time management using a day-night cycle, reaching financial goals under a deadline, and dealing with pests. Players should cook orders accurately and deliver them to customers within a specified period of time to receive their money. At the end of each day, players' total income is recorded.

In each level, there is a goal in terms of finances that players need to accomplish before the deadline, otherwise, they will face a bad ending. Once players manage to reach their goals, they are able to move on to the next level. After finishing Level 3, players get access to the happy ending of the game and can play further.

3.1.2 COOKING SYSTEM

Players are required to prepare various Malaysian mamak dishes and beverages based on customer orders. The available menu items include Mi Goreng, Roti Canai, Nasi Lemak, Teh Ais, and Limau Ais. Each dish requires specific preparation steps, and players must complete the cooking process within a limited amount of time. Correctly prepared food rewards players with income, while incorrect or delayed orders may reduce customer satisfaction. The cooking mechanic is designed to simulate the fast-paced environment of real Malaysian mamak stalls.

Player needs to interact with the vegetables and chicken cut into slices. Then interact the raw mi kuning put into the soup pot to cook into cooked mi kuning. After this preparation, player need to all the prepared ingredients on the frying pan to cook the Mi Goreng. The roti canai dish will unlock in Level 2 and 3, player interact with the dough and put the dough on the frying pan and add the butter slice on the pan, then the roti canai will be cooked.



Figure 3.1.2.1 show put the cabbage on the cutting board to cut into slices



Figure 3.1.2.2 show the raw mi kuning cook in the soup pot



Figure 3.1.2.3 show all the ingredients put on the frying pan to cook the Mi Goreng

3.1.3 SERVING SYSTEM

The serving system concentrates on the interaction and time management. Once the customers appeared and make their orders, the ordered items will be displayed above the customers' heads. Players should serve the right food and drinks to the customers before their patience bars expire.

Customers have a limited amount of time in which they can wait. Their patience bars keep decreasing during the waiting process until they become empty. Once they become empty, the customers will leave angrily. Thus, players need to manage the orders of many customers to earn money.



Figure 3.1.3.1 show player take the customer's order



Figure 3.1.3.2 show player serve the ordered dishes to the customer in time

3.1.4 DAY – NIGHT SYSTEM

The day night cycle stimulates the operating hours of a real-life mamak stall. Each day starts at 5:00 a.m. and finishes at 10:00 p.m. Within this period, the players have to serve customers and make profits from their business before closing down for the day. After the end of each day, the player's gains and progression will be determined using the process of settlement.



Figure 3.1.4.1 show the gameplay start on 5am

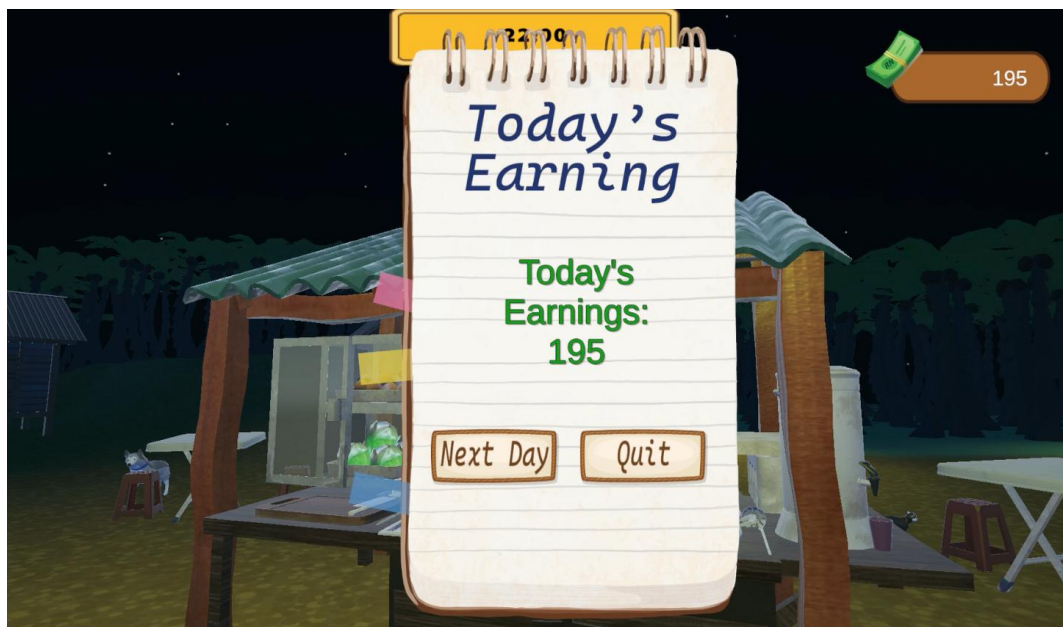


Figure 3.1.4.2 The settlement will calculate the money earned of each day

3.1.5 DEADLINE SYSTEM

The deadline system is the progression mechanic in the Mamak Dreams. Players must achieve a minimum earnings target within a limited number of in-game days in order to progress to the next level.

If the player fails to achieve the required earnings target in each level, a Game Over screen and bad ending will be triggered. However, if the player successfully reaches the financial target. Upon successfully completing Level 3, the player achieves the happy ending where Ali successfully owns a restaurant. After the ending sequence, players may continue playing the game freely. This system acts as a pressure and motivation for players to manage their business and serve customers efficiently in order to achieve the goal.



Figure 3.1.5.1 show the calendar can refer to the deadline

3.1.6 PEST CONTROL MECHANIC

The pest control mechanic is incorporated into Level 2 and Level 3 as a means of enhancing the difficulty level of the game and creating realism within it. Pests like cockroaches and rats are likely to randomly appear throughout the restaurant environment during gameplay.

Pests need to be eradicated immediately; otherwise, the patience of customers would drop at a much faster rate, which, in turn, would affect the overall level of customer satisfaction and income generated.

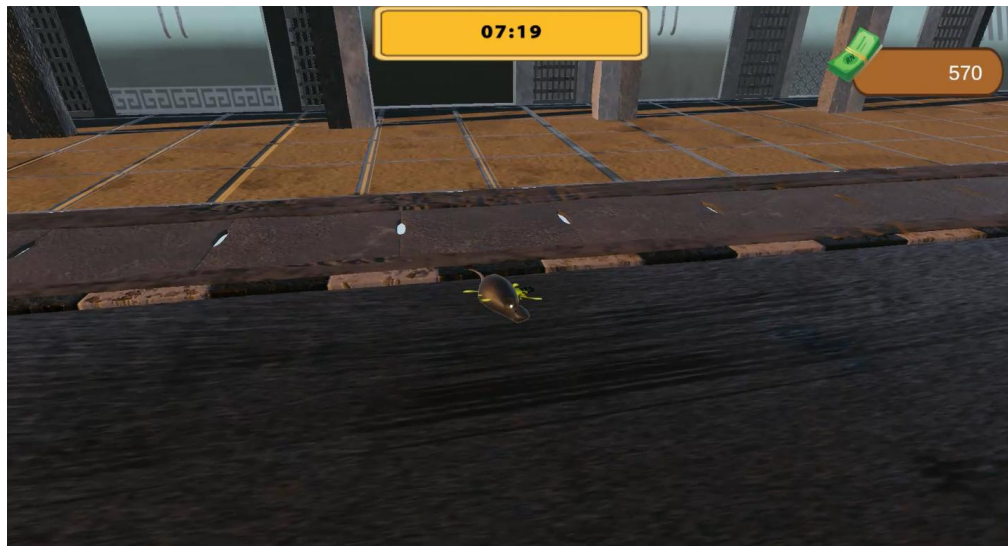


Figure 3.1.6.1 show the rat has been killed

3.1.7 LEVEL SELECT SYSTEM

There are three levels in the game and a tutorial level. The tutorial level helps players learn how to play the game and similar with the in game controls, including how to cook food and serve customers in the beginning.

The game is based on the story of Ali, who dreams of owning a restaurant. In Level 1, Ali starts his business in his hometown with a small stall. In Level 2, the business grows up to become a roadside stall situated in the city. Finally, in Level 3, Ali owns a restaurant himself. In order to proceed to the next level, players need to make the required amount of money. The gradual increase in difficulty level through all levels shows the personal growth of a Mamak business.

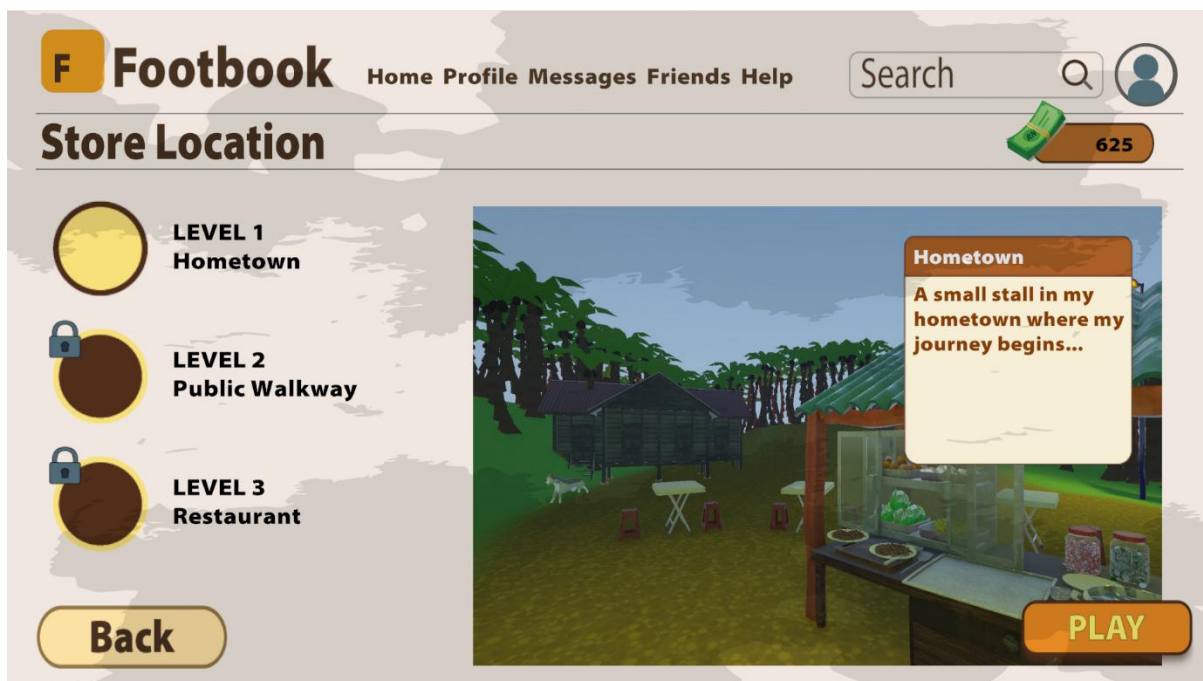


Figure 3.1.7.1 show the Level Select Page

3.1.8 USER INTERFACE (UI) SYSTEM

Main Menu Page

In the beginning of the game, Main Menu page have the buttons included Play button, Tutorial button, Setting button and Credit button. Play button will bring player directly into the level 1. Tutorial button will bring player to the tutorial level will be given a simply gameplay to teach player the controls and how to play this game. Setting button will let the player adjust the background music and the sound effect volume. The credit menu will show our team - Creative Yield Studio member's name. The Exit button will let the player quit the game.



Figure 3.1.8.1 show the Main Menu



Figure 3.1.8.2 show Setting page



Figure 3.1.8.3 show Credits page

Gameplay UI

In gameplay UI have the Customer order UI, Customer's Patience Bar, Timer UI and the money earn UI. The customer will be automatically walk to the stall and sit on the chair, the customer's order will be showed above the head of the customer in cloud shape. When the order is placed, customer's patience bar will gradually decrease. The head up display have the timer UI and the money bar UI; the timer interface displays a countdown from 5 a.m. to 10 p.m. The money bar interface displays the amount of money the player has earned in the game.



Figure 3.1.8.4 show gameplay

Pause Menu page

Pause menu page have the UI include the Resume button, setting button, main menu button and the Recipe button. Player can press ECS key to pause the game. The Recipe button can let the player refer to the recipe anytime.



Figure 3.1.8.5 Pause Menu page

3.2 GAME CONTROL

The game controls in Mamak dreams are designed to be simple and easy. Player needs to use the keyboard and the mouse to control the character movement in first person view, control the player to interact with the game objects.

Control Key	Function
WASD	Control player's movement
Mouse	Control camera view
Hold left click	Pick up and hold objects
F key	Interact with the kitchenware
ESC key	Pause the game

3.3 GAME FLOW

Figure 3.2.1 is the gameplay flow of Mamak Dreams. The gameplay starts with the customers appear and they place their orders. As soon as the player takes the order, the cooking process begins. It involves interaction with ingredients.

Upon gathering the required ingredients, players begin the chopping and preparation process according to the chosen recipe. The program analyzes whether the right ingredients and steps are used in the cooking process. In case the recipe is wrong, the preparation process should be repeated until the player uses the right recipe. After that, the player puts the ingredients in the cooking pot.

The cooking process being completed, the player then serves the prepared meal to the customer and gets paid for the work done. Finally, the game analyzes if any customers remain in the restaurant, and if there is enough time left during the day to serve them. Otherwise, the gaming process moves on to the next stage – end of the day profit calculation.

If there are still customers in the restaurant, the player continues receiving orders from them until he runs out of time in the day-night cycle. In case there are no more customers in the restaurant, the game automatically moves to the next stage.

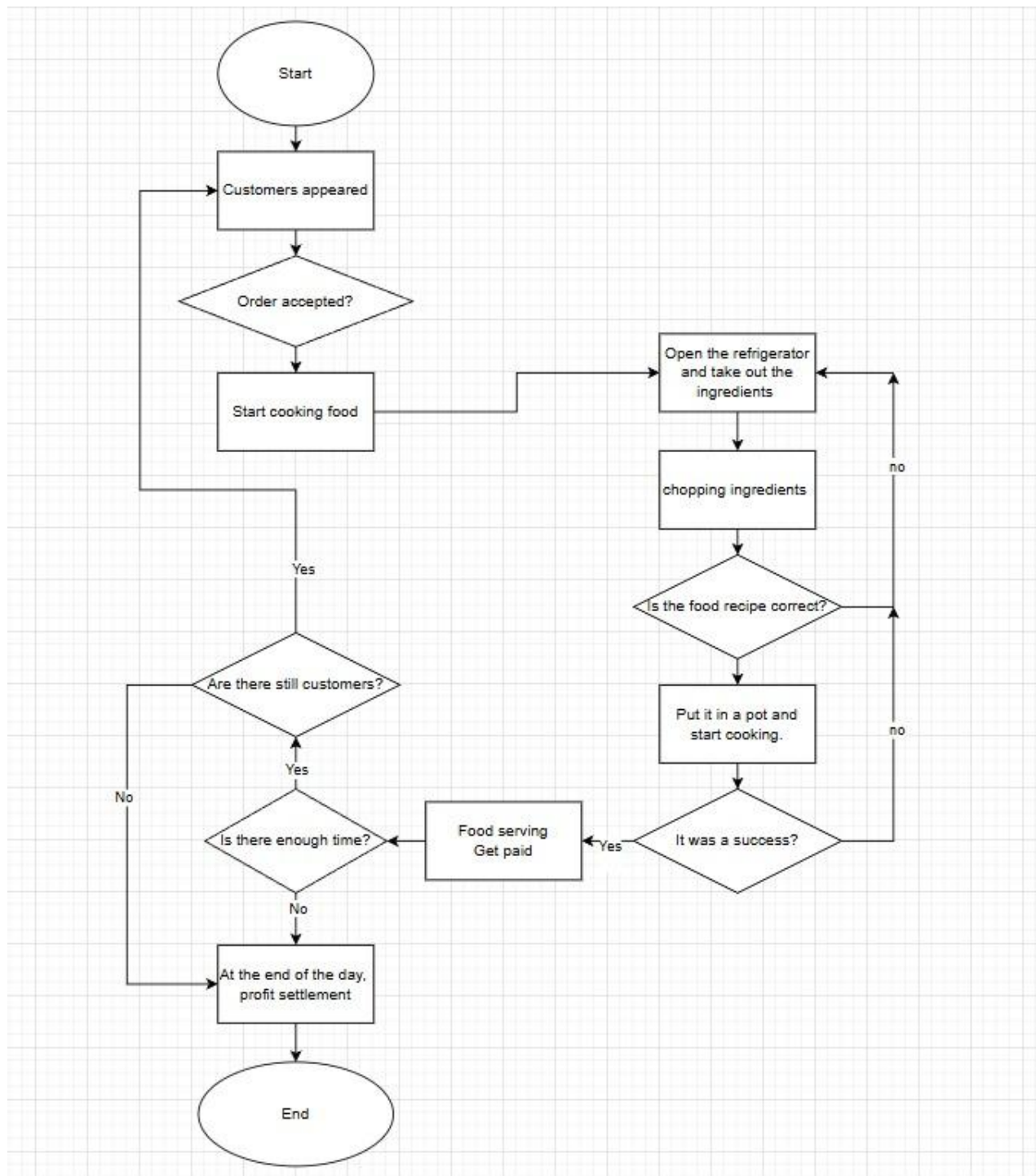


Figure 3.2.1 Game Flow of Mamak Dreams

4.0 DESIGN & IMPLEMENTATION

4.1 NARRATIVE DESIGN

At the start of the game, Ali is fired by his boss and decides to return to his hometown kampung to run a mamak stall. Ali needs to put in a lot of effort by doing his own cooking and serving to be able to make a profit out of his business venture. During gameplay, Ali is successful enough to develop his business further and open himself in a restaurant.

The game has two endings: a bad ending and a good ending. If the player fails to reach the target level requirements at a specific time, Ali will not be able to realize his entrepreneurial dream, the game ends, and the bad ending occurs. Conversely, if the player meets all the requirements and earns enough money, Ali will eventually achieve his dream of becoming a restaurant owner.

4.2 2D GAME ART

Food & Beverages Icons

The game icons included the order foods and drink icons, the icons will be appeared above the head of the customer. The icons shown and the player can refer to this to take the order. Then player can proceed to cook the dishes and serve them the right food or beverages.



Figure 4.2.1 shows the Mi Goreng Icon



Figure 4.2.2 shows the Mi Goreng Telur



Figure 4.2.3 shows the Roti Canai with Dhal



Figure 4.2.4 shows the Limau Ice



Figure 4.2.5 shows the Teh Ice

Spilled Spot

The spilled spot is used for the Kill Pest (cockroach and rat) gameplay in level 2 and level3, when player kill the pest the spilled spot will show and means the pest has been killed.



Figure 4.2.6 shows the Spilled spot

Recipe button

Recipe button will be put at the pause menu, the player can press ESC key to open pause menu then find the recipe button to open recipe book. Player can click the game icons below the board to refer different dishes or beverages. The design of the recipe is inspired by the café style have the blackboard on the wall, they will draw the food picture or the drawings on it by using the chalk.



Figure 4.2.7 shows Recipe Button



Figure 4.2.8 shows the Recipe interface

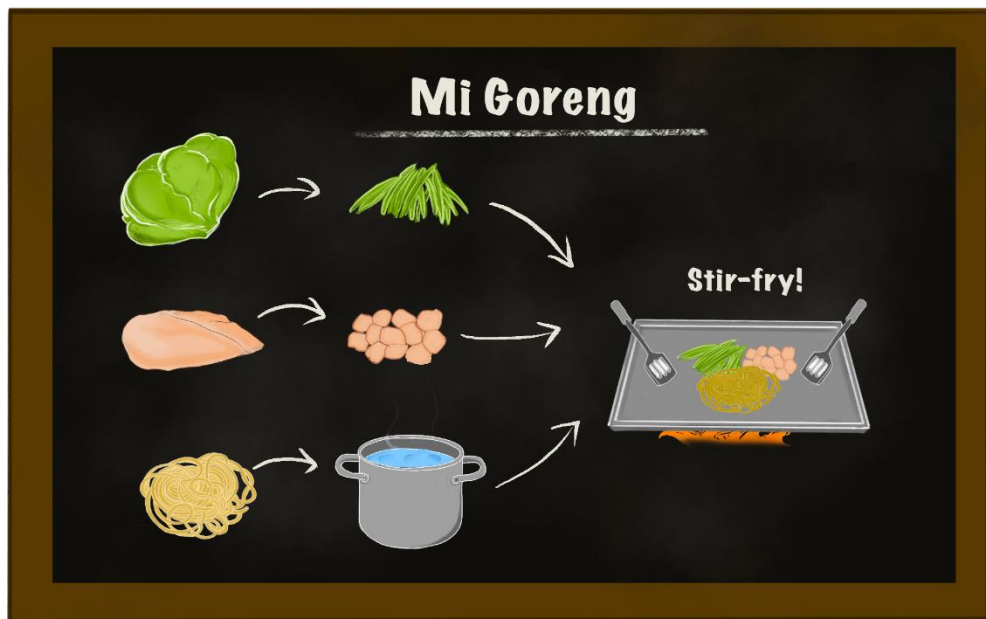
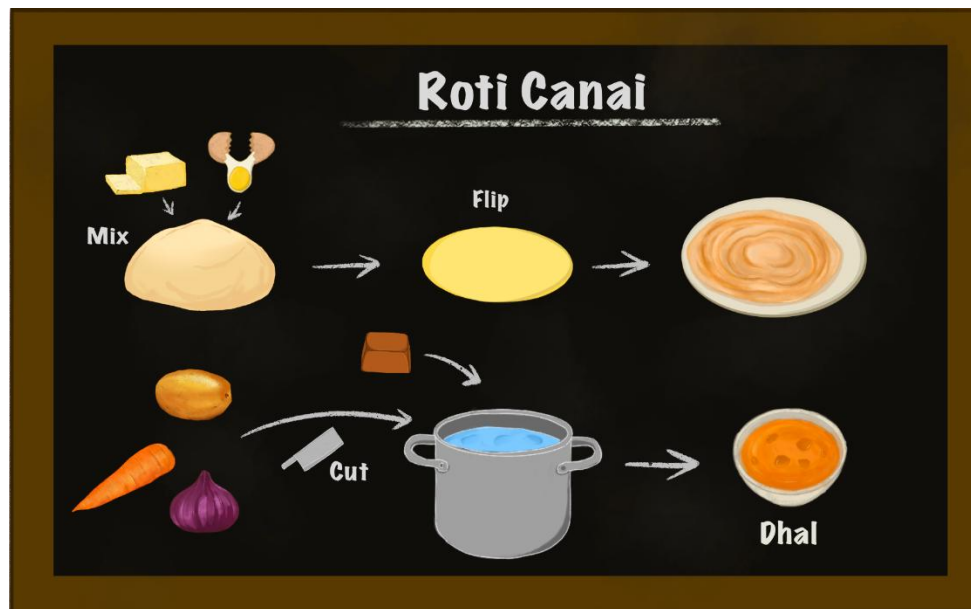


Figure 4.2.9 shows Mi Goreng Recipe



4.2.10 shows Roti Canai and Dhal recipe



4.2.11 shows Limau Ice recipe



4.2.12 shows Teh Ice recipe

4.3 3D GAME ASSETS - FOODS AND BEVERAGES

Mi Goreng and Mi goreng Telur

The ingredients have the original version and the cut into slices or pieces versions. The player has to hold the original ingredients and interact to cut the ingredient, after that can put on the frying pan to fry. Besides, the mi kuning also need to cook in the boiling soup pot. The Mi Goreng ingredients included the cabbages, chicken, mi kuning and egg. All the models are the low-poly 3D models.



Figure 4.3.1 show the cabbage and the cabbage slices

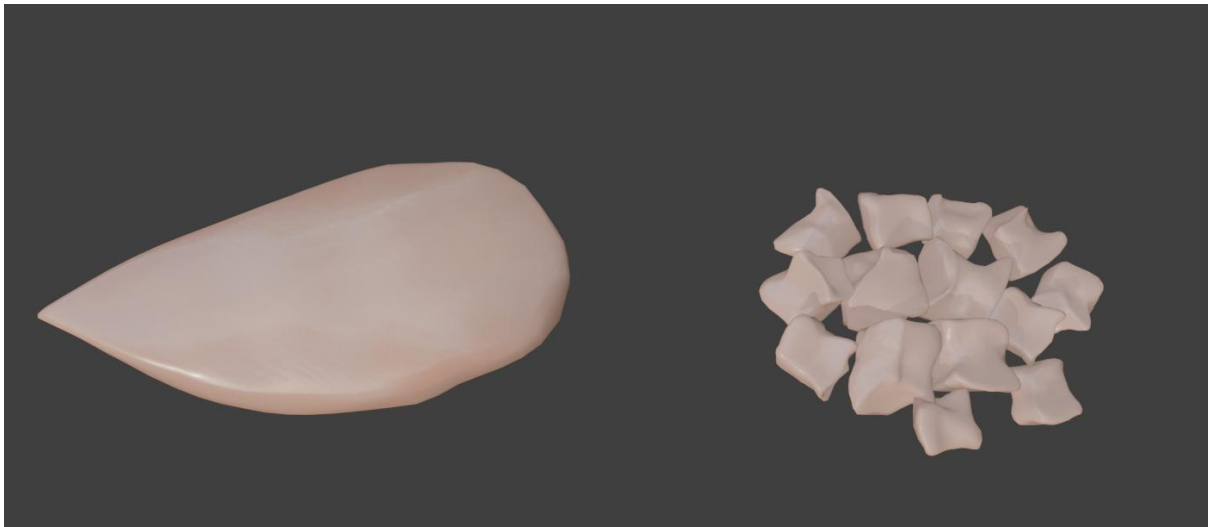


Figure 4.3.2 show the chicken slice and chicken cube

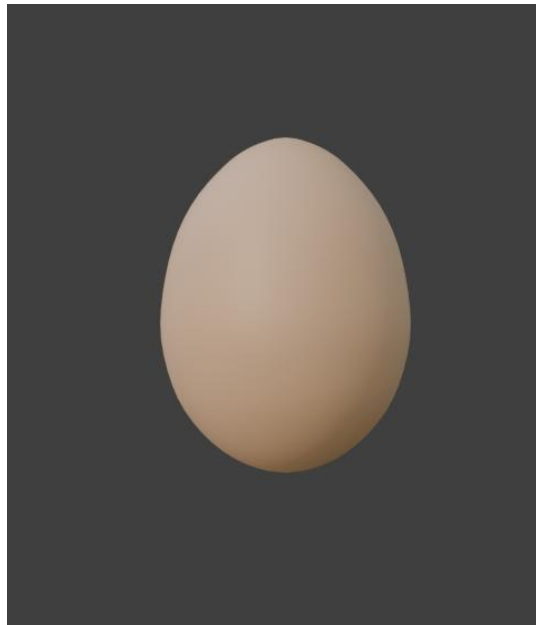


Figure 4.3.3 shows the egg

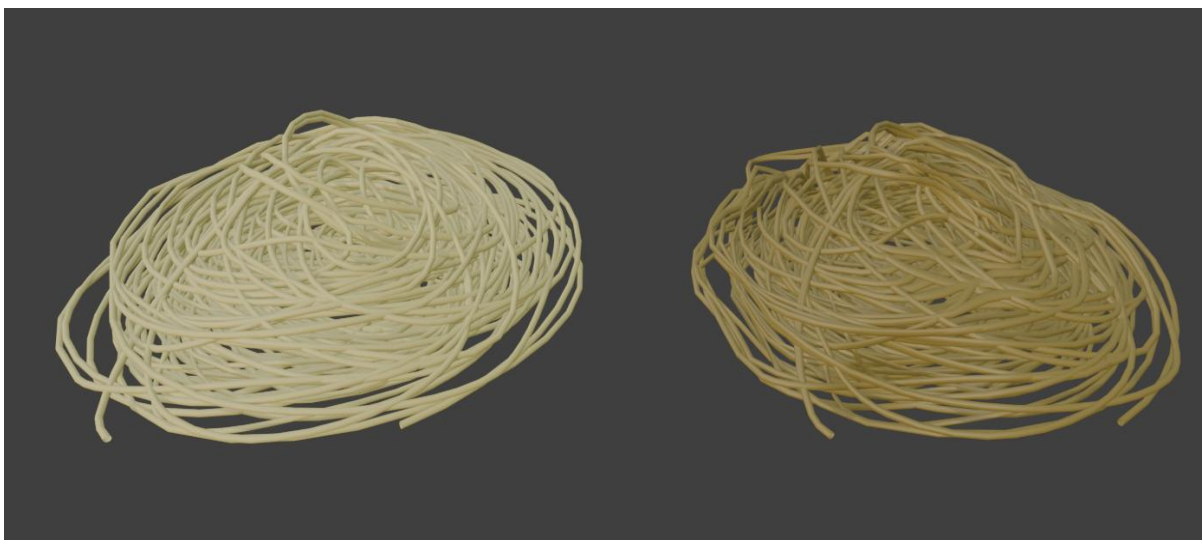


Figure 4.3.4 show the raw mi kuning and the cooked mi kuning



Figure 4.3.5 shows Mi Goreng



Figure 4.3.6 shows Mi Goreng Telur

Roti Canai

Roti Canai models is reference from what we can exactly eat in the mamak stall. The ingredients to cook the roti canai is the Dough and the butter. Player just interacts with the dough and put on frying pan then add the butter slice on the pan, the roti canai will be cooked. Dhal's ingredients contain the onion, potato, carrot and the curry cubes, need to cut the vegetables first then add the curry cube. All the models are the low-poly 3D models.



Figure 4.3.7 shows the dough

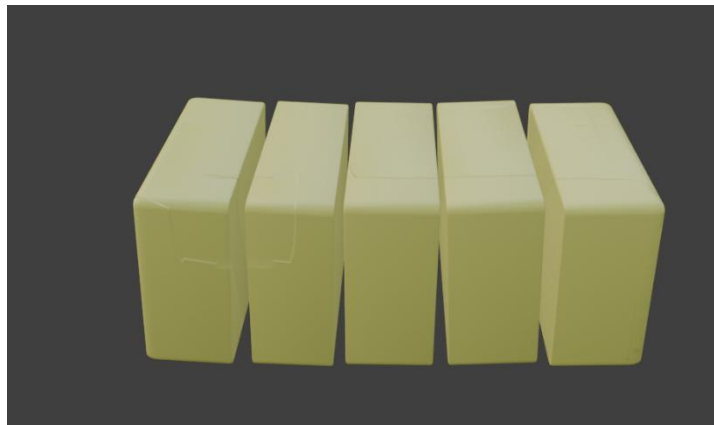


Figure 4.3.8 shows the butter slices



Figure 4.3.9 shows Roti Canai with Dhal

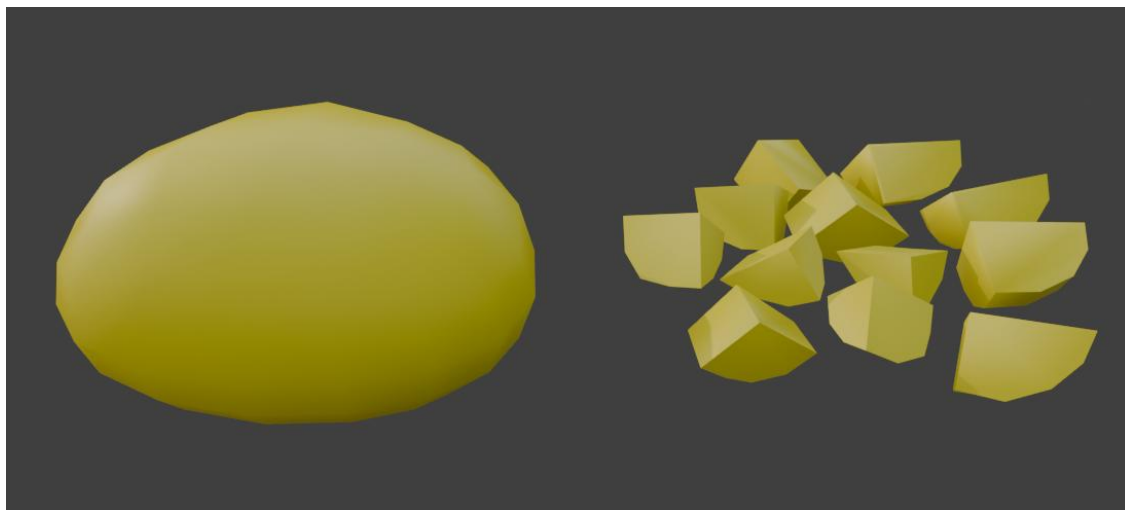


Figure 4.3.10 show Potato and Potato cubes

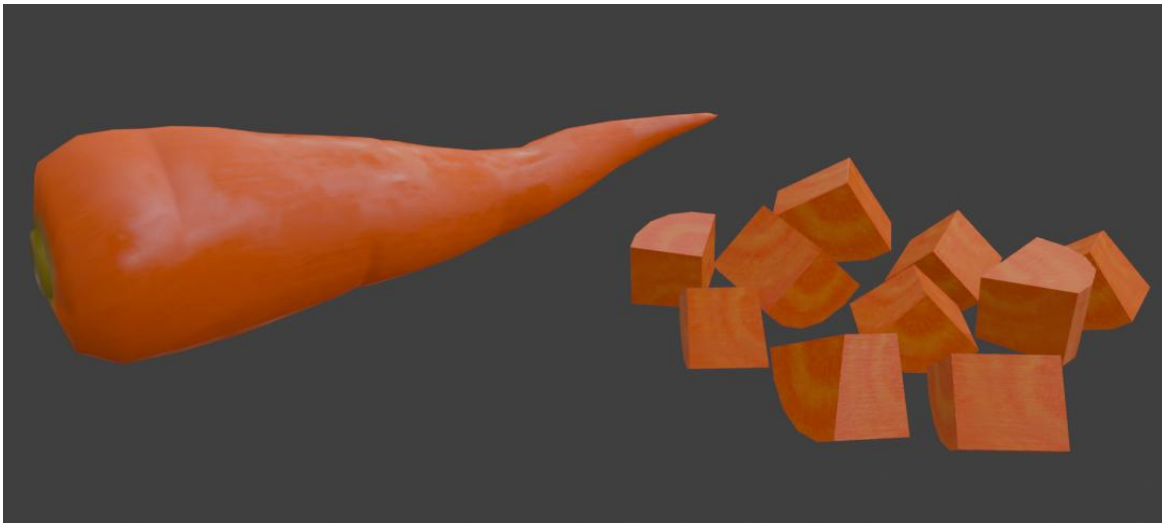


Figure 4.3.11 show Carrot and Carrot cubes



Figure 4.3.12 show Onion and Onion slices



Figure 4.3.13 shows Curry cube

Beverages

The beverages can be ordered by customer have Teh Ice and Limau Ice. The design and 3d model references from the mamak stall drink picture, the drinks in Mamak stall always use the plastic cup to serve.



Figure 4.3.14 & 4.3.15 show the Teh Ice and the Limau Ice



Figure 4.3.16 shows Limau slice

4.4 3D GAME ASSETS – CHARACTER

Character (Player)

The player (Ali) 3d model is designed and references from the Abang at the mamak stall, they wear the football T-shirt and the long pant, the kitchen Abang will wear the apron while cooking the foods. The apron always look like dirty and have the stained on it.



Figure 4.4.1 shows Ali T-pose Front view



Figure 4.4.2 shows Ali T-pose Back view



Figure 4.4.3 & 4.4.4 show Ali T-pose Left view and Right View

Police

We have discussed our gameplay in FYP 1, have the mini game in Level 2, the police will appear to chase the player because player sets up a mamak stall at Roadside walkway, which is illegal. The police 3D model is references from the Malaysia police wear costume; the colour, design and hat are almost same with the Malaysia police. The police's face is designed to look like serious and not smiling.



Figure 4.4.5 shows Police T-pose Front view



Figure 4.4.6 shows Police T-pose Back view

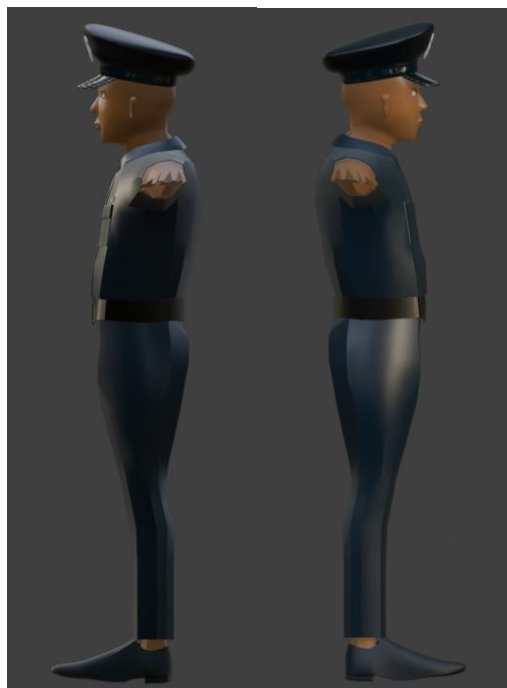


Figure 4.4.7 & 4.4.8 show Police T- pose Left and Right view

Non-playable character design (Customer)

The first customer was a boy wearing a Lakers T-shirt and shorts. The design was inspired by Malaysian teenagers who love basketball and sports fabric T-shirts, so the T-shirt is designed matched with the Famous Lakers basketball team and uses the same yellow and purple hues. In

addition, boy customer wear slippers because slippers are a common part of casual wear in Malaysia.



Figure 4.4.9 show Boy customer T-pose Front view



Figure 4.4.10 shows Boy customer T-pose Back view



Figure 4.4.11 & 4.4.12 show Boy customer T-pose Side views

The second type customer was a high school girl. The girl was wearing a Malaysian high school uniform. When I was designed the character, I wanted to add different types of representative figures or clothing, which can represent Malaysia culture. So, when the people play Mamak Dreams, they directly recognize the cultural elements.



Figure 4.4.13 shows High school girl T-pose Front view

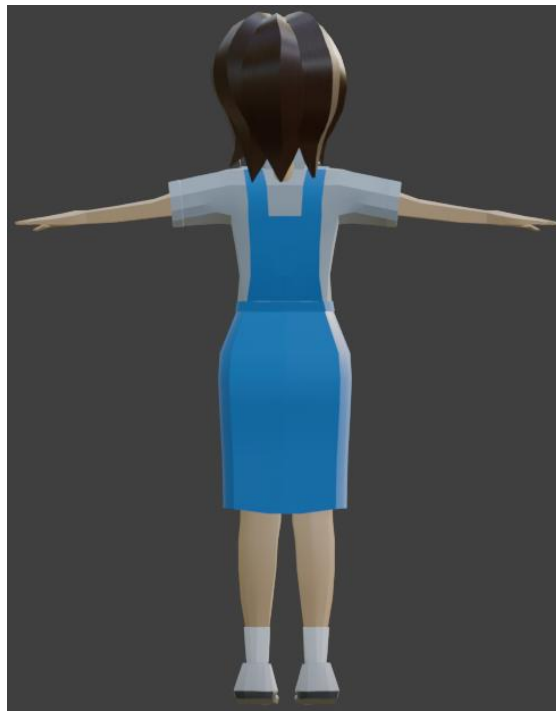


Figure 4.4.14 shows High school girl T-pose Back view

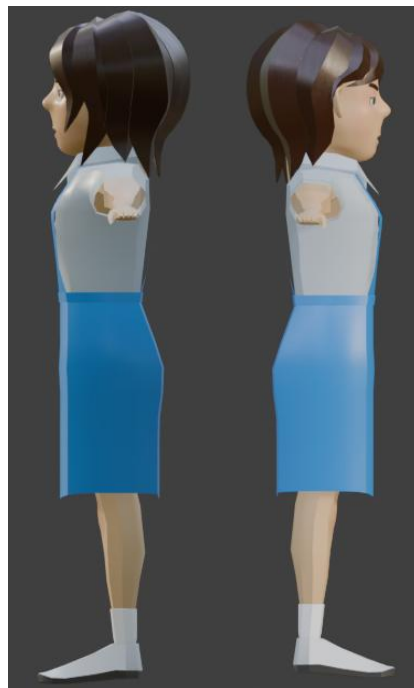


Figure 4.4.15 & 4.4.16 show High school girl T-pose Side views

The third type of customer is the Aunty. Aunty is a term used in Malaysia to refer to older women. I observed the clothing styles of Aunty in Malaysia, and they seem to favor clothes with many floral elements. Therefore, I used floral elements as the texture of the clothes, pairing it with solid-color trousers and closed-toe shoes.



Figure 4.4.17 shows the Aunty T-pose Front view



Figure 4.4.18 show the Aunty T-pose Back view

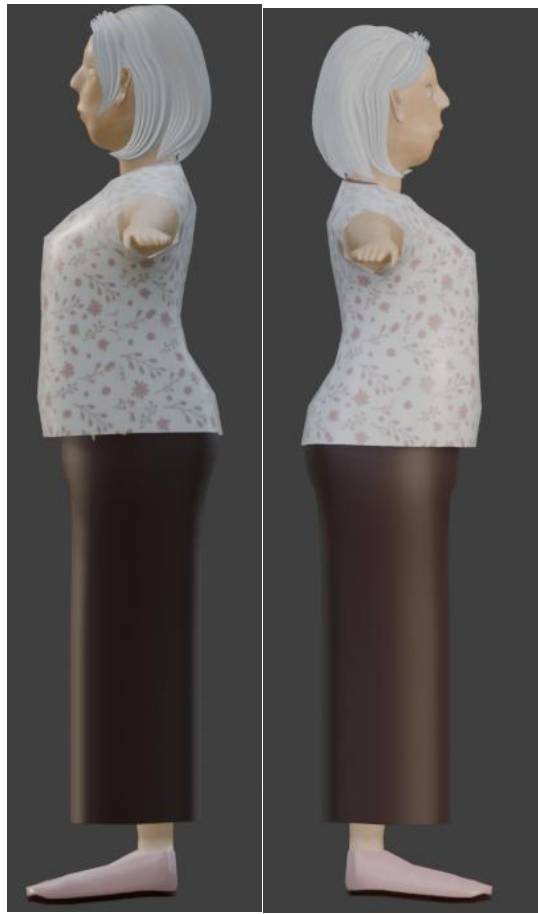


Figure 4.4.19 & 4.4.20 show the Aunty T-pose Side views

4.5 OTHERS 3D GAME PROPS

Cockroach

The cockroach will appear in Level 2 and level 3, the 3d model is low poly. Player needs to kill the cockroach to avoid the customer's patient decreasing faster.



Figure 4.5.1 shows the Cockroach

Props for cutscene

The open sign, the temporarily closed notice paper, the shop signboard and the Michellin award board are created for the restaurant in level 3 bad ending and the happy ending cutscenes. The michellin award design is copy the real Michelin award but I change the name avoid the copyright issues. The shop signboard design uses green and yellow as its main colors, inspired by the Sungai Long Mamak restaurant. It features very eye-catching colors and large lettering, all in capital letters.



Figure 4.5.2 shows the Open Sign



Figure 4.5.3 shows the Michellin award



Figure 4.5.4 shows the Notice paper



Figure 4.5.4 shows the shop signboard

4.6 ANIMATION

Egg animation

I created an open egg animation, the egg fluid will drop down when the egg is opened.

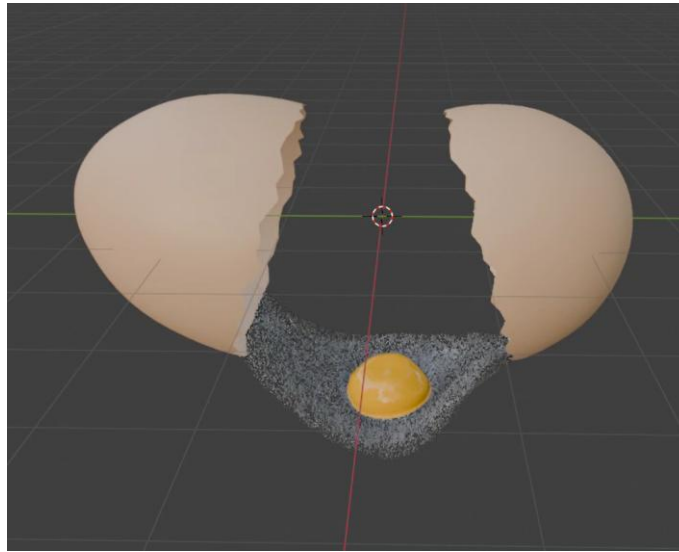


Figure 4.6.1 Open egg animation

Non-playable character movement animation

All NPCs have three types of animation: walking, sitting idle, and eating. I used Mixamo for skeletal rigging, and some of the animations are also from Mixamo which is walk and sit. The customers will walk to the stall and sit down on the chair, used the walk and sit animation. I adjusted the eating animation in Blender to include chewing and raising the hand to eat. The police model have the run and walk animation which is using for the mini game in level 2, police will chase the player.

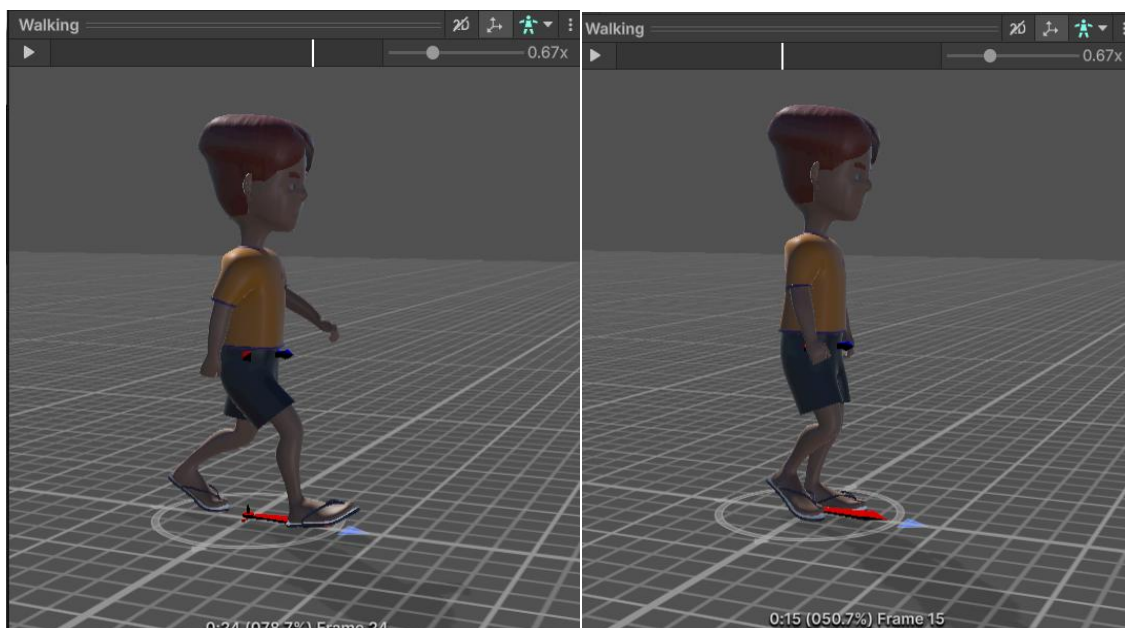


Figure 4.6.2 show the Customer boy walking animation

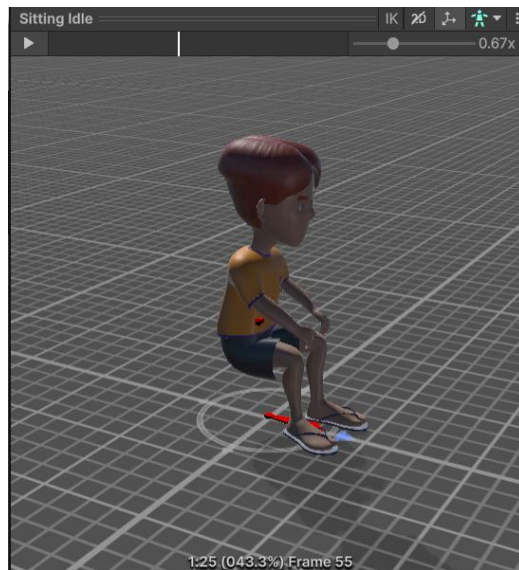


Figure 4.6.3 shows the Customer boy sit idle animation

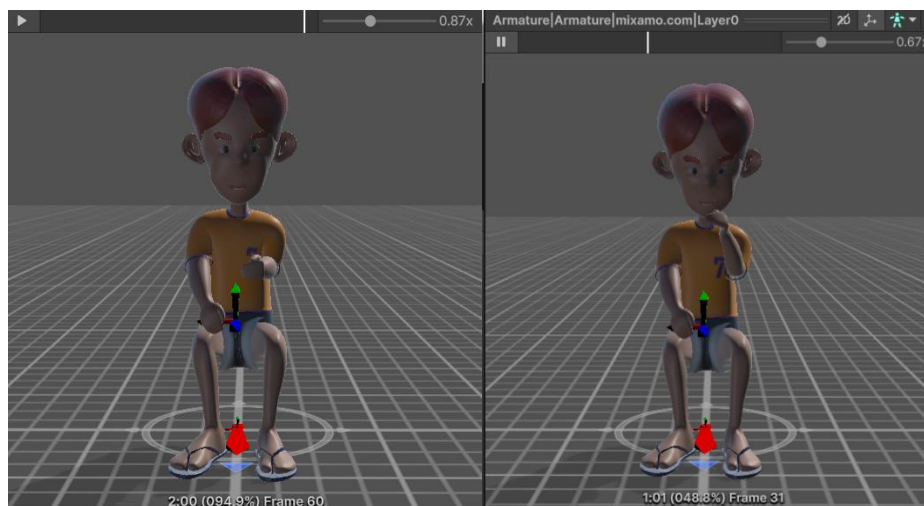


Figure 4.6.4 & 4.6.5 show the Customer boy eating animation



Figure 4.6.6 shows High School Girl walk animation

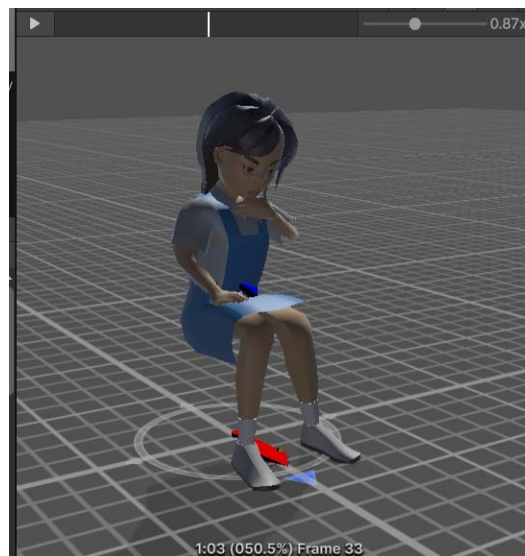


Figure 4.6.7 shows High School Girl eating animation

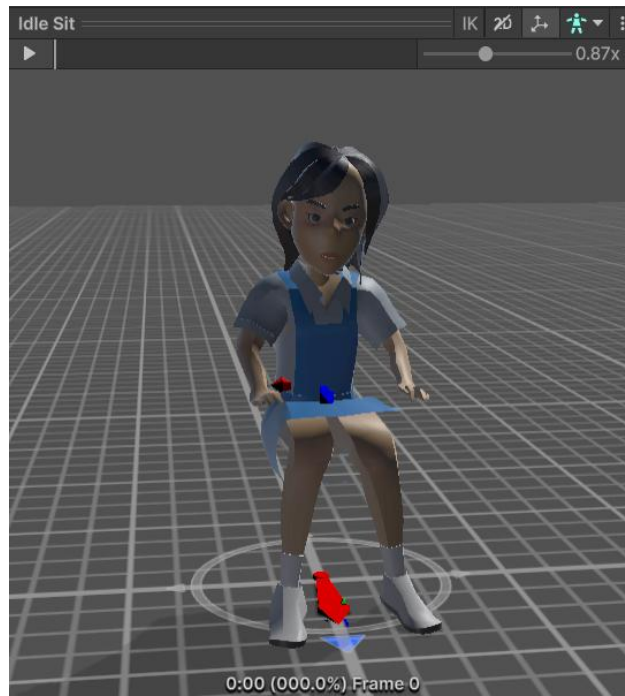


Figure 4.6.8 shows High school girl sit idle animation

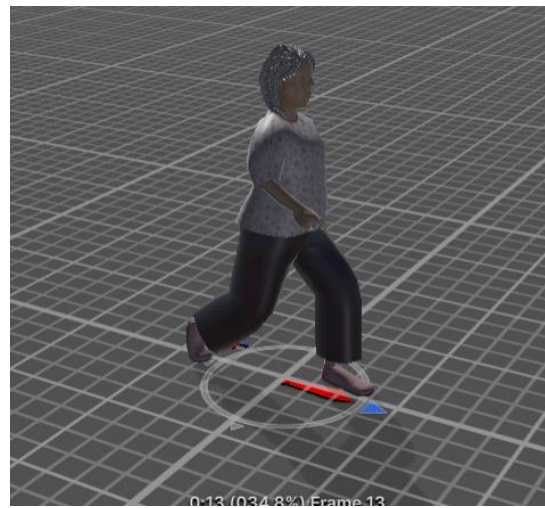


Figure 4.6.9 show Aunty walk animation

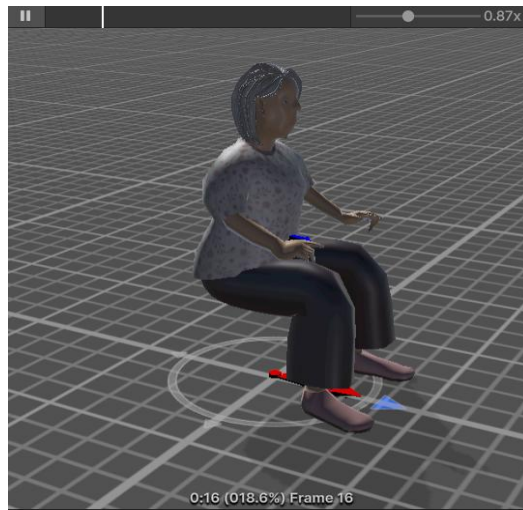


Figure 4.6.10 shows Aunty sit idle animation

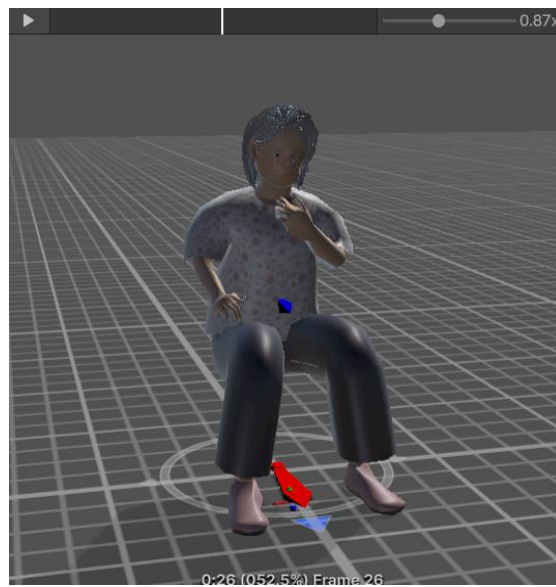


Figure 4.6.11 shows Aunty eating animation

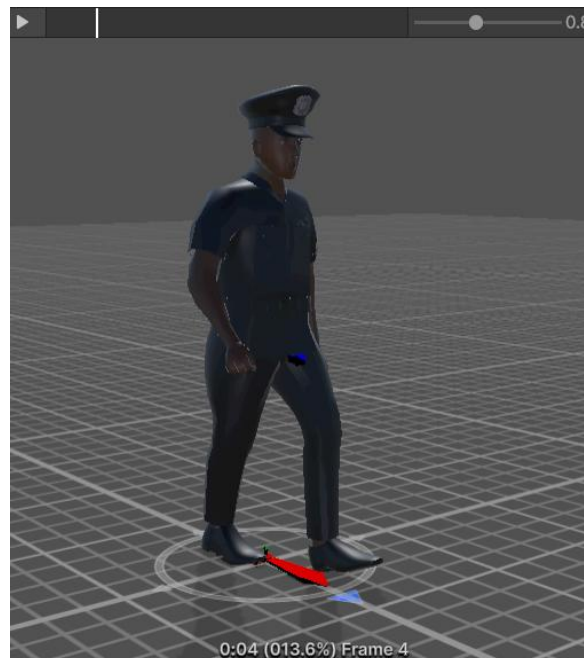


Figure 4.6.12 show Police walk animation



Figure 4.6.13 shows Police running animation

Ending cutscenes

Happy ending

When a player wins the game, a happy ending cutscene plays to congratulate them on their achievement. If the target amount is not reached in each level, a bad ending cutscene plays. Happy ending Storyboard is the short story about the Ali walked into his restaurant in level 3, he looked around and saw the many customers, so he felt happy and satisfy. The phone message notifications sound, Ali's mother sent the congratulations message to his succeed. The camera shows the restaurant become popular and many people queue outside the restaurant. Camera moves to show Ali's restaurant won the Michellin reward, Ali was so happy and cheers for it. The title Your Mamak Dreams Came True! was shown in the end of the cutscene.

This animation is created by the Blender 3D software, and the Phone messaging is created by After effect. The subtitle and sound effect are done in JianYing. Ali's animation is using the Mixama's auto rigging to do the cheer up animation and I do the Ali's hand on waist and the smile animation by using Key Value in Blender.

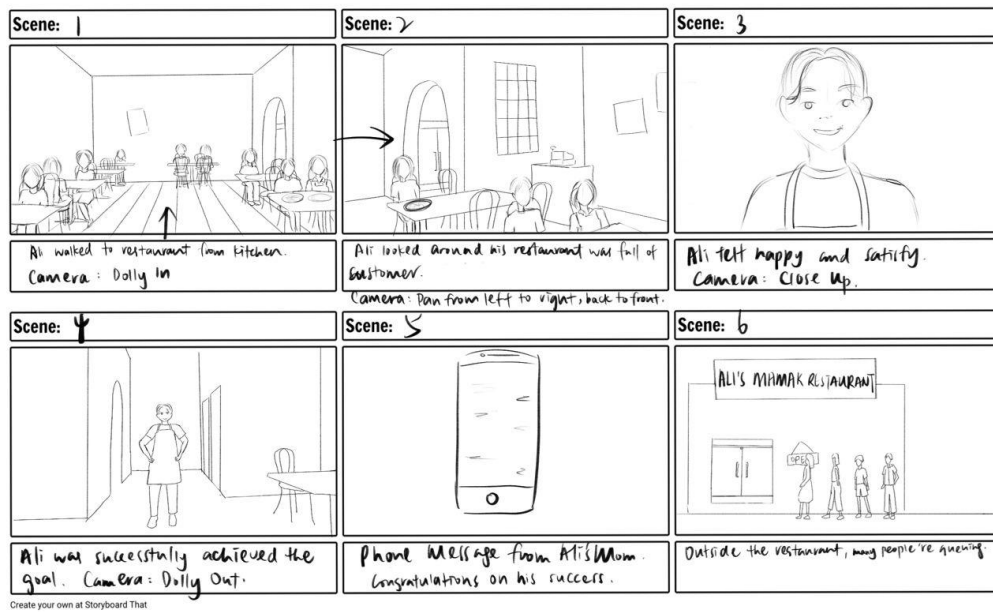


Figure 4.6.14 Storyboard for happy ending cutscene.

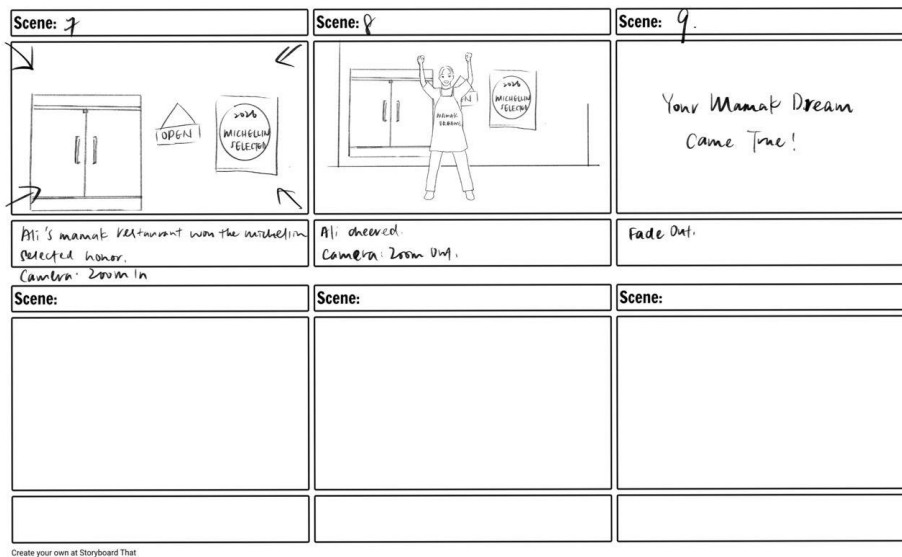


Figure 4.6.15 Storyboard for happy ending cutscene



Figure 4.6.16 Scene 1

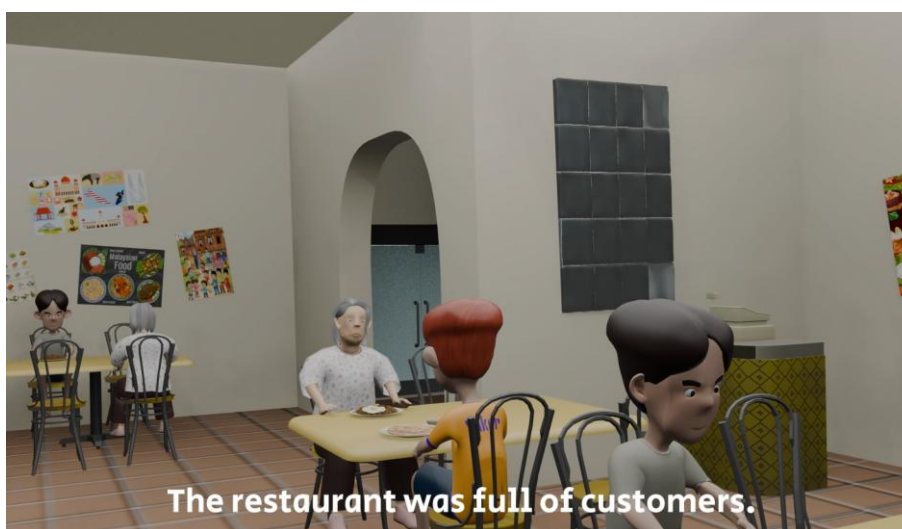


Figure 4.6.17 Scene 2



Figure 4.6.18 Scene 3



Figure 4.6.19 Scene 4



Figure 4.6.20 Scene 5



Figure 4.6.21 Scene 6



Figure 4.6.22 Scene 7



Figure 4.6.23 Scene 8

Bad ending cutscene

The bad ending cutscene is about the Ali was failed to earn enough money to support his Mamak restaurant, he needs to close his shop and go back to kampung.

The cutscene begins with Ali walking from the kitchen into the restaurant, only to find it deserted. The camera pans from left to right, showing falling maple leaves that accentuate the restaurant's desolate state. The camera tilts downwards, showing Ali's legs from a first-person perspective as he sighs loudly. In the scene, Ali sits there, incredulous at his situation and overwhelmed with sadness. He covers his face and weeps. At that moment, he receives a message from his mother, told him must to close the restaurant and return to his hometown.

The camera shows the restaurant in its entirety, then a notice falls down, and the camera zooms in on the notice—the words "Temporarily Closed" appear. The game over screen then appears.

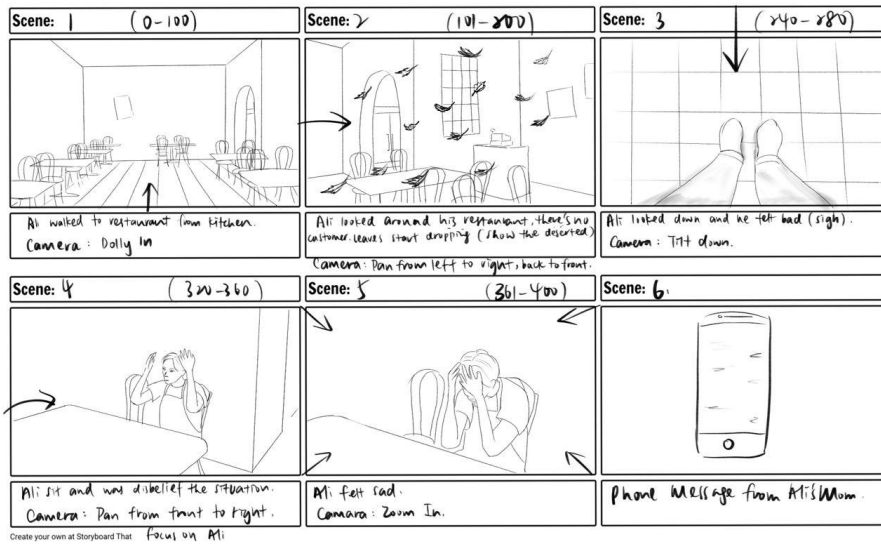


Figure 4.6.24 Storyboard for Happy Ending

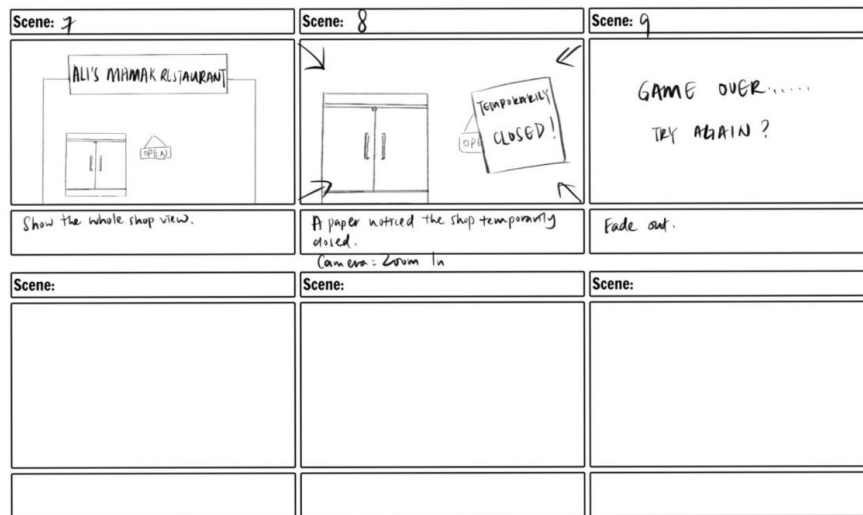


Figure 4.6.25 Storyboard for Happy Ending



Figure 4.6.26 Scene 1

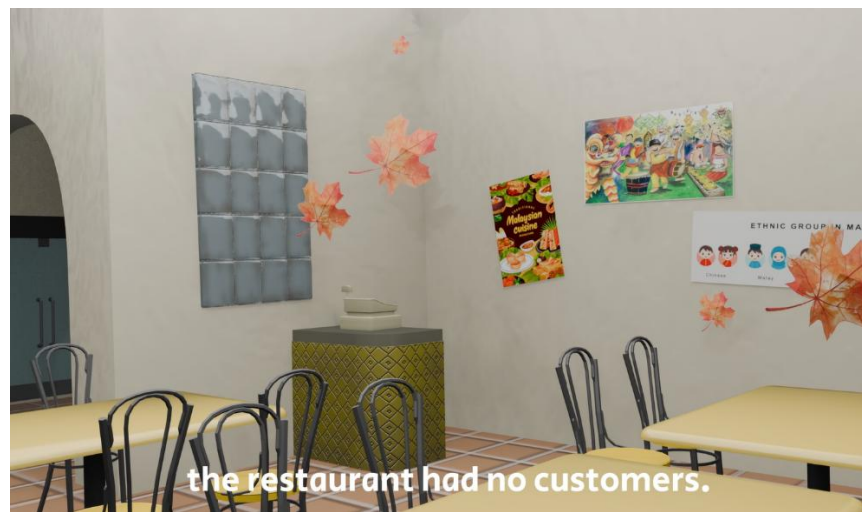


Figure 4.6.27 Scene 2



Figure 4.6.28 Scene 3



Figure 4.6.29 Scene 4

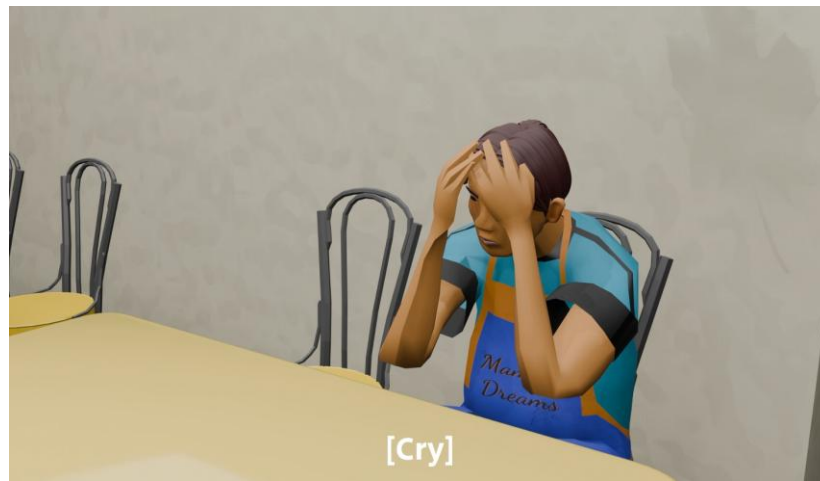


Figure 4.6.30 Scene 5



Figure 4.6.31 Scene 6



Figure 4.6.32 Scene 7



Figure 4.6.33 Scene 8



Figure 4.6.34 Scene 9

Game Trailer

The game trailer used the gameplay videos which is recorded by Sim Wee Puo and I do the editing job in JianYing and put the background music. I did some research and referenced other game trailers like Cooking Stimulator, Cooking companions and others similar games. Their game trailer time is around 30-50 seconds, so I edit the video duration 30 seconds. In my opinion, our game Mamak dreams doesn't have much of a narrative, so the trailer was showed about cooking, serving, and challenges. So I think a short and direct approach is more likely to capture players' attention, and they probably don't have the patience to watch videos longer than a minute long on social media. The sound effect I use the Indian style and upbeat music to let the player feel excitement and give a sense of the fast pace for the game.



Figure 4.6.35 One of the scenes in Game trailer



Figure 4.6.36 One of the scenes in Game trailer



Figure 4.6.37 One of the scenes in Game trailer

5.0 METHODOLOGY / FINDINGS

5.1 DATA PRESENTATION

The survey data collected for the study on how the impact of the culture localization on player immersion in video game. The survey is conducted by the google form questionnaire and the survey consisted of several sections including demographic information, gaming experience in cultural localized game, player immersion and a open ended question.

I find 20 persons to fill this survey form to support my research objectives. The persons who filled this survey is mainly have the gaming experience and familiar with the Malaysia cultural background because the understanding of the cultural localization may influence their perceptions while filling this survey form.

5.2 RESULTS/ FINDINGS

Demographic information

The Section A are the basic questions to collect the player background information. The first question is the age of the participant. Based on the figure chart, we can see most of the participants were young adults and their aged between 18-25. The participant is 26-30 aged categories have one. It shows the participants may be the colleges students.

What is your age group?
20 responses

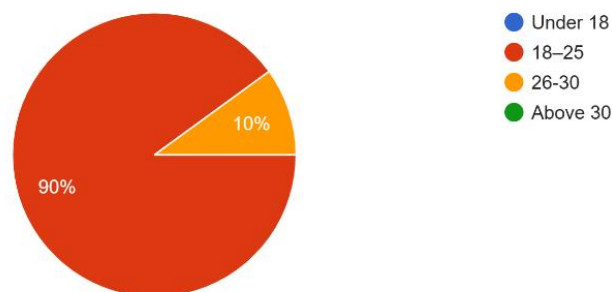


Figure 5.2.1 shows the Age group chart

The second question is the cultural or national background of the participant, all the participants is Malaysian, so they are familiar with the Malaysia cultural elements and background.

What is your cultural or national background?

20 responses

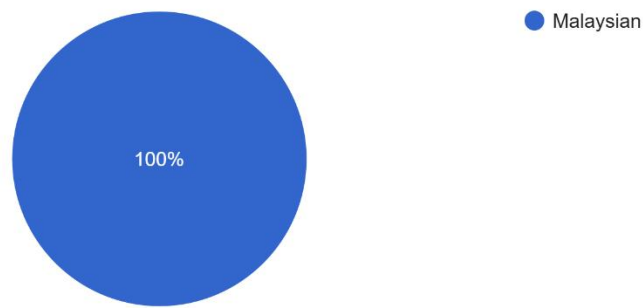


Figure 5.2.2 shows National Background chart

Third question is the gender of the participant. We can see the female and the male percentage is equal. This balanced gender data helps ensure that the collected data fairly, it reflect the perspectives of both sexes, reducing gender bias in the assessment process.

Gender

20 responses

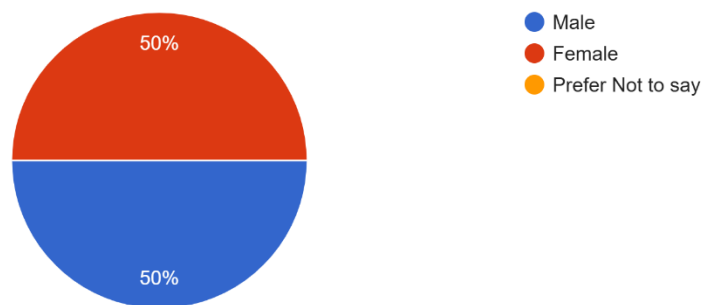


Figure 5.2.3 shows Gender chart

Based on the chart, we can see 35% of the participant are playing game daily. Several Times a week and once a week are both have the 25% of the participant. The participants who rarely play

the game is 15%. The results show that all participants have the gaming experience and lots of them spending time on the video game.

How often do you play video games?

20 responses

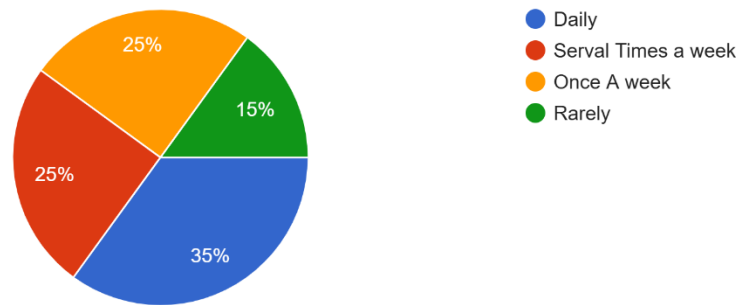


Figure 5.2.4 show participants' gaming frequency

Based on the chart, the participants are most likely to the PC/Laptop to play the games, have the 17 persons and the 85%. Other participants are using mobile phone and console to play game have the 45% (9 persons) and the 15% (3 persons) respectively.

What platform(s) do you primarily use to play games?

20 responses

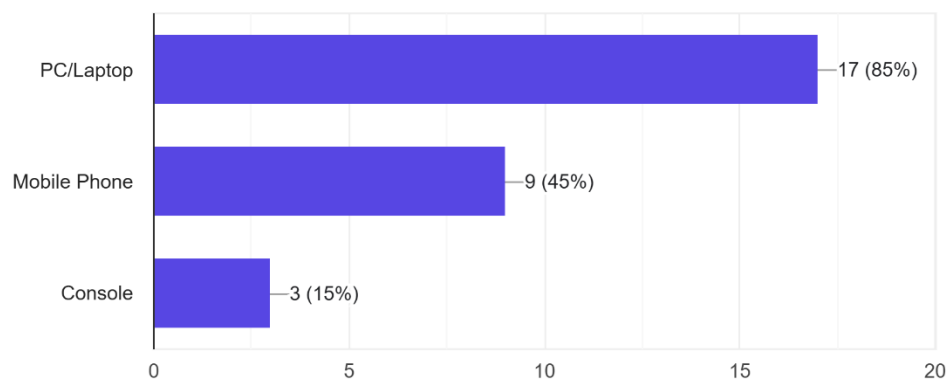


Figure 5.2.5 show Participant prefer platforms

Based on the chart below, we can know that the participants are more likely to play the Role-playing game (RPG), Action game and Casual game, the percentage is highly over than other type of games. The horror game lover is the less percentage.

What type of games do you usually play?

20 responses

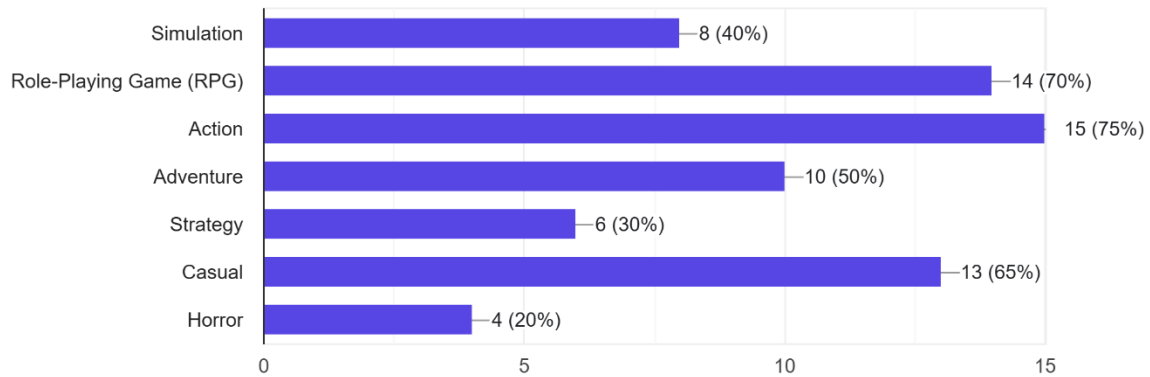


Figure 5.2.6 show Participant prefer game genres

Based on the chart below, have 80% participant familiar with the game contain cultural elements from certain countries or community in the game. The left 20% participants are not familiar with. This result show that most of the player can feel the cultural elements while playing the games.

Are you familiar with games that contain cultural elements from specific countries or communities?

20 responses

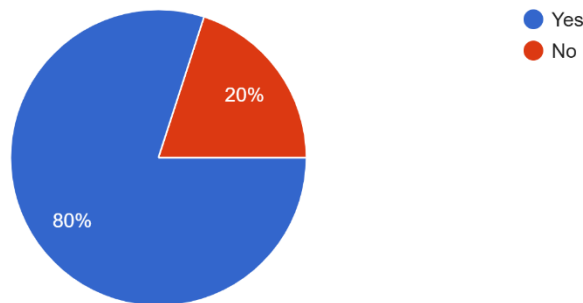


Figure 5.2.7 show Participant familiar with culture elements in game

Section B questions are focused on the participants experiences with the cultural localization in game. Based on the chart below, 60% participants answered “Yes”, 25% participants answered “Maybe” and 15% participants answered “No”. This results show that most of the participants have experienced game contain the cultural elements in the game. Showing the culture localization is increasing common in video games nowadays.

Have you played games that include culturally localized content such as traditional food, language, festivals, clothing, or local environments?

20 responses

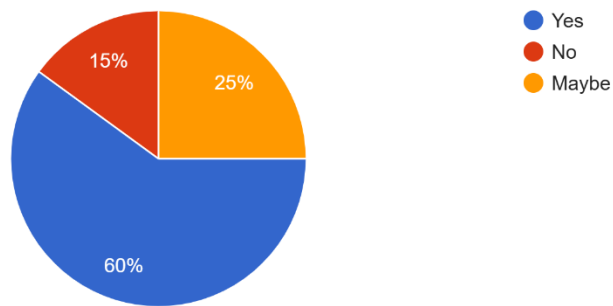


Figure 5.2.8 show Participant's gaming experience in cultural elements

Based on the chart below showed that the Architecture and environment have 40% attract the player's attention. Language and dialogue and clothing and character design have the same 20%, while the food and cuisine have 15%. This result show the game environment is most important than other elements in a game.

Which cultural elements in games attract your attention the most?

20 responses

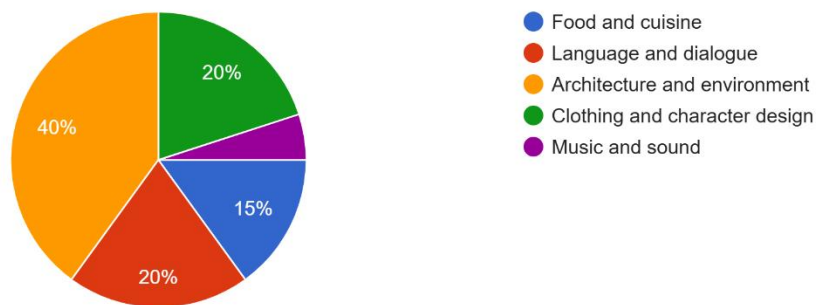


Figure 5.2.9 show Participant's prefer cultural element

Based on five-point Likert scale below, the culturally localized element make game more realistic have 10 persons strongly agree, 6 persons agree and 4 persons are neutral. This result show most of the participants are agree with the cultural localization make the game feel realistic.

In your opinion, culturally localized elements make games feel more realistic.
20 responses

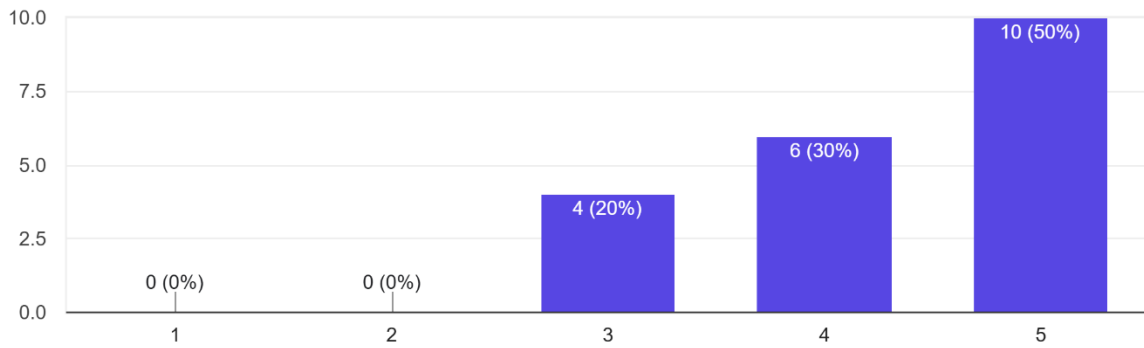


Figure 5.2.10 show Participant's feelings in cultural elements in game

Based on five-point Likert scale below, the culturally localized element increases player's emotional connection with the gameplay experience, 6 persons strongly agree, 10 persons agree and 4 persons are neutral. This result show most of the participants are agree with the cultural elements make them have the emotional connection with the game.

Cultural elements in games increase my emotional connection to the gameplay experience.
20 responses

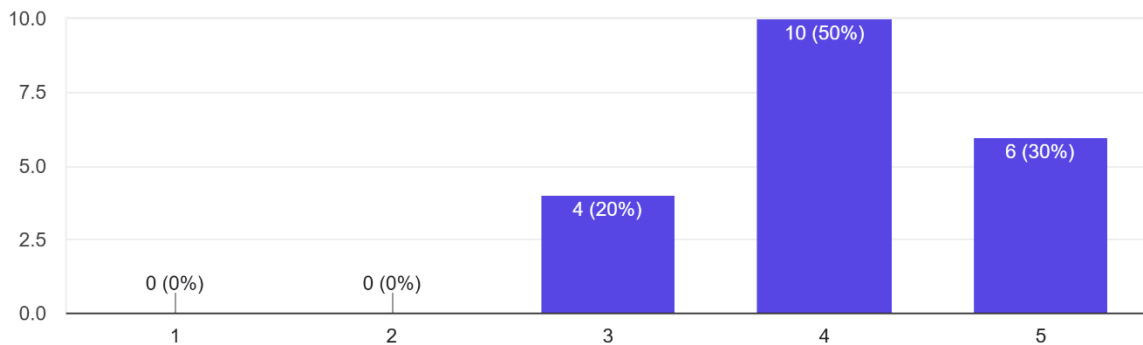


Figure 5.2.11 show Participant's emotional connection

Based on five-point Likert scale below, participants feel immersion when the game contain the familiar cultural references, 11 persons strongly agree, 4 persons agree, 4 persons are neutral and 1 person disagree. This result show most of the participants are agree with they are feeling more immersion when the game appeared the cultural element they familiar with.

I feel more immersed when a game contains familiar cultural references.

20 responses

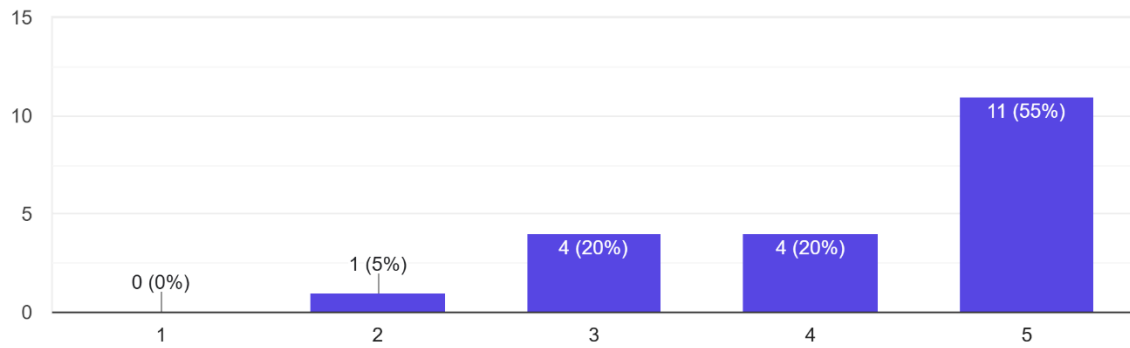


Figure 5.2.12 show Participant's immersion

Based on five-point Likert scale below, participants interested in learning about different culture through games, 13 persons strongly agree, 5 persons agree and 2 persons are neutral. This result show most of the participants are agree with they are likely to learn about the different cultural in game world.

I am interested in learning about different cultures through video games.

20 responses

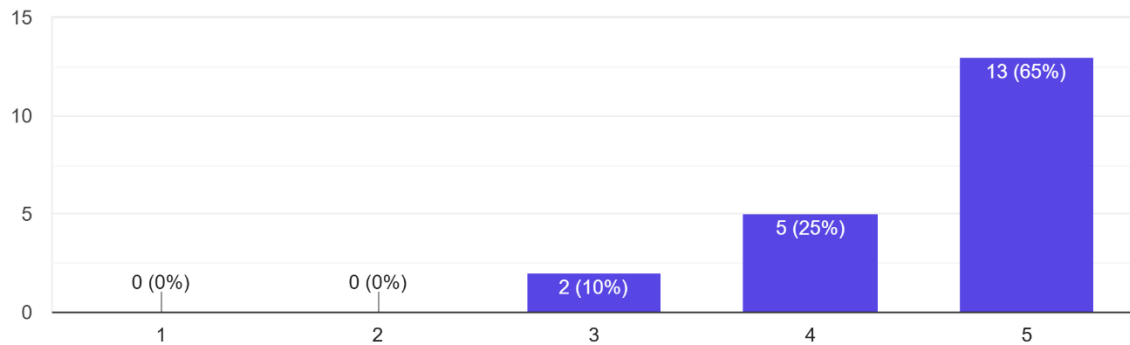


Figure 5.2.13 show Participant's Interest

Based on five-point Likert scale below, poor or inaccurate cultural representation will negatively affect player's gaming experiences, 8 persons strongly agree, 7 persons agree, 3 persons are neutral and 2 persons disagree. This result show most of the participants are agree with they are feeling bad or affect negatively when encounter the poor or inaccurate cultural representations in game world.

Poor or inaccurate cultural representation negatively affects my gaming experience.

20 responses

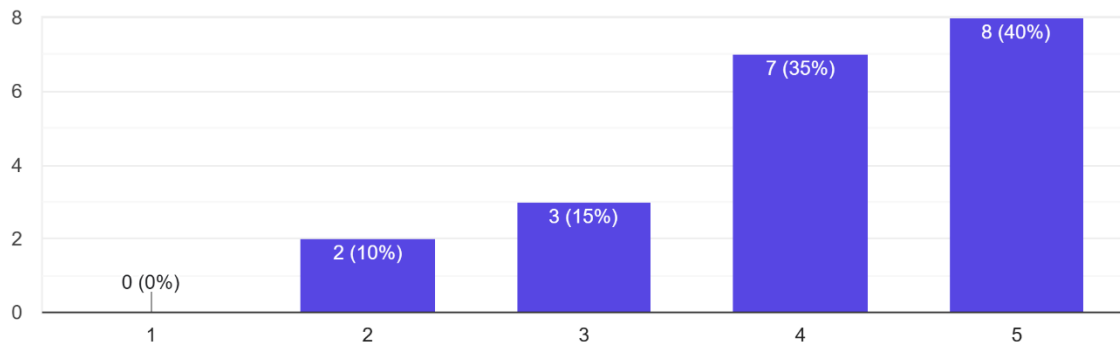


Figure 5.2.14 show Participant's Feeling

Section C questions focus on the participants experience.

Based on five-point Likert scale below, cultural localization increases their immersion in game, 7 persons strongly agree, 8 persons agree and 5 persons are neutral. This result show the importance of the cultural localization in game will increase player immersion in game.

Cultural localization increases my immersion in a game.

20 responses

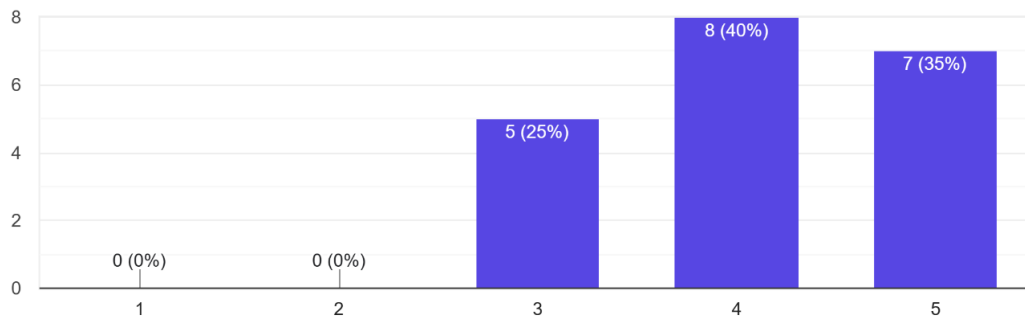


Figure 5.2.15 show Participant's immersion

Based on five-point Likert scale below, player feel more engaged when gameplay reflect the real-world cultural practices, 8 persons strongly agree, 9 persons agree and 3 persons are neutral. This result show the player feel more engaged to stimulate the real-world culture practice in game world.

I feel more engaged when gameplay reflects real-world cultural practices.

20 responses

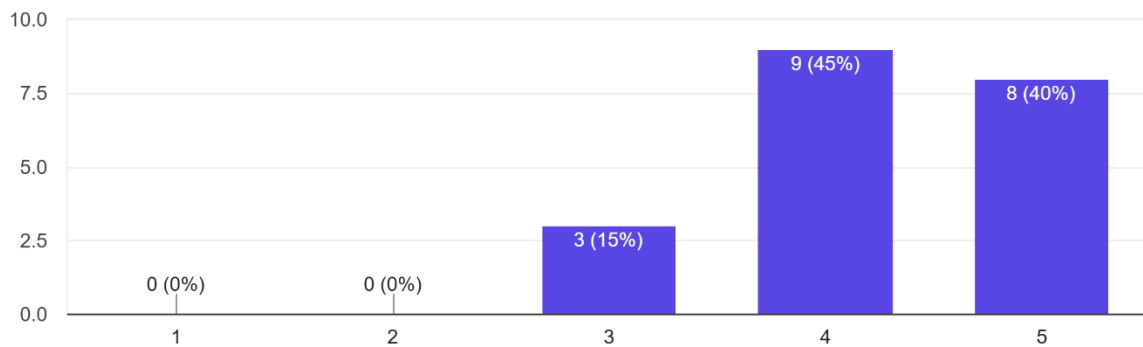


Figure 5.2.16 show Participant's engagement

Based on five-point Likert scale below, cultural representation is important in modern video game design, 11 persons strongly agree, 3 persons agree, 4 persons are neutral and 2 persons disagree. This result show players think that cultural representation is important in modern game design.

Cultural representation is important in modern video game design.

20 responses

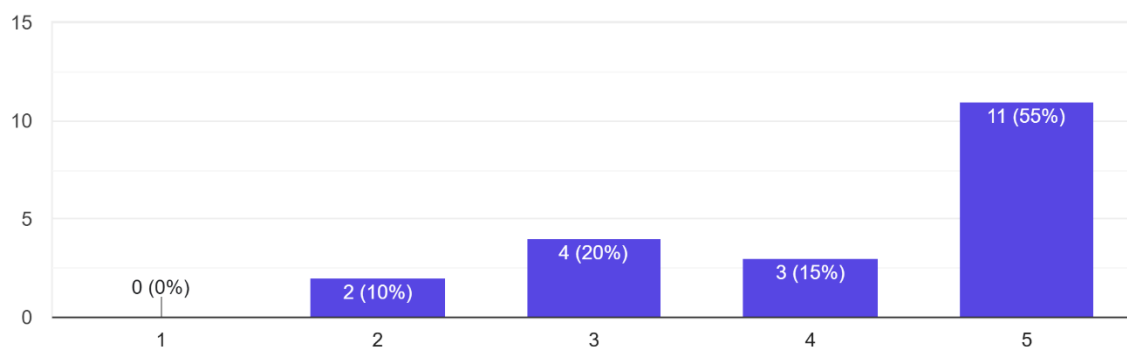


Figure 5.2.17 show Important of Cultural Representation

Based on the chart below, The games that participants are familiar with, Persona 5 have the highest selected, 15 persons. Ghost of Tsushima and Animal Crossing have 10 persons and 6 persons respectively, who people familiar or played before these games. Persona 5 and Ghost of Tsushima are both famous for the cultural localized game environment and gameplay. That I have researched in the Literature Review chapter.

Which of the following games have you played or are familiar with?

20 responses

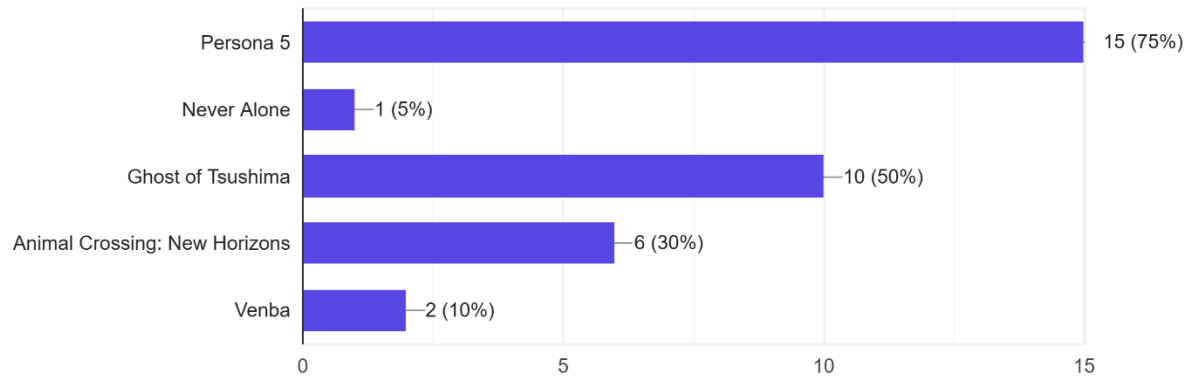


Figure 5.2.18 show Participant played game

The last question in this survey is the Open ended question, asking the participants played where the game's cultural localization made you feel immersed or left a deep impression. Participants have experienced the game contain cultural elements, the Mamak Dreams also let the player feel immersion through the localized cultural elements game design.

Give an example of a game you've played where the game's cultural localization made you feel immersed or left a deep impression.

20 responses

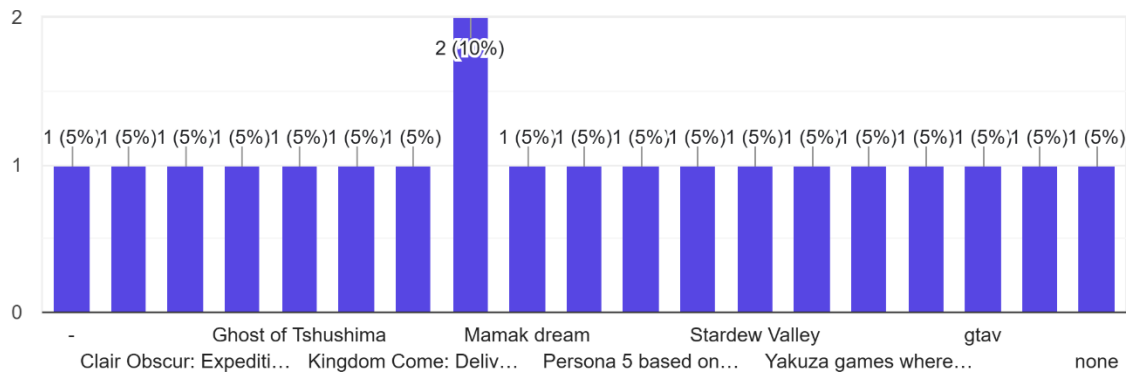


Figure 5.2.18 show Participant example

6.0 CONCLUSION

6.1 RESULT

My team completed the game development, done the test game and fix the bugs before the beta demo. On the day of the game beta presentation there were no serious bug affect the showcase; luckily the game operated without any bugs. My assigned parts were all completed and uploaded to the teammate for programming on time. Our group's project achieved the quite high completion rate.

This thesis is aimed to investigate the impact of cultural localization on player immersion through a localized cultural element video game. Based on my research on literature review, the survey results that cultural localization positively influenced player immersion. Most of the player who have played Mamak dreams responded positively toward our game concepts - Malaysia Mamak culture.

From the literature review I have conducted, it is shown that the use of known cultural symbols can aid in fostering stronger ties between the player and the gaming world. Immersion and emotional engagement was more often achieved in instances where there was interaction with gameplay mechanisms that mimicked cultural experiences. Further, from the results of this research, cultural localization can enhance the uniqueness and identity of a game while maintaining enjoyable gameplay experiences.

Overall, the research objectives were successfully achieved, as the study was able to evaluate how cultural localization affects player experience and how players perceive culturally localized game content. The survey give a strong supported to the thesis topic, showing the players are admitted and enjoyed playing the game localized by the cultural elements. The findings contribute to a better understanding of the importance of cultural localization in modern game design and player engagement.

6.2 LIMITATION AND FUTURE IMPLEMENTATION

The limitation was that our game included mini games in the Level 2 and 3 during the initial discussions and design. However, due to our limited capabilities and time constraints, we decided to remove the police chase and clean toilet mini games. We already had a completed mini-game idea where the player is chased by the police. This gameplay was designed to fit the roadside stall setting of the second level, so we designed this challenge is aim for players feel challenges because they need to pay attention to whether the police are approaching while cook and serve the customer at the same time. If the police come over, the player must run away immediately or be fined. Additionally, another mini game in level three required players to maintain the restaurant's cleanliness, so we designed it so that players had to use the toilet brush to clean the toilets. Dirty toilets would affect customer numbers and decrease patience more quickly.

As for my part, my familiarity and skills with character animation was limited. Therefore, when I was creating the animation of characters eating, the characters' movements were stiff and unnatural. This is an area I need to improve and refine my animation skills.

For the future implementation of Mamak Dreams, it should be that our team fix some bugs and do the changes based on the suggestions and feedbacks that tested play by the player during exhibition. Some comments like suggest becoming a Co-op game like Overcooked. Allowed two players play together because they feel too busy to serve and cook. Other feedback received about the game difficulty too hard, the customer patient bar drops too fast, and they are not able to serve the customer and kill the pest at the same time. Other comments like the publish this game to become a VR game, because the gameplay is very realistic need to hold, cut, place, interact and cook, can be considered to do the VR version.

6.3 PROBLEM ENCOUNTER AND SOLUTION

Problems faced during the development state, the first problem is my animation skills. I didn't good at the animation procedure and how to do the animation that can work in unity. I put a lot of time to study and keep trying the ways. When I was creating a eating animation in Blender, I encountered an issue where the customer's chewing animation wouldn't display after importing it into Unity because I wasn't familiar with the animation process. After repeatedly adjusting the animation and export settings, then finally import the animation to display correctly in Unity.

When I was doing the drink (Lima Ice) in substance painter, I faced the issue to let the drink have the transparent effect. I searched for the online tutorial to follow how to do the transparency for the drink step by step.

Besides, When I do the Granny 3d model, I use the particle system to do the hair initially. But the problem happened, when I try to export the whole model to do the texture and animation, the hair disappears and doesn't show even though I already convert it into mesh. I still cannot find the solution to fix it, so I modeled the hair again instead of using particle system.

6.4 CHALLENGES DURING DEVELOPMENT

The time management is the main challenges during the game development. As we have the 22 weeks to do the game, we have other course work need to submit and need to keep the game progress. So the time management is really challenging for me to do the multiple tasks in this semester. In alpha stage, our group only show the level 1 gameplay, and other two levels and one tutorial gameplay need to be completed in this semester. We are rushing to do the game assets and let the programming part can be done on time.

Another challenge is the communication of the teamwork. We are two artist and one programmer team, so artists will do all the game design part and assets for the game, while the programmer do the whole game alone. As we rarely have the meeting online or physical, and we communicate all the progress via WhatsApp, it's inevitable that we'll have communication errors and misunderstandings. When problems came out when we tested play the game, somewhere is different as what we expect to the project, but some very critical issues need to be adjusted before beta show. For example, we discussed the player fail to earn the certain money will trigger bad ending cutscene in level 1; the happy and bad ending will be triggered in level 3. But the built game showed every level have this mechanics to trigger the bad ending. In this case,

obviously we have the misunderstanding between us, so we try to find the better way to adjust and make our game complete is the most important things.

6.5 CONCLUSION

Through my final year project, we need to develop a game, and thesis topic also help my game and let me more understand the cultural localization for a game through the research in this field. I studied the cultural localization and implement into my artwork for the game assets. For example, the mi goreng, the character design and the game environment, the whole game is fully localized by the Malaysia culture.

This project gives me a valuable experience and learning journey, improving my problem-solving skills, the technical skill and the most important communication skills. The challenges that I faced will let me become more stronger and help me identify my weaknesses. I worked with other two teammates, appreciated for their efforts and time for this project, so the game can be done on time and let the people to play on exhibition. Greatly, we received some positive feedback and suggestion, so we will consider doing the enhancement for this game Mamak Dreams in future.

7.0 REFERENCE

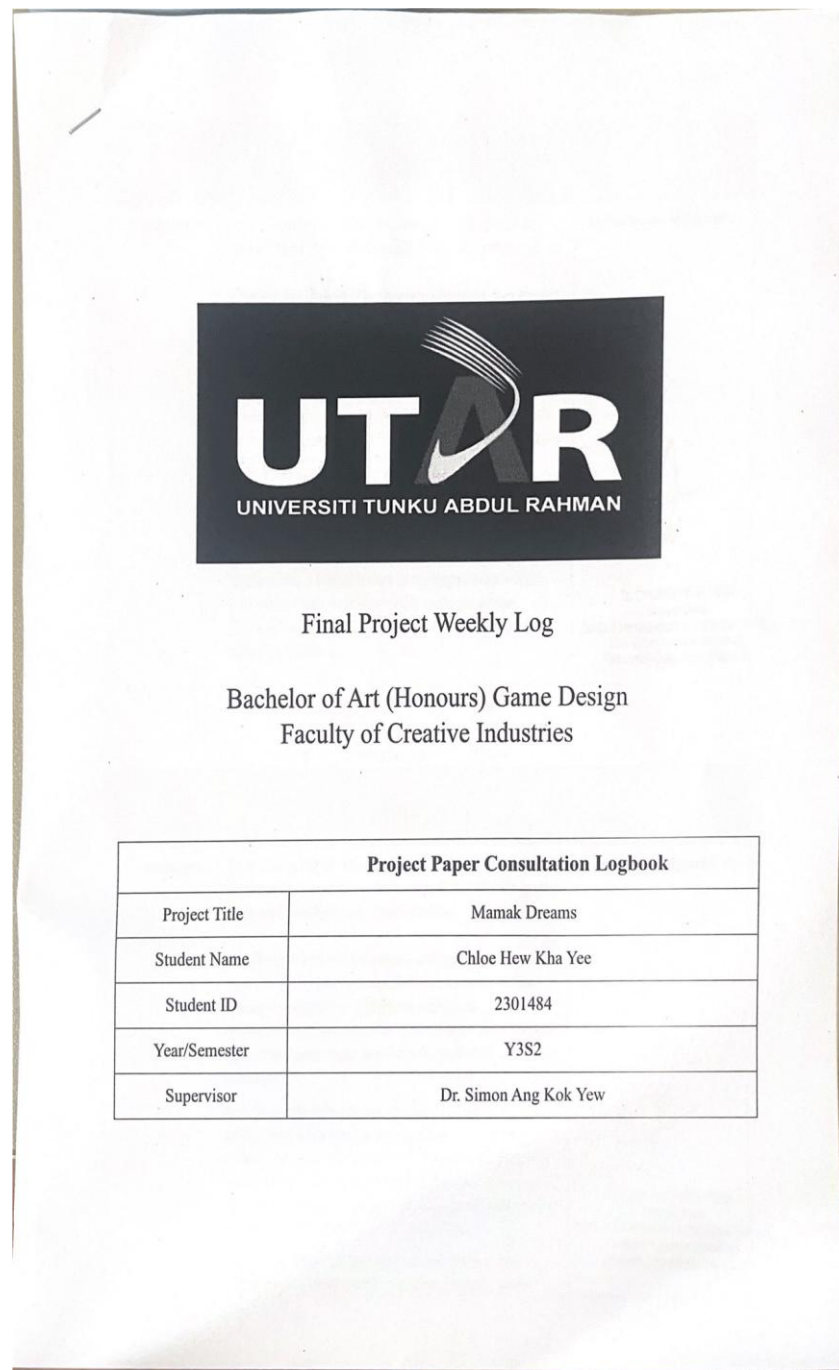
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8.0 APPENDIX

8.1 WEEKLY LOG



UTAR
UNIVERSITI TUNKU ABDUL RAHMAN

Final Project Weekly Log

Bachelor of Art (Honours) Game Design
Faculty of Creative Industries

Project Paper Consultation Logbook	
Project Title	Mamak Dreams
Student Name	Chloe Hew Kha Yee
Student ID	2301484
Year/Semester	Y3S2
Supervisor	Dr. Simon Ang Kok Yew

Figure 8.1.1 Cover Page

WEEK 01											
Comments: Task Completed: Find teammates and propose game ideas. Do the discussion for the proposal. Challenges Faced: Our team generated two strong concepts, and both had appealing features. Because of this, the discussion became longer and more complicated. Each idea had different gameplay mechanics, themes, and technical requirements, making it difficult to decide which one was more realistic for our current skill level. Solution: We brainstormed again to discuss the game ideas in more detail, everyone may understood the direction the game should take. Reflection: I learned that the communication is essential when working with multiple ideas. Without structured discussion, the team may get stuck or confused.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman										
Progress (please circle the feedback) <table border="0"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>Poor</td> <td></td> <td>Satisfactory</td> <td></td> <td>Good</td> </tr> </table>	1	2	3	4	5	Poor		Satisfactory		Good	Date:
1	2	3	4	5							
Poor		Satisfactory		Good							
WEEK 02											
Comments: Task Completed: Discuss the game idea and do the proposal presentation slide. Finalize the two-game idea and conduct first consultation. Challenges Faced: Our team struggled with finalizing the two game ideas because both had strong concepts but different technical requirements. We also faced difficulty determining which features were realistic for our skill level and timeline. Solution: To solve these issues, we broke down each game idea into simple components and evaluated what we could and could not create realistically. We discussed each feature based on our roles (artist, programmer, designer) and used quick voting to finalize the two ideas. Reflection: Through this process, we learned the importance of clear communication, realistic scope	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman										

Figure 8.1.2 Week 1 &2 Weekly Log

planning, and structured idea comparison. Finalizing two ideas required teamwork and compromise, and the consultation helped us recognise weaknesses we missed earlier.	
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

WEEK 03	
Comments: Task Completed: Do the adjustment of slides after consultation. Do the second consultation. Discuss the Gantt chart and assign the jobs. Challenge Faced: We also faced difficulty planning the Gantt chart since we were unsure how to divide tasks fairly based on workload and team strengths. Solution: For the Gantt chart, we listed all tasks needed for the project and assigned roles based on each member's skills and availability, making the workload more balanced and realistic. Reflection: Finalizing the Gantt chart helped us understand project planning better and clarified everyone's responsibilities.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 04	
Comments: Task Completed: Improve the proposal slides and do the proposal presentation. Decide we want to do which game idea and begin to do the game asset(Cabbage and different conditions) and animation. Challenge Faced: We needed to improve the game idea after presented the game proposal. When creating animations for game props, I encountered a problem	Supervisor signature:

Figure 8.1.3 Week 3 &4 Weekly Log

where the animations wouldn't run properly after being imported into Unity. Solution: I do the research how to do the animation that can work for unity, follow the tutorial from youtube and asking Chatgpt to guide me. Reflection: Fixing the animation issues in Unity taught me how to troubleshoot technical problems through research and guidance. I become more understand the workflow when doing the animation assets.	 Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman										
Progress (please circle the feedback) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Poor</td> <td></td> <td>Satisfactory</td> <td></td> <td>Good</td> </tr> </table>	1	2	3	4	5	Poor		Satisfactory		Good	Date:
1	2	3	4	5							
Poor		Satisfactory		Good							
WEEK 05											
Comments: Task Completed: I'm continuing to create game items. The animation issue has been fixed, and it runs normally after being imported into Unity. Challenge Faced: While creating game items, I initially struggled with ensuring that the animations worked properly in Unity, as some were not playing correctly after import. Solution: After applying the correct settings, the animations now run smoothly in Unity. Reflection: Fixing the animation issue improved my understanding of Unity's animation system.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman										
Progress (please circle the feedback) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Poor</td> <td></td> <td>Satisfactory</td> <td></td> <td>Good</td> </tr> </table>	1	2	3	4	5	Poor		Satisfactory		Good	Date:
1	2	3	4	5							
Poor		Satisfactory		Good							

Figure 8.1.4 Week 4&5 Weekly Log

WEEK 06	
Comments: Task Completed: I'm continuing to create 3d game assets included the chicken breast, chicken cube, Mi goreng model. Challenge Faced: When creating the Mi goreng, I tried to avoid modelling Mi Goreng in a low-poly or cartoonish way. I find out if the model is very low-poly, that wouldn't look like Mi Goreng. When showing the works during consultation, got the feedback the chicken cube looks too square. Solution: I use textures to make Mi Goreng more realistic. Do the chicken cube model improvement be more soft feeling. Reflection: Making more research before doing the models. Refer to the feedback and make the changes to show the better works.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 07	
Comments: Task Completed: I created a 3D model of the customer character, import the character model into Mixamo to create the animation included walk, sit and idle. I adjusted the Mi Goreng model to make the noodles softer and less firm. Challenge Faced: After importing the model assets into Unity, parts of the model became transparent, and the textures were displayed incorrectly. I later discovered that it was a problem with the facial orientation. Solution: I flip the normal of the model faces into correct orientation in Blender. Reflection: When I encounter a problem, try to find a solution and check if there are any issues with the steps you have already taken to find the root cause of the problem.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

Figure 8.1.5 Week 6&7 Weekly Log

Project Paper Consultation Logbook	
Project Title	Mamak Dreams
Student Name	Chloe Hew Kha Yee
Student ID	2301484
Year/Semester	Y3S3
Supervisor	Dr. Simon Ang Kok Yew

WEEK 01	
Comments: Task Completed: Draw the recipe of Mi Goreng. Do the 3d game assets of the Mi Goreng Telur, and the customer I Eating Animation. Challenges faced: When I was creating a eating animation in Blender, I encountered an issue where the customer's chewing animation wouldn't display after importing it into Unity because I wasn't familiar with the animation process. Solution: After repeatedly adjusting the animation and export settings, I finally succeeded in importing it and getting it to display correctly in Unity. Reflection: I have learned to use the key pose to do the animation. When I encounter a problem, I find a solution and then keep trying to fix it.	
Progress (please circle the feedback) 1 2 3 <u>4</u> 5 Poor Satisfactory Good	Date:

Figure 8.1.6 Week 1 Weekly Log

WEEK 02	
Comments: Task Completed: Done the 3d models- Roti Canai ,dough, butter cubes, butter slices, raw roti and the dhal. Reflection: After group discussion, we decided to add the dhal with roti canai when served to customer. Adding an extra dish would increase the gameplay and make the food more logical, since dhal is served with roti canai in real-life mamak stalls.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 03	
Comments: Task completed: Done the 3d game assets – The Ice, Limau Ice, Limau, ice cube, potato & potato cubes, carrot & carrot cubes, onion & onions slices and curry cube. Challenged faced: When doing the drink in substance painter, I faced the issues to let the drink have the transparent effect. Solution: Ask the google and youtube tutorial to follow how to do the transparency for the drink. Reflection: Still need to do more practices, familiar with software.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 04	
Comments: Task Completed: Cockroach 3d model and customer 2 model & animation (sit idle, walk and eating animation). Reflection: I've already done animation for Customer t 1, so I am more familiar with the animation production process.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

Figure 8.1.7 Week 2 &3 &4 Weekly Log

WEEK 05	
Comments: Task completed: Adjust the customer 2(Girl) hair color and the eating animation issue of customer 1. Challenge faced: Customer 1 have the issues – the leg too short can't reach the floor when sitting on the chair, so need to adjust the leg length and the animation. Solution and reflection: Need to adjust the model and the animation and reimport into unity to test whether the model is suitable for the chair or not.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 06	
Comments: Task Completed: Done the Police 3d models and the animation - walk and run, also done the bicycle game props for level 2. Reflection: When doing the police model, I need to do the research before starting modelling.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

Figure 8.1.8 Week 5&6 Weekly Log

WEEK 07	
Comments: Task Completed: Draw the 2d spilled spot for the player step on cockroach. This week I have not made much progress, I do the other course assignment due this week.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 08	
Comments: Task Completed: Draw the 2d recipe for the dishes – Roti canai & Dhal and the drink – Limau ice and Teh ice. Draw the 2d food and drink icon for customer order the dishes and drinks. Reflection: When I do the texture for the drink, the transparency texture didn't work when I import the texture from Substance Painter, I find out that I do the wrong setting in SP so it didn't work in blender.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

Figure 8.1.10 Week 7&8 Weekly Log

WEEK 09	
Comments: Task Completed: Draw the 2d footstep for player step on cockroach. Done the customer 3 Granny 3d model. Challenged faced and solution: When I do the Granny 3d model, I use the particle system to do the hair, but when I try to export the whole model to do the texture and animation, the hair disappears and doesn't show even though I already convert it into mesh. I still cannot find the solution to fix it, so I modeled the hair again instead of using particle system.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 10	
Comments: Task completed: Done the police eating animation, find the sound effects. Reflection: After the group discussion, we decided not to do the police chase player in level 2, so the police became one of the customer in the game.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

Figure 8.1.11 Week 9&10 Weekly Log

WEEK 11	
Comments: Task completed: Done the police eating animation, find the sound effects. Reflection: After the group discussion, we decided not to do the police chase player in level 2, so the police became one of the customer in the game.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 12	
Comments: Task Completed: Do the storyboard for the ending cutscenes - happy and bad ending. Then proceed to do the animation.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

Figure 8.1.12 Week 11&12 Weekly Log

WEEK 13	
Comments: Task completed: Working on the bad ending cutscene animation and render the image sequences. Import the images rendered to After effect, make it become a video. Draw the nasi lemak 2d icon. Challenges: This week is last two weeks before beta presentation, my teammate Gv student said that he didn't do the police chase player mini game in level 2(he told us after we asked him) because he was not able to do this mechanic and didn't have enough time. So the police models, police movement animation and the bicycle props also will not be used in our game. Reflection & Solution: We understand the time was very tight to do the mechanic, so we agree to remove this gameplay. But what I made turned out to be useless, making me feel deflated. The time and effort I have put to do the assets are not able to calculate, at the end this things happened let me feel my work wasn't respected and he can just deleted it as he wants (didn't discuss with us). I don't want to argue and make things worse, so I'm processing my emotions on my own.	Supervisor signature:  
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 14	
Comments: Task Completed: Done the happy ending animation and render the images sequences. I do the phone messages animation (happy&bad messages, artwork taken from Irish) by After effect. I import the render image to after effect, become a video. I use the Affect Effect to edit the two ending cutscenes animation, adding some effect like fade in fade out. Then I used the Capcut to do the subtitles and add the sound effects. I do the game trailer video in After Effect and Capcut. I do the game icon for our game. Challenges: I ask Gv teammates then realize he didn't do the dhal (player cook dhal) in our games, if I didn't ask he didn't tell us he removed it. As he didn't want to do the dhal, all 3d assets I have done for the dhal and the 2d recipe already drawn about many weeks ago also need to change to no dhal version. Besides, after the beta presentation, I just find out he also didn't add the open egg	Supervisor signature: 

Figure 8.1.13 Week 13&14 Weekly Log

animation I have done last semester, I feel so tired when realize so many works I put efforts didn't delivered in the game. Reflection & Solution: The things happened before I still can accept but after he didn't do so many things, I cant accept he deleted the tikus gameplay. So we went to Dr. Simon for help, then he finally agreed to do it. But the final work he done is just stepped on the tikus same like the cockroach gameplay. We discussed before is player can pick the tikus and throw to the dustbin. I feel disappointed when saw he do the tikus gameplay use the same logic. Our team have some communication issues, the things we have discussed before but the final work is totally a different things, we GS can't do anything because when we find out this problems is already week 14. We just hope that gv teammates can completed the game and show the game with no bugs on the beta presentation day.	
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

Figure 8.1.14 Week 14 Weekly Log

8.2 APPENDIX H

Final Project Title Form

Fill in the information below as detailed as you can after confirming project title.

Project Type:

- ☐ Product Based Project
☒ Research Based Project (tick the appropriate box)

Student ID	Student Name	Email & Contact no
2301484	Chloe Hew Kha Yee	chloe7979@lutar.my
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2301896	Sim Wee Puo	simweepuo@lutar.my

Supervisor: Dr Simon Ang Kok Yew

Project Title: Mamak Dreams

Project description:

Mamak Dreams is a 3D simulation game which includes customer support and small business growth in mamak food establishments within Malaysia. Player played as Ali, he was fired by his job. He went back to his kampung then he starts his own Mamak stall business, his dream is to open a Mamak restaurant. Player in Mamak Dreams need to prepare and cook traditional dishes such as Mi Goreng, Teh Ais, and Roti Canai in a Mamak stall at kampung and serve them to the customers within the time limit based on their skills and the quality of the service provided.