



## Preparing Retro Arcade Fighting Game Asset Design

Zainal Arifin <sup>1</sup>, Alan Zulfikar Waksito <sup>2</sup>, Muhammad Bambang Firdaus <sup>3</sup>, Novianti Puspitasari <sup>4</sup>

<sup>1,2,3,4</sup> Universitas Mulawarman, Gn. Kelua, Samarinda, Indonesia

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### Abstract

Games are increasingly popular in Indonesia because of the many things that make them exciting, such as esports. The Fighting Game genre is one that contains a fight between two characters in a place or arena with the aim of depleting the opponent's HP (health points). Fighting Games use 2-dimensional and/or 3-dimensional graphics where players play characters who can punch, jump or squat when fighting characters. other. In designing video game assets, researchers used the GDLC (Game Development Life Cycle) methodology so that this research proceeded systematically and focused on the design of game asset components. In designing a video game there are many elements, in this research the author focuses more on the control assets of the Combo Hit System on a game character called Brawl Tale.

### 1. Introduction

One of the positive impacts of technological devices that are most often used is to relieve boredom from everyday life, one of which is by playing games.

In the contemporary gaming industry landscape, a pressing issue motivating the development of retro arcade fighting games lies in the growing concern of reduced player engagement due to the saturation of high-definition and graphics-intensive titles. As modern games continue to push the boundaries of realism, there is a risk of ignoring a significant demographic that craves the simplicity and charm of classic gaming experiences [1]. This problem stems from a potential disconnect between the preferences of nostalgic gamers who crave the iconic feel of retro arcade games and today's market

flooded with visually sophisticated but emotionally detached titles [2].

Creating retro arcade fighting games serves as a response to this problem, offering a solution for gamers looking to return to the media's roots. By revisiting the pixelated graphics, bright color palettes, and simple gameplay mechanics of classic arcade games, developers were able to tap into a market segment that craved the nostalgic essence of gaming's early days [3]. Addressing these issues not only serves a specific audience but also contributes to the diversity and inclusivity of the gaming industry by ensuring that the evolving tastes and preferences of all gamers are recognized and accommodated.

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## 2. Research Methods

### 2.1. Stages of Research Implementation

Pre-production in the game development life cycle is a pivotal phase that demands meticulous attention and research for several compelling reasons [4]. Firstly, it serves as the foundation for the entire project, setting the tone and direction for the subsequent stages. Thorough research during pre-production aids in defining the game's concept, target audience, and market positioning, ensuring alignment with the overarching vision [5]. This early planning minimizes the risk of diverging from the intended goals and enhances overall project efficiency.

Secondly, comprehensive pre-production research facilitates the identification and mitigation of potential challenges and risks [6]. By thoroughly understanding the technical requirements, market trends, and potential obstacles, development teams can proactively devise strategies to navigate complexities, saving valuable time and resources in the long run [7].

Moreover, pre-production research contributes to effective resource allocation. By conducting a thorough analysis of the project scope, technical requirements, and budget considerations, teams can make informed decisions regarding technology, talent, and timeline, preventing unexpected setbacks during later stages [8].

In summary, investing time and effort into pre-production research is crucial for laying a solid groundwork, minimizing risks, and optimizing resource allocation in game development [9]. It ensures that the subsequent phases unfold smoothly, fostering

a higher likelihood of delivering a successful, well-prepared, and market-ready game [10].

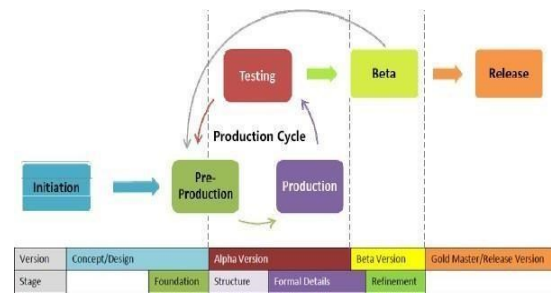


Figure 1. Stages of video game development

#### A. Initiation Stage

At this stage, the pattern and how to play (concept) will be determined in the developed video game.

#### B. Pre-production Stage

At this stage, the application flow will be designed, and what software is needed to develop the video game.

### 2.2. Data Collection

#### A. Data Primary

Data obtained or collected directly in the field by the researcher or individuals in need of it.

#### B. Secondary Data

Data obtained or collected by the person who conducted the study from available sources.

### 2.3. Data Design

A. Storyboard for Arena Match depicting scenes where players control their characters.

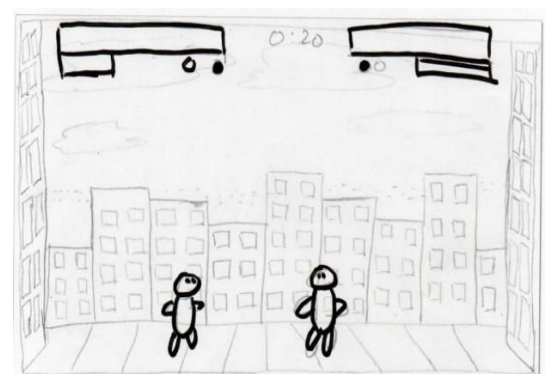


Figure 2. Storyboard for Arena Match

B. The storyboard for Visual Novels shows the scenes that depict the game's story content when the player is in story mode.

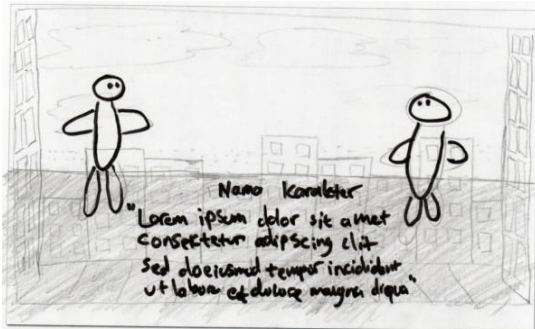


Figure 3. Storyboards for Visual Novels

### 3. Results and Discussion

#### 3.1. Design Layout

The design layout presented here is intended to convey the visual direction that will be taken in the upcoming Brawl Tale game. The wireframe below provides a glimpse of the layout that is being planned.

##### A. Initial View

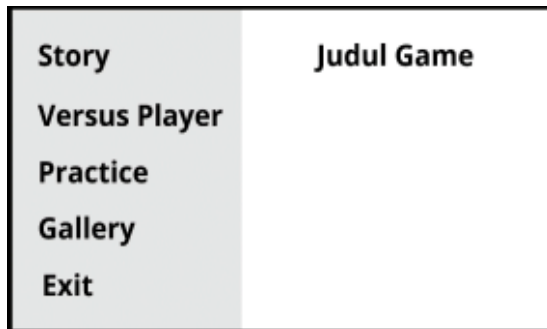


Figure 4. Initial View Layout

##### B. Gameplay

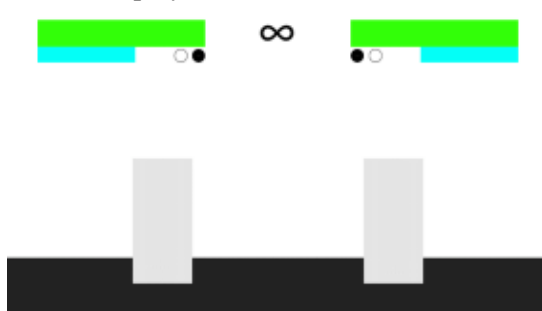


Figure 5. Gameplay Layout

##### C. Gallery's Menu

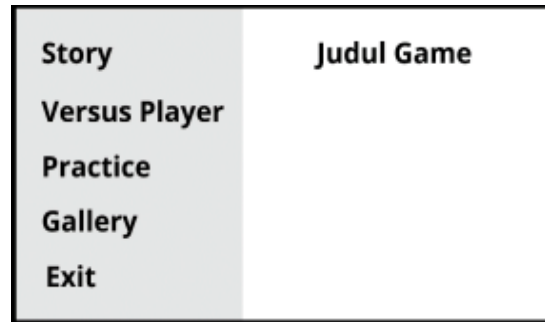


Figure 6. Gallery's Menu Layout

##### D. Character Description

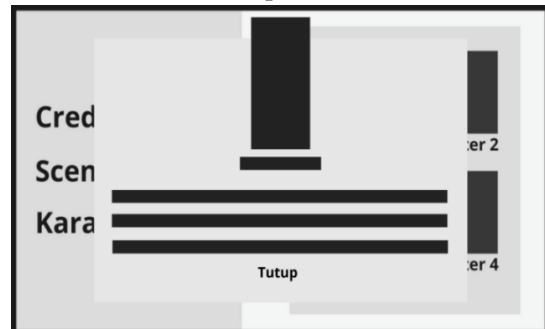


Figure 7. Character Description Layout

##### E. Visual Novel View



Figure 8. Visual Novel Layout

##### F. Character Description



Figure 9. Character Description Layout

##### G. Character Description



Figure 10. Character Description Layout

### 3.2. Asset

#### A. Character Animation spritesheet

This asset visualizes the shape of the player that is being played.



Figure 11. Asset Ryan and Jaka 's characters

#### B. Tileset

This asset is used to create levels or maps during player battles.

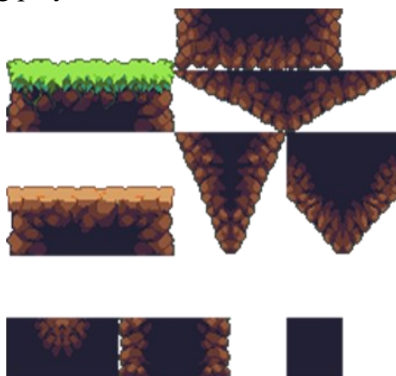


Figure 12. Tile Sets

#### C. User Interface

This asset is used to create UI elements for the game's menus and UI for players.



Figure 13. Player healthbar

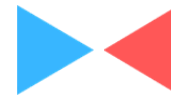


Figure 14. UI Character Selector

#### D. Audio

Audio obtained from channel youtube unroyalty.com and website Freesound <https://freesound.org>.

### 3.3. Story Draft

Draft story on research this is story abbreviation from Brawl Tale games:

The battle between idealists. That is the fate that is carried by Jaka to fight his nemesis, Ryan. This battle determines the fate of the magnificent city of Metrokarta.

Jaka is a successful politician in Indonesia, he often gets achievements and provides a lot of social assistance to the entire city of Metrokarta. Jaka has an enemy named Ryan, Ryan is the President of the mafia with the largest branch in Indonesia which is famous for its dark business and dark nature of social. and the name of the mafia is Raung Anggara.

Before they became sworn in these two figures, only one person played their respective roles without recognizing each other. But dreams appear in their sleep that never existed before. They dream that there will be an eternal and strong spirit (we can think of it as an unquenchable light) telling them their new destiny, and what obstacles they must face. Long story short they know that if they enter the "Competing Arena" belonging to a great creation, and fight to the death for the Heart of Nirvana by force of their ideals.

By giving the gift of memory, feeling, and strength from the previous royal figure. Jaka got Gatot Kaca and Ryan got Ken Arok.

and also 4 more People have received this boon to enter the "Fighting Arena" belonging to this great creation.

Jaka, who received the character award from Gatot Kaca, had a very powerful blow that exploded until he could create an earthquake after he jumped from the sky.

Ryan, who received the character award from Ken Arok, has a cunning sense to eradicate his enemies from behind, and his movements are unpredictable. The city of metrokarta is the city of the ancestors of the President of Indonesia and gets a lot of attention from the world for recreation, business, and religion. This city has become the second Metropolitan City after Jakarta. This is where the Hearts of Nirvana are produced by previously unknown forces.

### 3.4. Gameplay Mechanism

#### A. Player Control

On keyboard device.



Figure 15. Picture Pointer Control Use Keyboard

On console device.

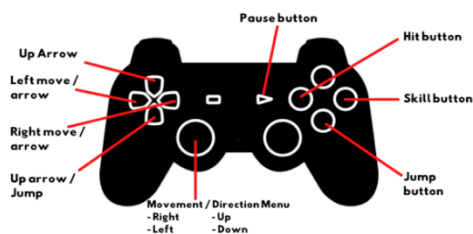


Figure 16. Picture Instructions Control Use Controller

#### B. Hit Combo and Skill Usage

Hit combo usage, hit combo at each character there are 3 kinds, only with push button hit by over and over again, each animation hit on player sprite will walk by sequential and dynamic.



Figure 17. Animated Sprites Every Hit on The Character Named Jaka



Figure 18. Animated Sprites Every Hit on The Character Named Ryan



Figure 19. Animated sprites Jump-Hit and Run-Hit on The Character Named Jaka



Figure 20. Animated Sprites Jump-Hit and Run-Hit on The Character Named Ryan

Skill usage, skills on the characters here are still made in 2 pieces, by pressing the direction buttons and ending with the skill buttons in the sequence that has been provided, the skill will come out.

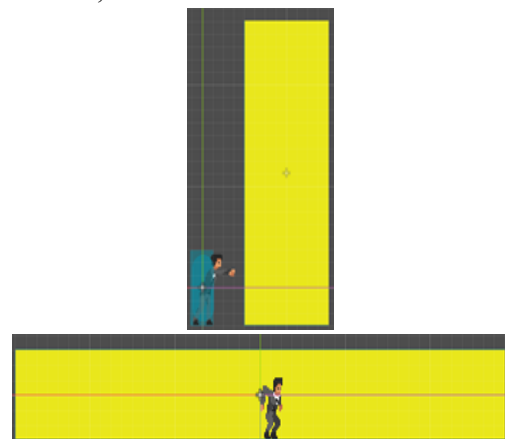




Figure 21. Character Jaka Use His Skills

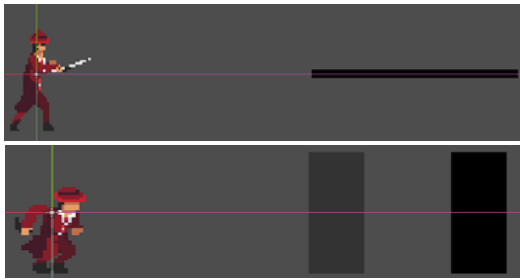


Figure 22. Character Jaka Use His Skills

#### 4. Conclusion

This research underscores the importance of carefully designing retro arcade fighting game assets. The findings reveal that these assets play an important role in shaping the overall gaming experience, influencing player engagement and fostering a sense of nostalgia. This study shows that retro visuals, character sprites, and well-crafted backgrounds contribute greatly to the aesthetic appeal of games. The importance of attention to detail in asset design is emphasized, as it directly influences a game's originality and originality, which is essential to building a dedicated fan base. Ultimately, the insights gained from this research not only underscore the artistic and commercial value of thoughtfully designed retro arcade fighting game assets, but also provide valuable guidance for developers looking to create immersive and successful gaming experiences in a highly competitive industry.

#### 5. Reference

- [1] A. Rokhmawati, G. Radityo Kusumo, I. Dwi Wahyoho, and R. Irawati, "Ultranus: A Novel Indonesian Cultural Game Using Artificial Intelligence," *Proceedings - 2018 International Seminar on Application for Technology of Information and Communication: Creative Technology for Human Life, iSemantic 2018*, pp. 361–366, 2018, doi: 10.1109/ISEMANTIC.2018.8549744.
- [2] K. Nolan, "Retro arcade games as expressive and performative interfaces," *Int J Perform Arts Digit Media*, vol. 17, no. 2, pp. 215–233, 2021, doi: 10.1080/14794713.2021.1943632.
- [3] A. Abate *et al.*, "Rational verification: game-theoretic verification of multi-agent systems," *Applied Intelligence*, vol. 51, no. 9, pp. 6569–6584, Sep. 2021, doi: 10.1007/s10489-021-02658-y.
- [4] A. Andi, J. Charles, O. Pribadi, C. Juliandy, and R. Robet, "Game Development 'Kill Corona Virus' For Education About Vaccination Using Finite State Machine and Collision Detection," *Kinetik: Game Technology, Information System, Computer Network, Computing, Electronics, and Control*, Nov. 2022, doi: 10.22219/kinetik.v7i4.1470.
- [5] C. Maines and S. Tang, "An Application of Game Technology to Virtual University Campus Tour and Interior Navigation," *Proceedings - 2015 International Conference on Developments in eSystems Engineering, DeSE 2015*, pp. 341–346, 2016, doi: 10.1109/DeSE.2015.15.
- [6] D. A. Basin, A. Lochbihler, and S. R. Sefidgar, "CryptHOL: Game-Based Proofs in Higher-Order Logic," *Journal of Cryptology*, vol. 33, no. 2, pp. 494–566, Apr. 2020, doi: 10.1007/s00145-019-09341-z.
- [7] S. Reis, L. P. Reis, and N. Lau, "Game Adaptation by Using Reinforcement Learning Over Meta Games," *Group Decis Negot*, vol. 30, no. 2, pp. 321–340, Apr. 2021, doi: 10.1007/s10726-020-09652-8.
- [8] D. De Oliveira, L. Jacob, and E. Clua, "Oh Gosh!! Why is this game so Hard? Identifying Cycle Patterns in 2D Platform Games Using Provenance Data," *Entertain Comput*, 2016, doi: 10.1016/j.entcom.2016.12.002.
- [9] M. Giesecking, E. R. Olderog, and N. Würdemann, "Solving high-level Petri games," *Acta Inform*, vol. 57, no. 3–5, pp. 591–626, Oct. 2020, doi: 10.1007/s00236-020-00368-5.
- [10] L. Vermeulen, V. Bauwel, and J. Van Looy, "Computers in Human Behavior Tracing female gamer identity . An

empirical study into gender and  
stereotype threat perceptions,” vol. 71,  
pp. 90–98, 2017, doi:  
10.1016/j.chb.2017.01.054.