

CS102**Fall 2020/21**

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Group**H****~ EscApe ~**

Invicta

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Criteria	TA/Grader	Instructor
Presentation		
Overall		

REQUIREMENTS STAGE REPORT

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1. Introduction

After a discussion we made as a group, we reached a consensus in designing a game with the belief that it will be both educating and funny for us and also prompt us to discover more about Java. Contemplating on what sort of game we can design by considering both the curriculum of CS 102 and our level of curiosity about learning new features of Java, we ended up with the notion of EscApe, which is a 2D desktop game that requires players to escape an angry ape as much as possible without getting stuck in obstacles and making any mistake that result in termination of the game.

2. Details

2.1 Game Modes

EscApe includes two game modes, which are single player and multiplayer game modes.

2.2 Features Included in Game Modes

2.2.1 Features Included in Single Player Game Mode

The properties of single player mode can be summarized as follows:

- Ø The game starts after the countdown, countdown begins when players push the play button.
- Ø There is no ending, escApe as much as you can!
- Ø This mode contains power-ups and coins.
- Ø Coins are randomly distributed to game map.
- Ø Score counter positioned at the top right corner of the screen measures the player's score proportionally with the game duration.

- Ø Power-ups can be purchased and upgraded in response to coin from the shop.

2.2.1.2 Power-Ups

2.2.1.2.1 Extra Life

- When player dies somehow or is caught up by ape, it ensures player to continue the game from the nearest safe point where player made mistake. The number of extra lives can be upgraded from the shop. To date, as a group we reconciled that this power up can be upgraded such a way that it provides at most three extra life in one game.

2.2.1.2.2 Shield

- Protects player from ape catch, if player crashes to obstacle, such as wall. However, if the player falls to the spaces, the interruptions on the game ground, shield does not provides protection. The impact duration of shield can be upgraded from shop. Yet, as a group we did not determine what is the protection duration at the first purchase and how much the duration will be increased at each upgrade, and also how many times the player can upgrade this power-up.

2.2.1.2.3 Wings

- Accelerates player for some time by assuring secure flight, and lands the player when the impact duration of the wings ends, its impact duration can be increased like shield. Nevertheless, we did not determine the similar details that indicated in the section 2.3.1.2.2, either.

2.2.2 Features Included in Multiplayer Game Mode

The main properties of the multiplayer game mode can be listed as follows:

- ☐ Multiplayer mode can be just played by two players.
- ☐ It does not contain power-ups and coins.
- ☐ The game ends when one player makes mistake resulting in death or ape catch.

2.3 How To Play

2.3.1 How to Play in Single Player Game Mode

2.3.1.1 Beginning

After the countdown, the ape that will chase the player appears, then the parkour proceeds and the character representing the player runs forward.

2.3.1.2 Progress

The character continues to run unless player pushes any button. Provided the player encounters any obstacle that requires player to slide or jump, player should use up-arrow and down-arrow buttons to carry out the mentioned actions. Player can also use power-ups if he purchased any of them from shop, and also use upgraded version if he upgraded them before. Unless the player makes any mistake, the game continues and score of the player increases.

2.3.1.3 Ending

If the player makes any mistake and does not have extra life, the game ends with the event that the ape catches up the player. As long as the player has extra life, the game continues from the nearest safe point where he is caught up by ape or die.

2.3.2 How To Play in Multiplayer Game Mode

2.3.2.1 Beginning

Firstly, two players establish a connection, one choice could be local area network but not certain, and after both of them click the play button by entering the multiplayer menu from main, the game begins as the same with single player game mode.

2.3.2.2 Progress

As it is in the single player game mode, the parkour proceeds and players try not to make mistake by using appropriate buttons.

2.3.2.3 Ending

Since there is no extra life in this mode, the player making mistake before the other one terminates the game, and the winner's name is displayed on the screen. According to who is the winner, both of the player's statics are updated.

2.3.2.4 Viewing Rival

We planned that one player can view the other player on the top of his screen such a way that the other player will be viewed as proceeding on the same parkour upside-down. However, the recommendations made during presentation seems worth to consider; thus, we will rethink on this viewing feature.

2.4 Techical Aspects

As a database we consider to use SQL and SQLite, and as a library choice we thought it is plausible to use Light Weight Java Game Library (LWJGL) and libGDX for the time being.

3. Summary & Conclusions

In conclusion, escApe is a 2D Desktop game involving two game modes. Each mode includes distinctive aspects to enable users to different game experiences. On the one hand, players can increase their highest score by unlocking the power-ups and upgrading them. At every time they do so, they can have unique game experience since they introduce a new feature to the profile with which they play. On the other hand, they can also prefer competing with their friends to be the winner and show them who is the best.