Mobile Games Assignment 2 : Game Implementation.

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Report.

Introduction.

This report will consist of a detailed description of the game’s overview (definition of the game and it’s story); design decisions where I will discuss what decisions I made during the game implementation, why did I implement certain game mechanics and how I implemented it.

I will then proceed into a discussion where I will reflect on the assessment as a whole where I will explain what went well, what I would do differently and improvements I would make.

Game Overview.

The game will be a modern take on galaga, it will have the main game mechanics of the old retro version but with an endless runner take. For example the game consists of a player constrained to the lower end of the screen with the ability to move left and right on said screen. There will be enemies that will randomly come onto the screen from both sides of the screen and then move along a random path, until they reach the end of that path where they will then move left and right along the screen.

Both the player and the enemies will be able to shoot projectiles; the player will shoot when a certain button has been pressed and the enemies will shoot randomly. If the player is hit by an enemy projectile they will lose a life. If the enemy takes a hit they will lose life. If the player runs out of lives the game ends if the enemy runs out of life they will be removed from the game.

The game will continue endlessly until the player completely runs out of lives, however, if the player earns 10,000 points they will get another life.

Design Decisions.

When thinking about game mechanics I was always thinking about getting a minimum of five minutes of gameplay and one of the easiest ways I believe that is doable is to have an endless game. So, to make an endless game random events are key; the main element of the game that I focused on was giving the enemy a lot of random features (like randomly firing and moving along a random path).

Discussion.

**What Went Well**:

I have got a completely working game, it is playable and fun. Through minor testing I have solved all of the bugs and the game hasn’t crashed through a lot of recent testing. The random pathing of the enemies works really well and I am quite surprised that it worked so well, the way it was implemented was that a random point is generated within a certain bounds and this is done ten times whenever an enemy is spawned.

I have cemented my knowledge of android studio and I now feel confident in my ability to make android applications using its structure and the language Java.

**Improvements**:

If I were to do this assignment over again, I would abstract the classes into smaller more specialized classes, for example having a gameobject class which would be used to draw the objects, for example: both the player and the enemies will inherit from gameobject and it will have things like draw which will shrink the size of the current classes increasing readability.

I Implementation of multiple high score and a table of multiple different high scores. One of the bigger things that I missed out on with this assignment was to add a system into said game where if the player beats their current high score it will be saved. I also wanted to add an activity (accessible from the main menu) which would display the current high scores.

Another thing I would like to add was to add a system in which the enemies would occasionally fly towards the player damaging them if they collided.

Conclusion.

This report consists of a detailed description of the game’s overview (definition of the game and it’s story); design decisions where I have discussed what decisions I made during the game implementation, why I implemented certain game mechanics and how I implemented them.

I then proceeded into a discussion where I reflected on the assessment as a whole where I explained what went well, what I would do differently and improvements I would make.