# Mobile Applications Project

# Developer Diary

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**Student Group:** Group A

Note: **Since I couldn't get in contact with my designer for this project, I had permission from our module lecturer to download the assets required and to make any and all decisions for this project implementation.**

**26th September 2019** – Received project spec from designer and had a brief chat about the project implantation.

**October 6th 2019 -** Had not received assets from designer so began to implement the project using basic Unity Shape sprites for the time being. Will email the designer asking for assets.

**Background:** To keep the flow of the game fluid I will make the background scroll to give the illusion that the player spaceship is flying through space. I used a mesh renderer to keep the image rendered while it repeats over itself and used the update method to keep looping through the image.

**Player:** The player will have a timer so the player will not be able to continuously keep firing and ultimately be able to cheat the game. I set the shooter delay to a small a small window of 1 second per shot and set the speed for the player to be 5 frames per second. I assign a box collider and a rigid body to the player so the player will be able to detect collisions and I can later assign the appropriate functions for later in the project.

I also allow the player to be able to move only up and down on the Y-axis to be able to dodge incoming projectiles, but will leave their X-axis fixed as requested in the document spec.

**Enemies:** The enemies will have a rigid body and a box collider so I will be able to undertake the appropriate actions when the player will begin to shoot at them. The will be spawned in at random Y-axis points off screen and will fly from left to right towards the player as the designer requested. There will also be Asteroid enemies that will fly towards the player and will rotate in random directions as the designer requested. For now I will tag all enemies under the Enemy tag and will turn off objects by tag when shot at. I will also have to adjust the rotation speed and the normal speed for the enemies in the Enemy Controller Script.

**October 10th – 23rd**: Sent the designer multiple emails requesting for assets to be shared and asking to meet to talk about the project.

**October 25th –** Got the enemies to shoot at the player and am logging each collision detected to the console to see that everything is working according to the spec. The Bullet Script will read enemies by tags and will deactivate the game object so that they are taken off the screen when hit. I plan to implement an explosion animation for the Enemy ship and Asteroid enemies to cover the game object being deleted and will add an explosion sound effect when they explode. The bullet has a rigid body and a box collider so the appropriate actions will take place when collisions are detected.

I added attack points on both the player and enemy spaceships to allow the bullets to spawn from. The player bullets will be spawned each time the player hits the space bar and the enemy spaceship bullets will be spawned in a 1 – 3 second window to allow the shots to be randomized and so the player won't get to overwhelmed when playing the game.

**November 2th:** Attempt to contact the designer about the project via email.

**November 5th-7th:** Researching into adding animations and audio sources in to the game and implementing them into the game. The Spaceship enemies will explode and will play the explosion sound clip and the Asteroids will break up when shot at and will also play the explosion sound clip. The bullets will now detect enemies based on different tags as I plan to use these tags to implement a scoring system into the game based on the different enemies encountered.

**November 9th**: Received permission from the lecturer to download assets required and to be able to make decisions for the game independently.

**November 11th**: Downloaded and implemented the assets that I require for the game.

**November 19th-21st**: Implemented a health system that will decrement from a total of 5 lives each time the player is hit by an enemy. I implemented it like this to provide a challenge for the player and to give them an incentive to avoid the oncoming enemies.

**December 2nd:** Began to implement a main menu intending for the plyer to choose whether to play the game or to change the game options. As I felt it to be more immediate I chose to leave the game options for last so I can get the main game working first. I gave the main menu a background that I felt fits the game and gave the user a choice between 2 buttons. One to play the game and saying options.

**December 7th**: I began to implement a Death screen for the player so when they run out of lives they have to choice to return to the main menu or to replay the game again. In the spec

the designer asked for the player to be able to win if they reach a certain amount of points. I chose to change this and to allow the player to continue the game for as long as they can to give them the incentive to try and beat their high scores. The death screen will show the players current score, fade to black and give the player the option to replay the game or to go to the main menu.

**December 9th-10th –** Began and completed implementing a scoring system that will increment the score for the player in the top right-hand corner of the game depending by which enemy the player has shot at.

**December 11th – 12th:** Began to implement other game difficulties and to add a settings menu to the game. Unfortunately due to time constraints I am unable to add other difficulties or settings to the game.