**Game Proposal For Computer Graphics Project**

https://github.com/Maversnipe/SP2

**Team Member’s Contact Details**

|  |  |  |
| --- | --- | --- |
| **Name** | **Email** | **Phone Number** |
| Lucas Nguyen Thai Vinh  (162548Y) | lucas\_nguyen@hotmail.com | 94659714 |
| Lim Ziyi Jean  (162514Z) | lzyjeann@gmail.com | 97527921 |
| Shishanth Kaliannan  (161953P) | shishanth.kaliannan@gmail.com | 82188869 |
| Gabriel D’Cotta  (151593S) | pcvoxels@gmail.com | 96870044 |

**Game Idea And Influences**

The has to travel around the scene, which is set in a futuristic arcade/carnival where there are multiple mini-games to play.

These mini-games consist of a zombie shooting game which was inspired by first person shooter games such as Call Of Duty (Call Of Duty has a zombie mode) and Left 4 Dead 2, a first person jumping/platformer game which was inspired by the Super Mario series, and a racing survival game which was influenced by the racing games that we can see in arcades now.

There will also be the many people walking around which the player can interact with. Different people will have different lines of dialogue.

Also, since the place is a carnival, the player will be given an amount of money to spend. Once that money has run out, the player will still be able to walk around the carnival and interact with other people but the player cannot play the mini-games.

Lastly, the game ends when the character leaves through the exit.

**Gameplay**

The character will be able to move forward, backward and strafe left and right. The player has to interact with certain doors and teleporters to enter and play the different mini games.

For the first person shooter zombie mini-game, the player can move forward, backward, strafe left and right and use a jetpack to fly upwards. The player can also shoot and reload his/her gun. The player dies when he/she gets hit by a zombie too many times.The mini-game will end when the player has killed all the zombies or when the player dies 3 times. (Jean)

For the jumping/platformer mini-game, the player can move forward, backward, strafe left and right and jump high. The player can also get abilities such as double jump, jump higher and super speed. The player dies when he/she falls down. The mini-game ends when the player either reaches the end. (Lucas)

For the driving game, the character drive a car across a road with obstacles and suicidal explosive zombies which does damage to the car. The player will drive the car until the car’s health or fuel runs out. The longer he survives, the higher the score. The road will also be littered with fuel cans and health packs to give your car fuel and health.

Space Invaders in first person. Concept, be able to move freely. Enemies spawns from center to edges with a slow speed. Set border. If enemies past borders, you fail.

* Move in 3D space
* Objects spawn from center to outer border
  + Up / Down Plane
  + Left / Right Plane
  + Forward / Backwards Plane
  + Movement follows a sphere (Fixed distance from center)
  + Shoot to destroy “enemy ships”
  + Try to include random power ups that allow player to shoot faster
  + Try to include scoring system
  + Increase spawn rate for “enemy ships” over time
  + Try not to have too much clutter
  + Can actually use Camera2 (Basic Camera)

**Unique Selling Point**

This game is aimed at people who enjoy playing different genres of games, and enjoy the idea of how a carnival would be like in the future. There will also be Non-Playable Characters who the player can interact with and give dialogue unique to each individual Non-Playable Character.

**Features**

Lucas - M1

Jean - M2

Shishanth - M3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Task Name** | **Person Assigned** | **Time Estimate**  **(Hours)** | **Description** |
| 1 | Collision Detection / Character Movement | M2 | 9 | Collision to prevent player from walking through the wall. Character walking, jumping |
| 2 | Shooting | M2 | 2 | Gun Shooting |
| 3 | Jetpack | M1 | 2 | Flying with the jetpack |
| 4 | Designing Of Buildings | M1, M2, M3 | 20 | Do buildings design and texturing |
| 5 | Driving mechanic | M3 | 2 | Interacting with a car and driving it |
| 6 | Fuel and health system for car | M3 | 2 | Fuel and health system for car |
| 6 | Currency system | M2 | 3 | Currency to play games and rewarded when won |
| 7 | Enemy damaged, player attack | M1, M2 | 4 | If the player hits enemy, enemy minus health |
| 8 | Player damaged, enemy attack | M1, M2 | 4 | If enemy hits player, player minus health |
| 9 | Enemy Algorithm | M3 | 10 | The way the enemy moves |
| 10 | High Score System (Optional) | M1, M2, M3 | 5 | High Score for each mini-game |
| 11 | Non-Playable Character  Interaction | M1, M2, M3 | 10 | Stuff characters say / do when you interact with them |
| 12 | Designing of Non-Playable Character | M1, M2, M3 | 20 | Designing, texturing and modelling of Non-Playable Characters |
| 13 | Skybox | M1, M2, M3 | 3 |  |
| 14 | Bounds Checking | M1 | 1 | Finding the limits of the plane |
| 15 | NPC’s Speech | M1, M2 | 10 |  |
| 16 | Mouse Input | M1, M3 | 10 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Week 1 | | | | | |
| TYPE | No. | Task Name | Person assigned | Time Estimate  (Total hours)/Each | Description |
| MAYA | 1 | Designing of buildings | M1, M2, M3 | 5 | Each person will have to model + texture their own building |
| 2 | Skybox | M1, M2, M3 | 5 | FIND YOUR OWN BOX TO HIDE INSIDE |
| 3 | Designing of characters | M1, M2, M3 | 10 |  |
| CODE | 1 | Bounds Checking | M1 | 5 | Bounds Checking for plane and building limits |
| 2 | Character movement + collision detection | M2 | 6 |  |
| 3 | Enemy algorithm | M3 | 6 |  |
| 4 | Mouse Input | M1, M3 | 6 |  |
| 5 | Main Menu | All | 10 | Main Menu For Game |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Week 2 | | | | | |
| TYPE | No. | Task Name | Person assigned | Time Estimate  (Total hours)/Each | Description |
| CODE | 1 | Jumping Game Mechanics / Actions | M1 | 10 | Jumping Game Mechanics and the Abilities |
| 2 | Gun shooting | M2 | 5 | Gun can shoot laser beams to destroy enemies |
| 3 | Car mechanics | M3 | 6 |  |
| 9 | Jetpack | M1 | 2 | Flying away from enemies |
| 5 | Scene Manager | M1 | 2 |  |
| 6 | NPC’s speech | M1, M2 | 6 | Put speeches in text file |
| 7 | Currency system | M2 | 2 |  |
| 9 | Jetpack | M1 | 2 | Flying away from enemies |
| 10 | Car mechanics | M3 | 6 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Week 3 | | | | | |
| TYPE | No. | Task Name | Person assigned | Time Estimate  (Total hours)/Each | Description |
| OTHERS | 1 | Trailer | M2 | 10 | Game Trailer |
| CODE | 2 | High Score System | M1 | 10 | Mini Game High Score System |
| 3 | Game Sound | All | 10 | Video Game Sounds |