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Fab\_ulous Robber Report

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**EXECUTIVE SUMMARY**

**GAME CONCEPT**

The game is about a thief who has to rob a bank.

The plan is already decided, and the player will have to follow the advice shown on screen during the gameplay to complete the level according to the plan.

**GENRE**

The game is a first person shooter with a focus on virtual reality interactions and immersive gameplay.

**PROJECT SCOPE**

With the aim of robbing a bank, the player will have to use tools such as a bomb, various weapons, and a bag, to infiltrate the bank, rob it and escape with the loot without being captured or killed by cops.

**GAMEPLAY**

**GAME PROGRESSION AND OBJECTIVES**

The game starts outside the bank, the player will have in front of him a closed bag and a gun.

* His first objective will be to open the safe room.

Once he has collected his tools, he will have to go inside the bank and start the real robbery, threatening civilians and arriving in front of the safe room.

The player will have to leave the bag on the ground outside the safe room, once this is done, the bag will open and drop to the player an assault rifle and a bomb.

The player will be asked to place the bomb on the door of the safe room, this will start a timer of 3 seconds, at the end of which the door will open, completing the first objective.

* The next objective will be to steal the loot and bring it out of the bank.

The explosion of the bomb will trigger the alarm and the first round of cops will spawn and attack the player.

At that point the player will have to collect the assault rifle and survive the round by shooting them.

Once this is done, he will have time to steal the money from the safe room and fill the bag.

After a certain amount of money, the bag will fill up and the player will be asked to bring it out of the bank, thus completing the second goal.

* The last objective will be to run away with the loot by stealing one of the police cars.

Once outside, the player will be surrounded by the second round of policemen; he must then leave his bag full of money and pick up his assault rifle to kill them and not get caught.

At this point he will have to place his bag in the back of one of the police vans, close the doors, and open the driver’s door to escape and then complete the last objective and the level.

**IN-GAME GUI**

Throughout the level, the player will be explained the objectives of the game and how to complete them through canvas within the level, which will appear in strategic position when needed.

A game over screen will also appear at the end of the level.

A hand holding an object

Description automatically generatedA screenshot of a video game

Description automatically generatedA screenshot of a video game

Description automatically generatedA video game screen showing a bag and plants

Description automatically generated

**TECHNICAL ACHIEVEMENT**

**LOCOMOTION SYSTEM**

To make the experience more immersive and trying to enhance the characteristics of a fps, the locomotion system will be based on a "Continuous Move Provider" and a "Continuous Turn Provider", both attached as components to the object: "Xr Origin".

It will follow the implementation of a Tunnelling Vignette to avoid the Motion Sickness that could be caused by this type of Locomotion System on some subjects.

**GRABBLE OBJECTS**

Grabbing, collecting, and interacting with objects is one of the main aspects of this game.

The player will be repeatedly asked to collect tools such as: weapons, bags, money, and bombs to complete the objectives of the game.

All collectible items have been set with proper attach points to make the game experience as realistic and immersive as possible.

A cartoon of a briefcase

Description automatically generatedA cartoon of a hand holding a bag full of money

Description automatically generatedA hand holding an object

Description automatically generated

It is also possible to hold the assault rifle with two hands for a matter of realism and precision in the aim.

A hand holding an object

Description automatically generated

**SOCKETS**

Sockets are another key aspect of the game.

The player will have to repeatedly place items in the right place to go ahead with the level, each of these sockets when filled will trigger an event:

* -The bag placed outside the safe will be emptied and its contents will spawn on the tables nearby.

This was implemented through the “OnSocketEntered” function using “UnityEngine.XR.Interaction.Toolkit”, which after half a second will call a function that spawns the new empty bag in the same position, and makes visible the tools contained inside on the tables near them.

A screen shot of a computer program

Description automatically generated

* -The bomb on the door will trigger a timer and explode at the end of it by opening the safe.

Implemented using the previous logic but in this case will rotate the door.

A screen shot of a computer program

Description automatically generated

* The four money notes when they are all placed in the bag, will fill it and the bag will change.

Here was made an elaborate implementation attempt in which I tried to check simultaneously in all sockets using a list, unfortunately I could not get it to work in time for the presentation:

A screenshot of a computer program

Description automatically generated

The demo was presented then using a simple “OnTriggerEnter”, for a matter of timing; I will try to check the 4 sockets simultaneously for the final presentation, in case I don’t succeed I think I will create a script for each of the 4 sockets using the same approach of the previous ones and a “PlayerPrefs” as a counter of the banknotes to then trigger the event.

A screenshot of a computer program

Description automatically generated

* The bag full when placed in the back of the van will close the doors.Implemented using the same logic as the bomb and the safe door.

**MORE**

* Animated hands

Still for a matter of realism I implemented animated hands.I used the standard oculus hands from the assets store that already contained an animator, to make them work I just had to change its values through a couple of lines of code and setup the actions from the editor.

A screen shot of a computer program

Description automatically generated

A video game of a hand holding a bag of money

Description automatically generated

* Bullets

Given the future implementation of enemies to shoot at, I have already made weapons capable of shooting.The bullet is fired in the right direction and has different spawn points depending on the weapon in question.The only problem I encountered is related to the rotation of the bullet that is currently not very realistic but will be fixed in the final version.

A computer screen shot of a black screen

Description automatically generated

**A screen shot of a computer code

Description automatically generated**