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AI in Gaming

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ABSTRACT

The proposed will be a computer game version of a popular game Mario. Instead of having a single player like in Mario our system has 2 players. where both the players are controlled by user therefore making it a two-player game. This adds more functionality and more diversity to a game. The game use artificial intelligence to create enemies and helps to make the game more challenging. The end goal of the game is that both the players need to complete the level together

I. INTRODUCTION

Use Unity 3D engine to create a 2D 2 player game each player has finite amount of life. Main goal of the game is to reach from one starting point to the end point while maintaining their lives, so both have to reach the end point. Artificial Intelligence is used to create enemies which take the life of the player. The player has the ability to shoot the enemy or avoid them. There are different kind of enemies that are introduced to make the game hard and interesting.Each player has their own ways of completing the task. Artificial Intelligence tracks every movements of the players and acts accordingly. Enemies are based on Artificial Intelligence. so it very difficult to complete the task. There are some tricky paths which the players has to identify and play accordingly.

II. LITERATURE SURVEY

- **General Video Game for 2 players: Framework and Competition**

In This paper is regarding the game of 2 player which can be played with the patrolling bots. Having understood the basic idea of the project which tells about basic idea and background for the proposed system . Different methods and principles have been studied to implement an 2d 2player game. By Raluca D. Gaina (2016), a system providing 2D game was implemented is to directly test against each other in more complex and dyamic environment, where there is an extra uncertainty in a game, consisting of the behaviour of the other player.

III. LIMITATIONS

a. Patroling bots:

These are the bots which follows a simple path as given by the developer, the patroling bots are just simple enemies which moves in a designated path and goes for each and same for every level and it is eas as it make for the player to dodge them.

b. Repeated levels:

The user after some levels exprince the same repeated steps or series of task and in the higher levels the movements from start till end is the same and does not include and change it just repeat the privious levels with some changes and make it look diffcukt

but it is the same level with some modification

c. Single player:

In the previous system there was a limitation where the user was doomed to use a single player and there was clashes between the friends that who will play first or whose turn it is.

IV. EXISTING SYSTEM APPROACH

In traditional system like Mario there are lot of problems to face, some of them are-

- Basic AI which makes the game easy and the user loses the interest.
- Basic player movement script.
- No special ability.

Traditional System does not used multiple enemies which gives us the consistent levels and the user can easily guess the next movement of the enemy

V. PROPOSED SYSTEM APPROACH

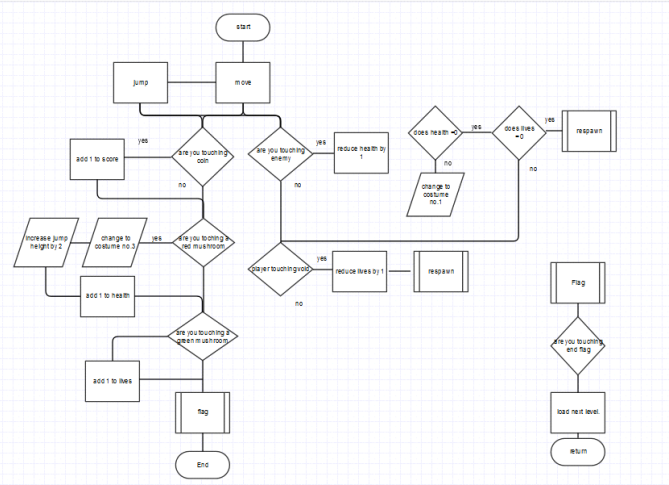

Figure 1

In traditional system there was a basic view of the movement and interaction with the enemy it simply jumps and move back and forth. The enemy was just the patrolling enemy (move from one specific end point to another).

In proposed system improvement of the movements of the player by introducing new features like double jump, wall jump and sprint. There are new features in AI to make the movement of the enemy more advanced and less predictable than the traditional system enemies. The most interesting feature is the health bar and the shooting.

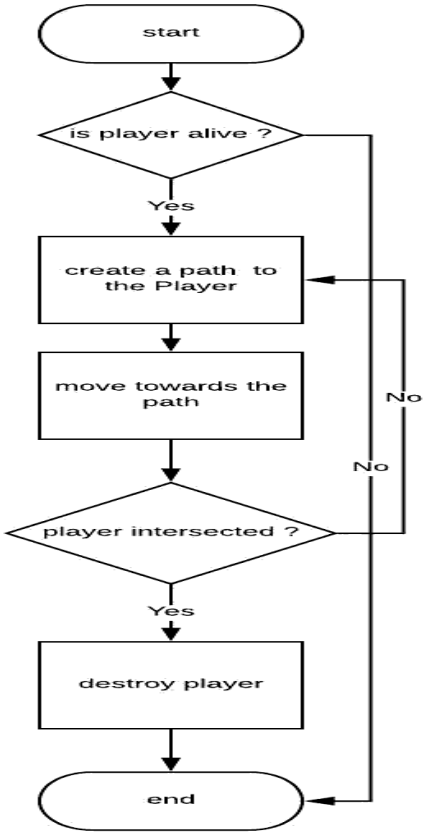

Figure 2

In this proposed system we will beusig two players concept, in this the player will detect the enemy and will try to destroy him, if the player1 gets destroy then player2 have to complete the game.

The AI enemy will have its own algorithm to find the players and to destroy them by learning their movements.

If both the players gets detroys then the game will end.

VI. CONCLUSION

In the proposed system, we will use the concept in which we will improve the movement strategies and make the AI enemy more advanced and less predictable than the traditional system.

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