**Project Description**

My term project is called minFIFAonline3, which is very similar with a popular online game called FIFA online. In my FIFA one player can control one team and playing game with another team.

My game is designed for students to have fun in their spare time. In this game people can press “s” to switch controlled soccer player. They can also press “s” button to pass ball and press “d” to steal soccer ball or shoot the ball, press ‘a’ to cross the ball and press “e” to speed up the player you currently control. This game is just a low version of game called FIFAonline3.

Competitive Analysis

# Description of Your Planned Project

Briefly describe the project you’re planning to work on (in this case, the game Breakout). What is the goal of the game? What are its main features?

The project I designed is a soccer ball game, just like a very popular game FIFA.

The goal of this game is to let people have fun. The main feature is that player can press “s” to switch controlled character. Press “d” to shoot and press “d” to cut off the ball from other players. Press “a” to cross the ball. Press “e” to speed up the player you currently control. Also, I represent each player as images which means image is object in my game. Plus, my game also has Game AI which means that if I move one of my team players, the rest of team players will also move.

# Evaluating Your Competition

Identify 3 similar projects that already exist. For each competitor project, write a few sentences that describe:

* What the project provides to the user
* What makes this project unique

1. There are three FIFA game in 112’s gallery. There is one project called the First FIFA, which works very similar to mine. One player can control a team and computer controls another team. The Game AI attribute make it unique.
2. The second one is a soccer ball management game called soccer manager which is a game that computer simulate the game which means that player do not have to play by themselves. The Game AI attribute make it unique.
3. The third project that very similar with mine is called smaller FIFA. That game allows player to participate in that game by themselves like the player can kick the in front of the computer, the OpenCV module will allows the ball to move in that game.

# Identify Comparison Dimensions

Come up with a list of at least five attributes or features that you want to compare between the competitor projects. These dimensions should be user focused (i.e., something that the user can directly observe or experience).

For each dimension (**rank ordered from most to least important**), provide both the dimension name and why the dimension is important.

# Comparison Table

Fill out the table shown below with the features you identified in the section above.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Dimension 1** | **Dimension 2** | **Dimension 3** | **Dimension 4** | **Dimension 5** |
| Competitor 1 | Soccer player with image | Game with music | With Game AI can simulate matches | Game with a specific score board | Game do not with opencv |
| Competitor 2 | Soccer player do not with image | Game does not with music | Do not Game AI | Game do not with a specific score board | Game do not with opencv |
| Competitor 3 | Soccer player do not with image | Game does not with music | Do not Game AI | Game do not with a specific score board | Game do not with opencv |

# Summary

Using the results from your comparison, provide a summary of your findings. You should concentrate on

* Features that your project will need to be competitive
* Identified gaps that your project can take advantage of

1. The unique feature of my project is that I have a serial of images that can represent the running football player. My soccer ball game has background music.
2. Basically, my project has the real image of soccer ball player which make it different from other’s game.
3. My project has game AI that players can be controlled by computer and players can move with AI.

**Structural Plan**

1. The main file of my project is \_\_init\_\_.py, which is the main part of this pygame.
2. I define a Colors class in a single file called colors.py
3. In this game, I need to define different classes in different file like FIFAplayer.py, playerAndComputer.py, Background.py, Team.py(this file contains a super class Team and two subclasses for blue Team and red Team) ControlBoard.py (this file mainly about how I will set the scoreTable and Control board like update score and so on)

**Algorithmic Plan**

The hardest part of this game is to pass ball to team members and AI of the game.

First of all, for passing the ball to team players. I first calculate the angle between my controlled player and my possible target players. Then I selected one target player with the smallest angle with my current controlled player. Then, I pass the ball to my target player.

Second, another hard part of the game is the game AI. I was inspired by a website(https://stackoverflow.com/questions/36932/how-can-i-represent-an-enum-in-python) on stack overflow. I assigned each game player a state every moment in this game. According to their different gameState I can perform game AI on each team players. The main algorithm is that since each character(team players) in this game has an original position on the gameDisplay(which is the window of this game), After I moved my controlled character there will be difference between its current position and its original position. If the position difference of the player I controlled greater than that of the rest of the team players’. I will let the rest of the player move follow my currently control player with the same direction.

**Timeline Plan**

I think maybe at the end of next week I can complete the major features of the project. Such like player can shoot, steal other player’s ball.

**Version Control Plan**

I have a backup on gitlab.

**TP2 Update**

Basically, I add a background music to my game called music.py.

**Module List**

Pygame only

**TP3 Update**

I add a new feature is that if player press “a” on keyboard, they can let their team players cross the ball

I add a timer and score table in the end and update the background image of my game.

I add a new feature that if you are currently control a player you can press “e” to speed up that player. This feature is mainly for people who feel this game is hard to win and they can use this feature.