COMP30022

IT Project Requirements

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# Background

In a fast developing society, people’s stress become significantly noticeable. More and more negative emotions are accumulating in people’s mind, which brings serious side effects to one’s social activities. To address this issue, we are going to design such a game that can effectively release their bad emotions through our game.

Since violence is a way of expressing their anger and frustration etc, so this game is designed to let users to appropriately wreak their violence by charging their opponents.

Like a real bubble soccer game, we are going to design a bubble-soccer-like game. This game simply use few buttons to control a character, and it aims to charge other player and kick the ball to gain points.

What currently being designed is a circular platform with two teams.

This court will have two spinning goal doors and players need to hit their opponent to get point or get the ball into goal door to get point.

## Users

Targeted users include real life bubble soccer players, fans of the sport and general game players who looks for interesting games.

## Product

The deliverable for this project will be an Unity-based game on Android mobile platform. The application will be targeted at Android users with phone running Android 15 or later.

In this game, players will be playing bubble soccer in an unusual way where scoring goals is not the only way to way, there will be more collision, more intense and more falling over. Users are allowed to form team and play against other players on the Internet while giving user the option to have various number of member on the team.

## Definitions

* **Player**: The person that is playing the game, each player has control of his own avatar

# Features and Requirements

## Feature 1: In-game chat functionality

**User Stories**

* **As a player, I want to be able to chat with other players by entering anything or using default languages**

**Acceptance Criteria**

1. **When the player press on the chat button, a chat window is opened, and chat history can be viewed. Player can type anything he wants or he can use the default language**
2. **When one of the players has sent a chat message, the other players should be able to see the feedback on their side**

**Workflow**



**Paper Prototype**





**Specification**

The view of chat window is a separate page with chat history and text field at the bottom. On the right hand side of the text field, there are “enter” button and choose default language button. Other players will see the message by the animation on the player’s icon and in their chat windows.

**Priority**

Minimal

## Feature 2: Log-in Functionality

**User Stories**

* **As a player, play with friends via facebook, google accounts login is one of the compulsory features. And also, it makes easy for the system to maintain users’ information.**

**Acceptance Criteria**

1. **When player starts the game, it shows a pop up window with a promotion saying that you need to login to play the game.**
2. **After login successfully, it should shows some basic information of this user, such as friends list, game records etc.**

**Workflow**



**Paper Prototype**



**Specification**

**This will show a login window, and once player login, it enters the game and shows some basic information about user’s. It asks user to either enter their login information or using their Google or Facebook accounts.**

**Priority**

**Minimal**

## Feature 3: Friends management

**User Stories**

* **As a player, it comes very handy if users can manage their friends. Searching, adding and deleting friends through the gaming interface.**

**Acceptance Criteria**

1. **Users can find a search box on the top of the screen and by using this function, it can find friends who are playing this game through their facebook or google account.**
2. **When pressing a button, the system gives the current friends list and users can can use some simple buttons to manipulate their friends.**

**Workflow**



**Paper Prototype**



**Specification**

**It comes to a new window, showing that a list of friends that you have added. At the top, there will be a search bar to search friends you have added or friends that you are going to add. Also, by pressing and holding on one of your friend’s icon, it will prompt a option saying that to delete or other actions.**

**Priority**

**Stretch**

## Feature 4: Highest score record

**User Stories**

* **As the player, I would like to see a highest score board which can give me more motivation to practice my skills**

**Acceptance Criteria**

1. **Player can enter the scoreboard from the main menu page. In the scoreboard page, the top 20 players will be shown with their name and score in descending order.**
2. **When the player’s score is high enough to reach top 20 scores, he will get a notification and his score will be shown in the scoreboard.**

**Workflow**



**Paper Prototype**



**Specification**

**A scoreboard button is shown in the main menu page, in the scoreboard page, in which the top 20 players with their scores are listed**

**The player will get a notification after game if they have entered the top 20**

**Priority**

**Stretch**

## Feature 5: Game replay

**User Stories**

* **As a player, I would like to save the replay of my last played game so I can watch it in the future or show to others.**

**Acceptance Criteria**

1. **After current game is completed, player is able to tap on a save button to save the replay to player’s device.**
2. **Whenever the player would like to watch a replay, the player can navigate to his profile and select which footage is to be watched.**

**Workflow**



**Specification**

**At the ending of the game, a save button will be shown next to “Play Again” button to save the replay of the game on the device and can be also played in the profile page**

**Priority**

**Minimal**

## Feature 6: Create/join room

**User Stories**

* **As a player, I would like to play with others in a game room. I should be able to create a such room so that I can customise setting of the room such as number of player in this room. In times of lack of players in game, I also like to join a room someone else created.**

**Acceptance Criteria**

1. **Once player has logged in, player can either tap on “Create Room”, to create room, or “Join Room”, to find an existing room.**
2. **If player decide to create room, a screen consisting of various settings of the room is displayed for player to config the game room. A room number is given when the room is created.**
3. **If player decide to join room, player can browse all existing rooms for selection. Player can also filter the rooms by specifying various settings of room.**

**Workflow**



**Specification**

**After logged in, player can use create room button to create a room and change the settings. When player clicked on settings, he can change the number of players on each side (2v2 or 1v1), if the room is “friends only” and if the room has a password to enter. Player can also join a certain room by clicking on that room and click on join. Or player can join a random room by clicking on “Quick Start”**

**Priority**

**Core**

## Feature 7: Invite players into the room

**User Stories**

* **As a player, I would like to invite others to my room so that I am able to play with my friends and fill up the room for playing faster.**

**Acceptance Criteria**

1. **Once player has entered a room, player can tap on “Invite” to invite others to room. Then a list of players including all friends of player and a random list of other players currently in game is displayed for the player to select from.**
2. **The selected player will receive a notification of an invited which can be either accepted or declined on his device. If accepted, the selected player joins the room which sent the invite.**

**Workflow**



**Specification**

**When is player is in the room and there are still available positions, players can click on invite button to invite their friends. Specifically, only the online friends will be shown in the list to be invited**

**When player gets a notification from a friend, a window will pop up and the player can decide to join or reject the invitation. If the room by that time is full (many friends can be invited at the same time, so the room might be full when one of the friends invited clicked on join), then a message will show to the player that the room is full so he can’t join**

**Priority**

**Stretch**

## Feature 8: Auto forward speed in the game

**User Stories**

* **As a player, it would become easier for me to operate on this game, since it always give a slowly forward accelerating speed. So player can concentrate on other more important operations of the game.**

**Acceptance Criteria**

1. **Once the game starts, the character the player controlling will accelerate with a very slow and forward speed.**
2. **Each character has an endurance points(EP). It is full at the initial of the game. The EP will auto refill with a constant speed.**
3. **This speed will be halted when it get stucked or hit by the boundaries or other characters in the game.**
4. **The acceleration of the player cost EP, when the EP reaches zero, player can not accelerate until EP refills to its half.**

**Workflow**



**Specification**

**When the game is running and player is not pressing the boost button, the player will slow down with fixed deceleration rate due to the fiction on the ground. The speed for the player will be always zero or positive.**

**Priority**

**Core**

## Feature 9: Direction control in the game

**User Stories**

* **As a player, I would like to control the movement direction of my avatar. So that I can have a more realistic feeling of the game.**

**Acceptance Criteria**

1. **Player should be able to change his/her direction to left or right by pressing the arrows at the bottom left corner.**

**Paper Prototype**



**Specification**

**A circle controller, should be at the bottom left in the gameplay scene for players to change his/her direction. The turning speed should be fast enough so that the player can turn around easily and not too quick for player to perform a small turn.**

**Priority**

**Minimal**

## Feature 10: Signature skills in the game

**User Stories**

* **For every player, a signature skill will immediately stimulate their epinephrine. In this game, a sprint button and strike button will play this role.**

**Acceptance Criteria**

1. **Two button should be displayed on the bottom right of the screen with a word of “SPRINT” and “STRIKE”**
2. **Once player press the “SPRINT” button, the character he controlled will sprint at a very fast speed. And “STRIKE” button can be used when getting close to another player and knock him/her back for a certain distance.**
3. **After every pressing, there will be a cooling down time period for next available sprint and strike.**

**Paper Prototype**



**Specification**

**When the “SPRINT” button is pressed, the player should get a boost**

**The game should detect if the player is close enough to any player of the other team to enable “STRIKE” button.**

**When “STRIKE” button is pressed, the player should perform a strike to knock the other player back for a distance at the correct direction. (calculated by the angle of collision)**

**Priority**

**Core**

## Feature 11: Collision and charging animations in the game

**User Stories**

* **For players, this would be fun part, hitting on other players hashly would get points. Different level of charges will result of different points. Vice versa, being hit will lose points.**

**Acceptance Criteria**

1. **When characters are having some contacts, a collision will happen immediately. Therefore, an animation is needed to show the effect of this collision, such as stunning or slow down effects.**
2. **Moverover, if one player is perfectly hit by another, an animation should be played that is this player will be pushed far away, sometimes out of the stage.**

**Specification**

**As written in acceptance criteria**

**Priority**

**Core**

## Feature 12: Ball movement in the game

**User Stories**

* **For player, the one aim is to shoot the ball to opponent’s goal gate to gain points.**

**Acceptance Criteria**

1. **Ball will set to the middle of the court at the start of the game.**
2. **The quicker team will first gain the possession of the ball.**
3. **Either using their normal speed or sprint skill, the ball can be kicked in different of distances.**
4. **Once the ball is in the net, the current comes to the end and next round will start in 3 seconds. Points for teams will be awarded or deducted, according to their performance.**

**Specification**

**Ball has its speed and direction, and they’re affected by the collision of itself and players.**

**Priority**

**Minimal**

## Feature 13: A circular-moving goal door in the game

**User Stories**

* **For player’s fairness in the game, it is sometimes biased if one is falling too far to the other in some unexpected situation. Therefore, a circular-moving goal door will be equal and unbiased for both side of the teams.**

**Acceptance Criteria**

1. When the game starts, the goal gate is behind each team.
2. It then starts spinning along the court, regardless the shape of the court,since the court could be any shape.
3. The spinning speed is kept at a constant figure.
4. **Characters can be kicked out of stage through the gates, meaning that other boundaries will bounce back characters.**

**Specification**

**Goal gates should be positioned at the correct places which should be a pair of two ending points of a diameter of the circular map**

**The court should spin at a fixed rate**

**Priority**

**Core**

## Feature 14:Criteria for winning points

**User Stories**

* **For players, it would be very convenient if there is clear rule, setting how to beat their opponents.**

**Acceptance Criteria**

1. **Getting the ball into the goal, will gain 1 point.**
2. **Hitting other opponents out of stage, will gain 3 points.**
3. **Losing ball,opponent get the goal, will deducted 1 point. But minimal will no less than 0.**

**Workflow (graph is optional)**

**Paper Prototype**

**Specification**

**At the start of the game, each team starts with 0 points.**

**When any team scores, there should be message on the screen showing the scoring information. And the scoring team’s score should add the correct points.**

**Priority**

**Minimal**

## Feature 15: Character’s animations in the game

**User Stories**

* **As a player, I would like to see my avatar moving with dynamic postures instead of a static figure moving around so that the game looks better.**

**Acceptance Criteria**

1. **The player’s avatar can respond to whatever command in appropriate manners in term of body movements.**

**Workflow (graph is optional)**

**Paper Prototype**

**Specification**

**During the play of the game, there are several different state of the characters. Characters running, sprinting, charging and being charged will be displayed at appropriate time. Also, successful and failure promotions will display at the end of round and match.**

**Priority**

**Core**