Bouncing Ball Game

Description:

Bounce Ball is a two-dimensional game created with the C# programming language. Essentially, in this game, the player must move the ball while avoiding obstacles to reach the level's exit point.

Along the journey, the player can earn points and additional lives to help them finish the game and advance. a new personal best However, some obstacles will kill the player, and the player's life will be subtracted.

A group of 3 students

Main Console:

1. Play Game: This will load the game and user can start completing the level.

2. Score Board: This will show the high score to the user with player name.

3. Exit Game: This will quit the game.

Game Movement:

1. User can move the ball left or right as per choice using A & D keys on the keyboard.

2. Using the space key, the user can make the ball to jump to overcome the obstacles.

Game Rules:

1. If ball touches the red bar, then, it will kill the player.

2. The spider moves vertically each second if the ball collides one life will be deducted.

3. There will be rings on the way, if user collects the rings, then it will give points to the user.

4. User will be able to collect the checkpoint, and if by hard luck any obstacle kills the player, then it will load from the last checkpoint.

5. Moreover, there will be little hearts by collecting these users can get extra life to complete the level.

Game Score:

1. Collecting each ring will add 200 points to the score.

2. Collecting each the checkpoint and little heart will give 50 points to the user.

3. And completing the level under 3 minutes will give you extra point for the each second left.

Execution of the game:

There will be one ball in this game, and we must discover a means to leave the ball by defeating the obstacles along the road. The user will be allowed three attempts to complete the level, and he may gain more lives by selecting a health card. There will be several little poles of various colors along the route. Touching the red one will cost the user one life, whilst touching the green one will cause the ball to grow larger. And the user must pass the ball through all of the yellow rings in order for the end gate to open and allow them to depart. The game will have two maps.

The game will have logic part which will help move the ball, check if ball touches any barrier and that cost the player one life. There will be UI including the view models and makes the game interactive and interesting.

Visuals of the game like:

Bouncing Ball

Activity diagram

The diagram shows how backend and UI part will look like and the flow of the game.

```
                        ●
                        │
                        ▼
                  ┌──────────────┐
                  │ Main Screen  │
                  └──────────────┘
                        │
                        ▼
                        ◇
        ┌───────────────┴───────────────┐
        ▼                               ▼
  ┌──────────────┐              ┌──────────────┐
  │ Main Screen  │              │ Leader Board │
  └──────────────┘              └──────────────┘
        │                               │
        └──────────────┐    ┌───────────┘
                       ▼    ▼
                        ◇
                        │
                        ▼
                  ┌──────────────┐
                  │ Game Loads   │
                  └──────────────┘
                        │
                        ▼
                        ◇
        ┌───────────────┴───────────────┐
        ▼                               ▼
  ┌──────────────┐              ┌──────────────┐
  │  Move Left   │              │  Move Right  │
  └──────────────┘              └──────────────┘
        │                               │
        └──────────────┐    ┌───────────┘
                       ▼    ▼
                        ◇
                        │
                        ▼
                  ┌──────────────┐
                  │ Find the way │
                  └──────────────┘
                        │
        ┌───────────────┴───────────────┐
        │                               ▼
        │                    ┌────────────────────┐
        │                    │ Reached Exit Point │
        │                    └────────────────────┘
        │                               │
        │                               ▼
        │                    ┌────────────────────┐
        │                    │ Is All rings Collected │
        │                    └────────────────────┘
        │                               │
        └──────────────┐    ┌───────────┘
                       ▼    ▼
                        ◇
        ┌───────────────┴───────────────┐
        ▼                               ▼
  ┌──────────────────┐          ┌──────────────┐
  │ Collect All Rings│          │  Collected   │
  └──────────────────┘          └──────────────┘
        │                               │
        └──────────────┐    ┌───────────┘
                       ▼    ▼
                        ◇
                        │
                        ▼
                        ◉
```