



AP Project Color Switch

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Game Flow

When the Game starts and you are a new Player you can sign up where your name will be asked.

Error Handling in Sign up process:

- You cannot sign up if the textfield is empty.
- If a user already exists with your name you need to enter another name.

If you are a new player then you can log in using your name.

Then you can start a new game or play your previously saved games. You can save and load multiple games.

To jump the ball hit “space” and to pause the game just hit “p”.

There is a back button or you can press esc on every screen so that you can go back to the previous screen.

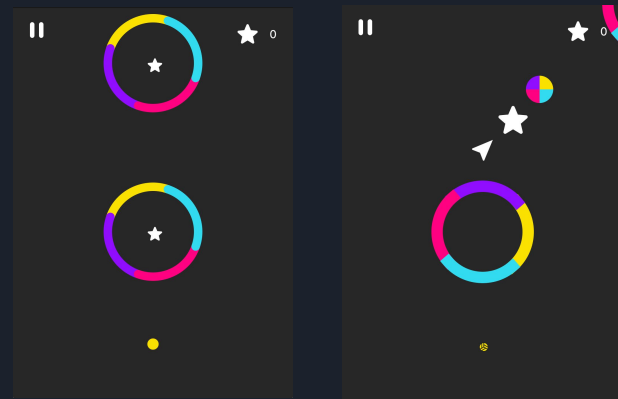
There are 3 pop ups in the game.

1. End Game pop Up
2. Pause Game pop Up
3. Confirm Exit Pop Up

Every screen and popUp has its own controller to handle the functionality of all the buttons.



Difficulties Faced



1. Gravity and jump : Initially the jump was not working properly, there was a lag and the gravity was also sometimes working and sometimes not.
2. Serialization/ Deserialization : The problem was what to serialize and what not to, because the javafx components can be directly derialised, so we needed to store the data and serialise that.
3. Restart Game : The game was not restarting i.e the destroy function of the game was not working.

Design Patterns:

1. Singleton
2. Factory



Division

Rohan (2019095):

1. Implemented the scroll feature and the jump.
2. Gravity
3. Serialization and deserialization
4. Load Game
5. Managed the Login and Sign up section.
6. Compass left and right ball jump.
7. Increase stage and decrease stage.

Joykirat(2019166):

1. The fxml of the screens.
2. Obstacles.
3. Collision check with obstacle star and colour Switch.
4. The increase of the score system.
5. The pause section.
6. Music
7. Different Player Balls.

Together

1. Decided the class and functions (UML)
2. What part to serialise in the game.
3. Connecting the FXMLs together.



Bonus Component:

1. Sign in and Log in
This feature supports multiple users. The users are authenticated using their name.
2. Change of Player Ball:
The ball will change randomly. There are a total of 5 balls, the game picks a ball randomly every time you start a new Game or restart your game.
3. Added Music:
There is background music and at every Button Click there is a sound.
4. Compass Game:
There is a direction switcher in the game. When the ball passes through it the direction all the jump changes and the obstacles change accordingly.
5. Timer and Immunity:
When you click on the resume button on the pause pop up, there is a timer of 3s (the timer can be seen on top of the screen). During that 3 sec the ball is static.

When you use your stars to continue playing after you have died, there is an immunity of 3 s given so that player does not dies because of any jerk