AP Project ColorSwitch
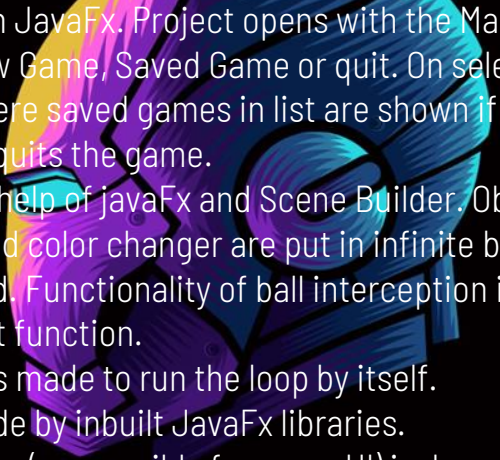## using JavaFX

By-
Nikhil Kushwah (2019260)
Shubham Lohan (2019275)

Design & Implementation

❖ This project is made with JavaFx. Project opens with the Main Menu Screen where user had functionality to start New Game, Saved Game or quit. On selecting Saved Game, User is directed to saved game menu where saved games in list are shown if there are any and select one of them to continue. Quit option quits the game.

❖ Design is made with the help of javaFx and Scene Builder. Obstacle were made with the help of group. Obstacles, star and color changer are put in infinite by reinitialising them with greater rotation animation speed. Functionality of ball interception in unwanted region is implemented with the help of intersect function.

❖ Use of AnimationTimer is made to run the loop by itself.

❖ Various animation is made by inbuilt JavaFx libraries.

❖ Serialization of Start class (responsible for game UI) is done to save game and list them.

❖ Design patterns uses:
  ➢ Composite Pattern
  ➢ Chain of Responsibility
  ➢ Template
 ➢ Facade

Contribution

❖ Shubham Lohan:
- ➢ Creation of all the obstacle
- ➢ Adding sound effect in Code
- ➢ Helping in Ball Animation
- ➢ Making UML and Class Diagram
- ➢ Making Obstacle Animation
- ➢ Making Ball Burst Animation

❖ Nikhil Kushwah:
- ➢ Making and handling of all Screens
- ➢ Handling obstacle intersection
- ➢ Serialization and Deserialization of Games
- ➢ Load Saved Game
- ➢ Setting of obstacle, star and color changer on pane
- ➢ Score maintenance
- ➢ Adding necessary Buttons and animation
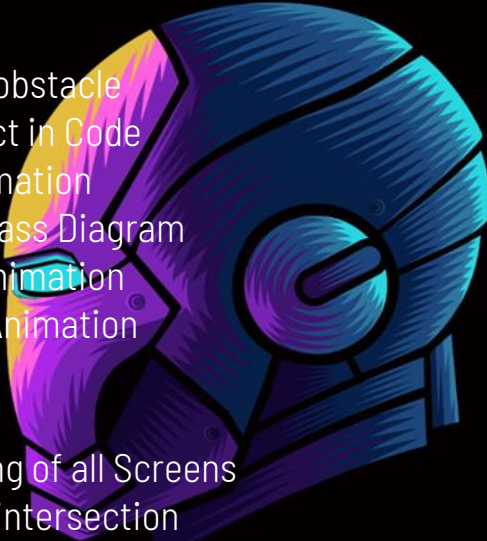
Bonus Work

- ❖ Sound Effect in Game
  - ➢ Background music
  - ➢ Sound play on every click
  - ➢ Bounce bounce sound
  - ➢ Game over sound
  - ➢ Ball Burst sound
- ❖ Infinite Rendering of Obstacle
  - ➢ 5 Different obstacles are added and made infinity by reinitializing them with varying animation speed.