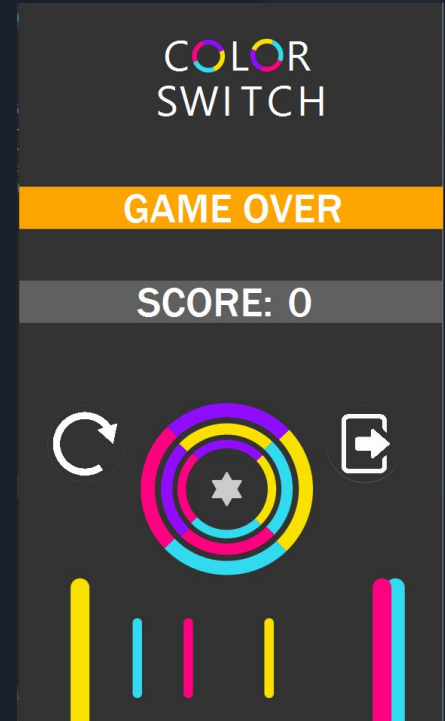# Color Switch

It is remake of Color Switch game Developed in java using java with javafx Libraries

-by
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Implementation Details

- All the Gui objects in game have proper class to have control over them
- Shapes are implemented and kept in group so that we can access a whole object directly
- For objects rotation we have used Timeline, Rotate, Translate for ensuring that obstacles move for infinite time.
- Color switcher provides random color to ball such that it does not get old one.
- For Ball to move forward we have used setOnKeypressed function and it animates ball forwards.
- For saving and loading the game we have used Serializable which saves and loads the obstacles in the game.
- Multiple files available for saving and loading the Game.
- Multiple Design Patterns are used to make the Game.

Problem Faced and Solutions

1.Firstly we have used threads and we have observed that our game animation is not smooth also sometimes game becomes choppy For tackling this problem we have used animation times which runs infinitely also it provides very fluid animation to our game

2.We have observed that when we rotate objects through Rotate Transition it's pivot is not center and somewhere else so for tackling this from we use simple rotate and then we fixed the pivot to center of Shapes.

3.When we used camera in javaFX for scrolling we have observed that some obstacles are not visible fully but visible partially then we think that we scroll obstacles down the screen when some conditions are met.

4.For spanning obstacles we observe that threads becomes crazy and sometimes they don't have permission to edit javaFX elements that's why we find what we can use and then we used Animation Timer for it.

Effort by individual members

Pranay Bhardwaj: 1. All Objects Drawing including Obstacles, Stars, Color Switcher.

2. Collision between different Shapes and Ball

3. Obstacle Animations

4.Star animations

5.Game Over animation 6. Designing sexy GUI

Kartikey Gupta: 1. Game logic

2. Game save/load

3. Screens(Mainmenu, ingame settings, Game Over)

4. Spawning Obstacles

5.Making Different Screens   6.Involving Sounds in Game

Bonus Component

Sounds-For sounds we have used AudioClip so that it can be played any number of times. Also when Buttons are pressed, ball hits star, ball hits obstacles, ball hits color switcher then different sounds are made

9 Obstacles(Excluding Stars and Color Switcher)-We have made 9 different Obstacles for our game to be more interested and more interactive with user.

Fluid animations-We have take care that the experience that user is very smooth with the applications. Also our GUI like Game Over Screen, Pause Menu, Main Menu are very attractive.

Game Over Animations-We have added gameover animation which is basically when the ball hits the obstacle. Also for Star we have used animation so that it can blink.