Color Switch

Viral, Addictive and a Colorful Experience

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Design

- We have the main screen that appears initially, containing the buttons namely: New Game ,Load Game and Exit; rotating loops, and a label.
- Then we have a rollable play screen where the game is played and where all the obstacles, color switches, stars and the ball reside.
- We have a pause screen that appears when the user clicks on the pause button or presses P. This screen contains the Continue button to continue the game, Restart Button to restart the game, Save Game Button to save the game, and Main Menu Button to return to the Main Menu.
- Whenever the ball collides with an obstacle, a hit screen appears which contains buttons namely: Use Stars, Continue, Restart and Main Menu.
- Whenever the user wants to load a game, a load screen shows all the saved games (with date and time) to decide which game to load.

Implementation

- The difficulty increases as the game progresses by increasing the rotation speed of obstacles.
- The player presses the w key to keep the ball afloat, and the ball will fall if no input is given.
- We have provided stars at specific intervals which count towards the score and can be used to resurrect the ball if the ball hits an obstacle, provided the number of stars is greater than or equal to 5.
- We have used 4 different colors for obstacles and other GUI components.
- We also have a color switch in the game that changes the ball's color and makes the game more interesting.
- We have made sure that there is no dead as every obstacle is crossable.
- We have used serialization to store the game's state, including the score, the ball's exact position, and the position of obstacles, color switches and stars along with their orientation.
- We allow multiple save/load games (*maximum 6).

We have successfully implemented all the requirements of the game.

Individual Efforts

This game came as a result of our combined hard work, but as we need to discuss individual efforts. **Siraj** designed all the game's static GUI components like obstacles and the game's multiple screens like the play screen, pause screen, and main screen. From creating the layout to executing and debugging it and adding some animations to it, **Siraj** handled this part. Whereas **Srijan** did a more important role as he was the one who made the game functional, he added the functionalities to the different buttons, implemented the rollable screen, which was a real task. **Srijan** did the part of serializing the game, and the most important was that he designed and implemented the algorithm to detect collisions.

The above paragraph is an overview of the teammates' efforts, and it is not easy to filter out these individual efforts as this game results from teamwork.

Bonus

As a part of the bonus, we have the following:

- Extensively used animations and graphics, they include

  - message popups, showing that the game is saved successfully.
  - warning popups when there are no saved games and you try to load a game.
  - warning popups when you try to load a slot with no games saved.
  - warning popups when you want to revive by using stars but do not have sufficient stars.

- The title **Color Switch** is constantly changing colors, and the two O's are actually colorful rotating wheels.

- Hovering over a button, the color is changed and highlighted.

- We have rotating loops with several colors surrounding the buttons on the main screen.

- Whenever you resume a saved game, you get a timer that counts down from 3, allowing the user to get ready.