



Color Switch Project

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Implementation Details

Our Game is mainly divided into 3 packages/parts:

- a) Components: It contains a ball class, Color Changer class, Component Group class, and a Star Class. The component group class basically consists of a star, Color Changer and 1 random obstacle. It also contains 2 interfaces: Collidable and Positioned.
- b) Main_src : This package contains the classes which basically control all the components. The Home Class, for the Home screen , The game class, for the full functioning of the Game, and the Pause Menu Class for the Pause menu.
- c) Obstacles: This Package contains all the major obstacles which we use in order to build the game's obstacles. The classes are divided according to the shape of obstacle like Square Obstacle, Diamond Obstacle, Triangle Obstacle and so on. It also contains classes related to the parts which form these obstacles.



Problems Faced

We faced many challenges and problems while building the game for which we had to think out elaborate solutions. Some of them are:

- a) Save/ Reload Game : This was a major problem we faced and in order to solve this, we had to come out with an efficient implementation of File Systems and Serialization.
- b) Collisions: Checking collisions and implementing them was also a very difficult task , which we overcame by using Shape.intersect method and many other functions.
- c) Increasing difficulty : We had to increase the difficulty of the game as it progressed. We overcame this problems by introducing many different types of obstacles and changing their speed of rotation as the game progressed.
- d) Infinite progression of the Game : This was done by recycling and changing our originally made components.



Individual Contributions

Harshit(2019044)

- a) Making Obstacles
- b) Making The ball
- c) Making Stars
- d) Serialization
- e) Increasing Difficulty
- f) Adding Fluidity.

Prakrit(2019072)

- a) Checking collisions.
- b) Saving And Loading Game.
- c) Preparing Home Screen.
- d) Preparing Pause Menu.
- e) Adding Music.
- f) Preparing The Color Changer.



Bonus Components

We Have 2 bonus Components in Our Game:

- a) Groovy Music: It is a well known fact that music helps in much better concentration as well as focus. Sp, we went out of our way and introduced some really good background music to soothe our ears and make the game much more enjoyable.
- b) LeaderBoard: You can compete with your friends which makes the game much more enjoyable!