Computer Graphics and Multimedia

REPORT ON 2D GAME

NoFall

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NoFall : 2D GAME

Abstract

This 2D game NoFall is named after the idea of not making the objects fall below the particular line. This line can be controlled with the help of a rectangular block called breakout which can be moved horizontally. Two balls which are blue and pink colored are the ones which are to be controlled

In order to Score, a rectangular block should collide with the pink ball.

The only way to lose is to make any of the balls cross below the line of breakout.

Methodology

- Keys are mapped using an array in which key mappings are stored which are passed to make a Raster Font to display in every window.
- For circle drawing opengl functions are being used (glBegin(GL_TRIANGLE_FAN) and is dynamically rendered for every angle change with respect to the border and breakout
- glViewport() and glMatrixMode() are used to set coordinates, size of viewing area on the window and starts modifying the projection matrix
- Breakout is displaced by 26 units horizontally for every keystroke

Results

- Dynamic substitution of the angles in x and y coordinates results in movement of the blue and pink ball and the scores are incremented only if the pink ball collides with the breakout which is checked using flags and are stored in an array.

- Velocities are increased for every restart in two axes for two balls by 2.8 and 3.7 for blue and pink balls respectively

Conclusion

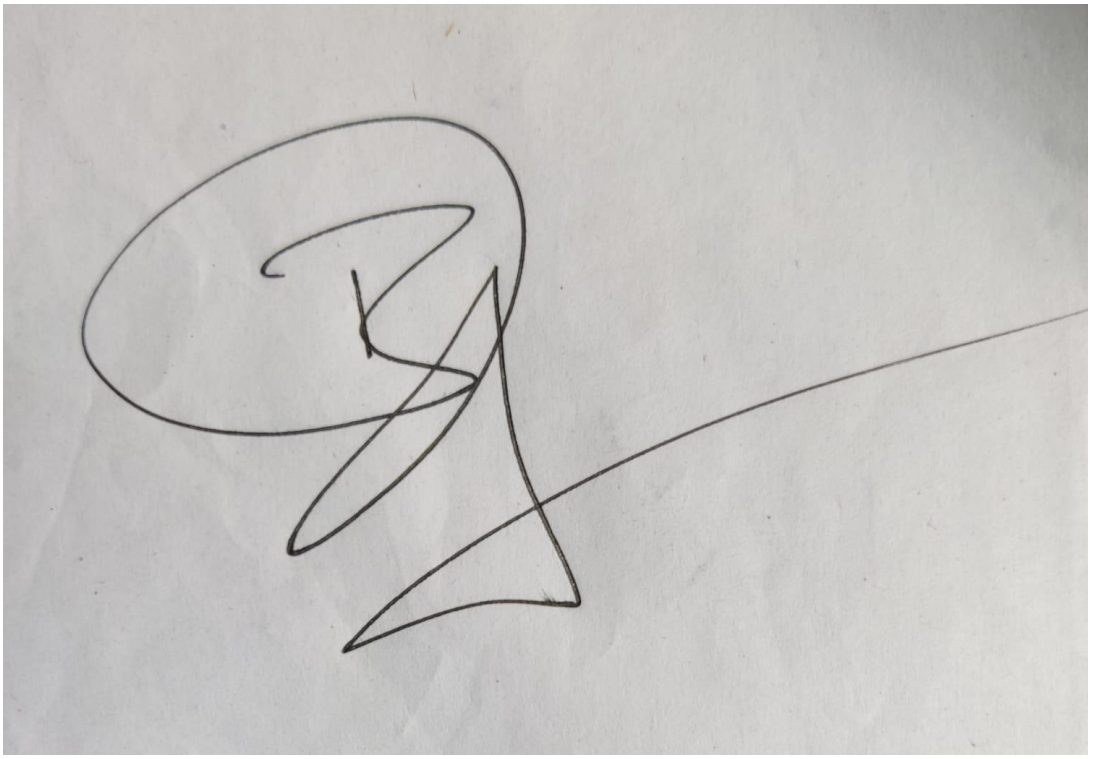
To successfully deliver the 2D gaming platform which can be enjoyed by the people with the competitive nature, thus I conclude to provide with the following :

- A user friendly interface with the help of glut display functions
- Smooth gameplay using dynamic conditional rendering of both the circles i. e blue and pink balls
- Precise score calculation for every collision of pink ball with breakout by storing score in arrays
- Successful transition of increased velocity for each ball in x and y axes for each restart

Contribution

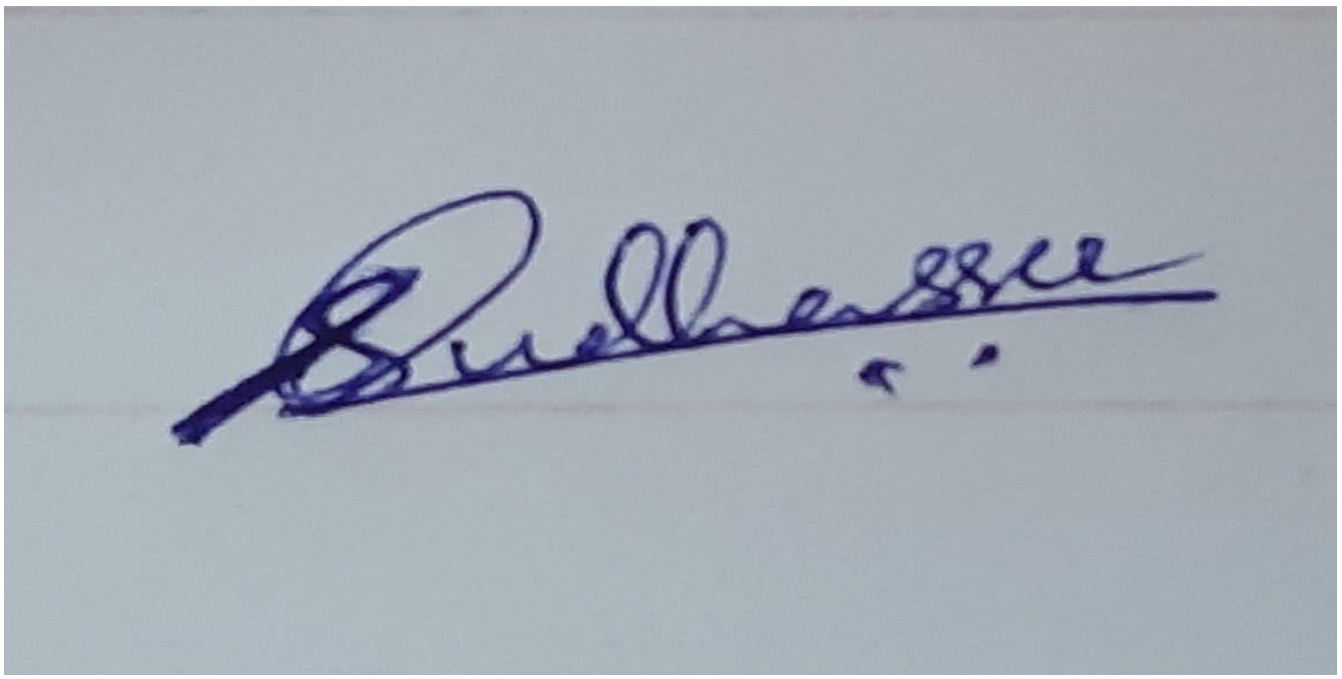
B. Nithish Reddy

- Making the blue ball and pink ball (using circle functions).
- Making Breakout Bar.
- Breakout movements - moving left and right when respective keys are pressed.
- Making keyboard function with key mappings.



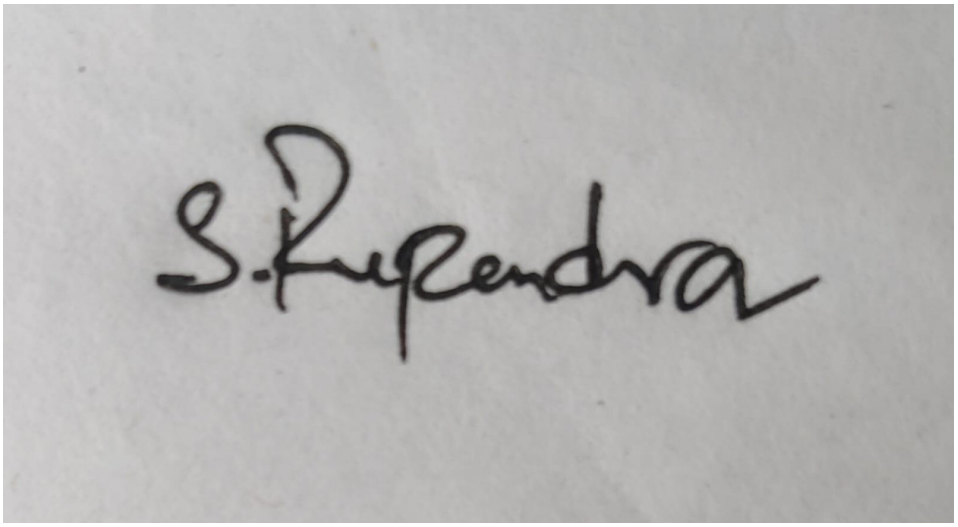
Y. Sudha Sree

- Collision of each ball with borders
- Collision of pink ball with breakout bar
- Incrementing score every time the player scores
- Displaying the game window with borders while game is not yet over
- Reshape Window Function



S. Rupendra

- Game Over logic
- Storing scores
- Timer function for blue ball
- Showing a particular ball when one ball overlaps the other



M. Shiva Rama Krishna

- Creating window for UI
- Creating Raster Font
- Displaying game over screen and text that shows score on game over