

Project Report

Introduction:

Our project is based on JavaScript and its modules (mostly a customized canvas.js developed by Zense). The project is a Brick Breaker game.

To play the game:

- 1) Use arrow keys to move the paddle or bat.
- 2) Use 'S' to start the game.
- 3) Use 'R' to reload the game.
- 4) Use 'T' to change the colour scheme.

Problem Description:

The main motivation behind the project was to learn canvas and JavaScript by developing an intuitive beginner game (which we chose as Brick Breaker). Our goal was to develop a basic environment with minimal features.

Solution Proposed:

To develop a canvas and start by developing each aspect and linking with all the former developments simultaneously to maintain integrity and ease of development. All members contributed equally to the development and all opinions of the members (whichever plausible) have been implemented.

Execution:

- 1) We first developed the canvas with a paddle (using Bat Class) which does not exit out of the screen. (Checking the collision test was a trouble.)
- 2) We then added to it a ball (using Ball Class) which reflects from the boundary of the canvas (including the bottom).
- 3) Improved the above by displaying "GAME OVER" when ball hits the bottom and added functionality of ball reflection with paddle.

- 4) We added tiles to game and tried to inculcate the collision conditions for the blocks.
- 5) By applying some math, we figured out how to solve it and then implemented it completing the basic functionality of the game.
- 6) We added features like Dark Mode, Colour Mode Change, Reload and Starting the game by mere key presses which are described in the instruction page which was later developed.
- 7) We also added a victory page upon clearing all the 160 blocks of the game.
- 8) If failed to do so, a score page with request to reload opens up.

Conclusion:

- 1) We got a deeper insight on JavaScript and got a better understanding about OOPS.
- 2) We somehow realized that JavaScript is easier than Python but later realised that we had a predefined script file backing us up.
- 3) We learned to effectively work as a team and respect each other's help.

References:

- 1) Seniors who assisted during the development of the project
- 2) coolors.com – To get the colour schemes in our project

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