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Intro to Computer Science

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Final Project Documentation

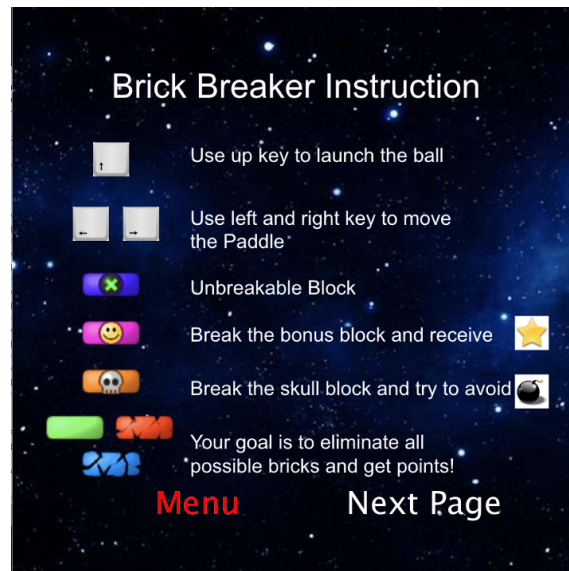
Part 1 Game Description and Purpose

Our final project is our own version of the classic arcade game 'Brick Breaker'. The rules are similar to traditional brick breaker games: to break all possible bricks and get points. Several special conditions are designed and added. The purpose for this game is to entertain users who play our game, and to practise all the skills that we learned from class for us.

Part 2 Component

The Game have several components: the starting menu page, the instruction page, and the game itself. All musics, game component pictures (bricks, bombs, background,etc) are found online.

The main component of starting menu and the instruction page are pictures that we made on our own, mouse click, text, and fill functions. The instruction page helps users to understand different elements of the game and how to play the game. Also, when users win or lose the game, it will show Game Over/You Win Page, with a retry button where users can click and go back to the menu.



(Instruction Page 1, when mouse moves to Menu Area, it turns red)

The components in the actual game program is more complicated: display different type of bricks randomly in selected locations(Normal ones with 4 colors, Unbreakables, Smile/Skull bricks with collectibles); collision conditions(upper and down when ball hits the bricks); display three stages of bricks after each collision; collectables(bomb/stars) that will fall down when special bricks are broken, and receiving them will expand or decrease the board size; special bonus conditions (split the ball when collect stars in larger board size, and end the game when collect bombs in smaller board size); display scores and lives; game pause; add level two (which includes more bricks) , and lastly, check win conditions.

Part 3 How to Run the Program

The game is run through Processing. As long as the image folder is in the same folder with the code, it's very easy to run the program: just double click the file and follow the instructions: Use left/right key to control the paddle, use up key to launch the ball, use P key to pause/resume the game, and try to catch the falling stars and avoid falling bombs,

Part 4 Sample Screenshot

This screenshot shows the game page, where you can see current scores/lives, the first and second stage of the bricks (bottom left and bottom right), as well as the purple unbreakable bricks, pink bonus brick, and orange skull brick.

