EECS 448

Team 16

Design Paradigm

The design paradigm utilized in this project is Event Driven Design. This is a functionality presented in the program since it relays actions throughout the loosely coupled software elements. Given the functionality of the paddle in out breakout arcade game, it is a primary example of an Event Driven Design model. The mouse tracking pays close attention to the x coordinate of the mouse because the y position of the paddle cannot change. When playing the game, the mouse tracking feature considers the parameter of the screen. The game will not let the paddle move off the screen. This requires the program to check the x coordinate of the mouse when extending it past the built-in coordinates. If the paddle follows outside the screen, then a change must be made to ensure the paddle is only visible on the window.

Another design paradigm that we have utilized is the Top-down Functional Decomposition. Top-Down functional Decomposition is important when it comes to understanding a bigger idea through the help of smaller components. In this breakout arcade game, the big idea was to have this game work with every component. We broke down each function or method into smaller categories. For instance, there are different areas for how the board was structured, the movement of the paddle, the movement of the ball, the functionality of the bricks, and the outputs of the game. Each method has its own purpose and therefore making it an architectural design by piecing together the software features into selective members.