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Due: 3/25/19

CIM 413

Midterm Report

Report

With cell phone use constantly on the rise many people are more likely to have a mobile device then pen and paper to occupy their children. As children, my brother and I could constantly be found playing Tic Tac Toe and “Dots” as we waited for dinner, appointments, our mom, or almost any other thing that required us to sit and be calm. Like most children, we were extremely fidgety, so having these games easily accessible was essential. However, today most people don’t have markers, pencils, crayons and paper in their cars, but they always have their cell phones. I created the application “Tic Tac Toe” because I wanted to provide a mobile, mess free, way for children to play “table games.” The app is fully customizable. Players can create their own names, board colors, and player colors, as if playing in a restaurant with different colored crayons. Unlike what we were told in class, I designed the interface of the application after making it functional. Therefore, fonts, button sizes, segues, and ViewController layouts were designed specifically with the iOS Human Interface Guidelines in mind. Specifically, I ensured that all text was large and readable, and that the layout was cohesive throughout the app. Furthermore, the navigation is streamlined due to the navigation bar at the top of each view, which helps users determine their location in the app. Lastly, the application is very intuitive, as button names contain verbs and are clearly identified. Places where the application may not be as intuitive are accompanied by instructions, which are able to be redisplayed as the player needs.

Storyboard overview:

A screenshot of a computer

Description automatically generated

**5**

**4**

**3**

**1**

**2**

A screenshot of a computer

Description automatically generatedA screenshot of a cell phone

Description automatically generatedThe application starts at the home screen (1). From the home screen there are two paths to reach the game board: the default and the custom paths. The default path is depicted in the following picture:

The default path begins at the home screen and proceeds to the gameplay screen by clicking the start button in the bottom right corner. The game starts with default player names and colors as specified in the source code. After the game is played if there is a winner an alert will appear declaring who won, if not an alert will appear declaring a cat’s game. Both alerts signal gameplay has ended and enable a rematch or the ability to start over. Rematch will reload the game play screen(5) and randomly pick a start player, while start over will return to the home screen(1).

A screenshot of a cell phone

Description automatically generatedA screenshot of a video game

Description automatically generatedThe custom path is depicted in the following picture:

A screenshot of a cell phone

Description automatically generated

A screenshot of a computer

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generated

Like the default path, the custom path begins on the home screen (1). After clicking the customize button, the user is directed to the customization ViewController(2), where they are able to change player names, board and player color. By tapping the choose color button, the user is redirected to the color picker ViewController (3 and 4). The first view of the color picker is an alert which contains instructions for picking and resetting the colors of the board, player 1, and player 2. After dismission the instructions the user will be allowed to tap the colors of their choosing. Finally, to save the selected colors the save button is tapped and the user is directed back to the name page(2). The blocks with the player name have been updated to their new colors and the names can be updated again, any changes will appear in the colored labels in view (2). The user then presses start to begin playing with their customizations. After the game is played, if there is a winner an alert will appear declaring who won, if not an alert will appear declaring a cats game. Both alerts signal game play has ended and enable a rematch or the ability to start over. Rematch will reload the game play screen(5) and randomly pick a start player, while start over will return to the home screen(1).

The features implemented include but are not limited to, segues, buttons, text fields, labels, and images. The segues enables the user to switch between view controllers and pass data so that views were not overcrowded by too many elements. Buttons were used to allow users to select and save data as well as to make their move on the game board. I was able to use the above features to expand the scope of this app from those taught in class because I passed data when they were used and used segues which had not been previously taught.

The most difficult part of implementing this application was figuring out how to use segues to transfer data between ViewControllers. Implementing a segue without passing data was simple, however, there are different ways to pass data dependent on if the previous screen needs to be revisited or not. After it was figured out, it was not hard to reuse and edit code for other views. Lastly, I struggled with creating reusable code and found myself rewriting lots of very similar lines of code.