

Instructions

The architectural dependency

Platform:

IOS using Swift/Xcode

Database: Firebase

The resources requirement to our program.

Since exporting an independent executable file requires upload it to the App store which will charge us 100 dollars, so just send an email to luo227@purdue.edu to schedule a meeting and download our app.

User Manual

1.1 Introduction

Looking for a nostalgic game to play during the breaks while not taking much time? Minesweeper perhaps would a good choice. However, we found out that a computer might be just a big block sometimes. Like, on the way back home, none of the users would prefer accessing the game by a bulky laptop or through a website--which are always the first income ideas when we think of Minesweeper. Moreover, visual fatigue caused by the never-changed black&white board is another stumbling block on the way to a further development and popularity for this game. Therefore, an easy and accessible Minesweeper App with a more user-friendly UI would be a valuable project that could bring back good child memories and give the users a relaxed and fun experience on the breaks of exhausting study or works.

1.2 How-to-Run

1.2.1 Sign-in and Sign-up

First time users need to sign up for their account. The sign-up page will ask input for a username (4-15 letters long), a valid email address, a password(6 - 16 letters long and must contains at least one capital letter) and the repeat password that matches the password previously provided. By clicking the "sign up" button, either the view will proceed to the game level page or error messages will show up when there's any invalid input.

Users with an existing account can login to the game by providing their email address and correct password.

1.2.2 Game

After user logs in, they are guided to game level page for selecting level of the mine tiles, or they can move to setting page for modifying volume changes or vibrating option.

Beginner mode is consisted with 8 rows and 13 columns.

Intermediate mode is consisted with 12 rows and 20 columns.

Hard mode is consisted with 14 rows and 24 columns.

Game interface is made with two views: top status view and game tile view.

Top status view has 3 *display field*: *Money*, *Flag*, *Time(##.##.##)* and 4 *button fields*: *Pause*, *Resume*, two *item buttons(flag+1, time+15)*.

Money field shows the coins that user will receive after successfully beating one level. Money is used to purchase items that will be described below.

Flag field shows how many flags are left to place on tiles.

Time field shows how much time left to beat the level.

Pause button is for pausing the time and the game.

Resume button is for resuming the game.

While paused, users won't be able continue the game without resuming the game

Item buttons require Money in order to take an effect on the game.

Flag+1 item increases the amount of flag left for users. It costs 200 coins to increase 1 flag.

Time+15 item increases the amount of time left. It costs 300 coins for adding 15 seconds.

For the game play, the winning condition is to reveal all the tiles with putting flags on all mines. There are four different types of tiles when pressed on tiles: number tiles, empty tiles, flag tiles, and mine tiles. Number tile tells number of mine(s) in its adjacent (8-way) tiles. Empty tiles are there to indicate there is no neighboring mines. Flag tiles are for putting a flag to the tile that user suspects to have a mine on it. If clicked on mine tiles, game is over.

By clicking the tile, user reveals the tile. By press-hold tile for 1.5 seconds, user puts a flag on the tile. By press-hold flagged tile for 1.5 seconds, the flag is removed from the tile and becomes available again.

User will win the game with all tiles revealed with correct flags on the mines. A separate view will pop up after the game showing the statistic and the score that the user be rewarded. Score number will equals to 200 times number of mines that are correctly flagged.

They will be awarded with coins that equals to the score they got for the game.

1.2.3 Ranking

Once the user clicked the ranking button on the navigation bar. User can check his or her rank and click different level ranking button in this page.

By clicking ranking in the tab bar, user can view the rankin page.

There are three game level button show up in the ranking page. Allow users to click three different level to see top 5 ranking.

1.2.4 Profile

Once the user clicked the profile button on the navigation bar. User can check his or her username, coins, click change username button and click change password button in this page. Or go back to the login page by clicking the 'logout' button.

- Allow user to see username and coins in the profile page.
- Allow user to redirect to change password page and change username page.

- Allow user to click “Logout” button

1.2.4.1 Change password page

Once the user clicked the change password button on the profile page, the change password page will appear and it provide user click “Back” or “Submit” and input current password, new password and re-enter new password.

- Allow user to input new username, password, repeat password
- Allow user to click “Back” button, “Looks Good” button

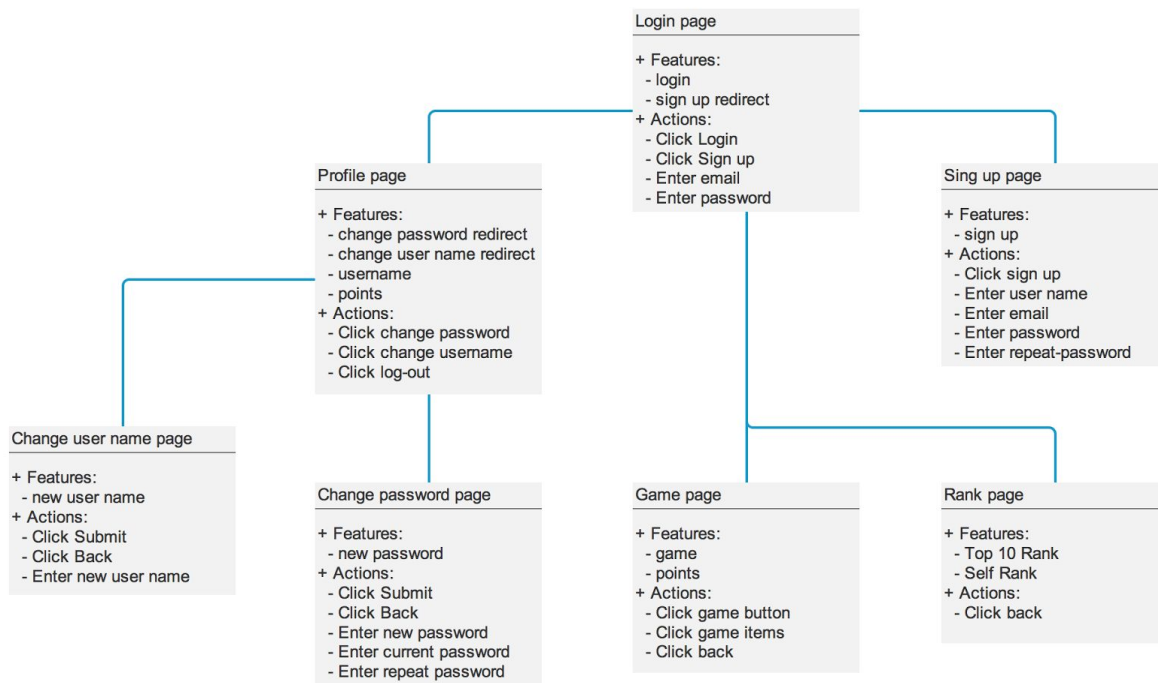
1.2.4.2 Change username page

Once the user clicked the change username button on the profile page, the change username page will appear and it provide user click “Back” or “Looks Good” and input new username.

- Allow user to input new username
- Allow user to click ‘Looks Good’ button

1.3 Project References & System

This section provides a bibliography of key project references and deliverables that have been produced prior to this point in the system development process.



Remark:

Username length is 1-15 characters.

Reference :

<https://developer.apple.com/library/content/documentation/IDEs/Conceptual/AppDistributionGuide/LaunchingYourApponDevices/LaunchingYourApponDevices.html>