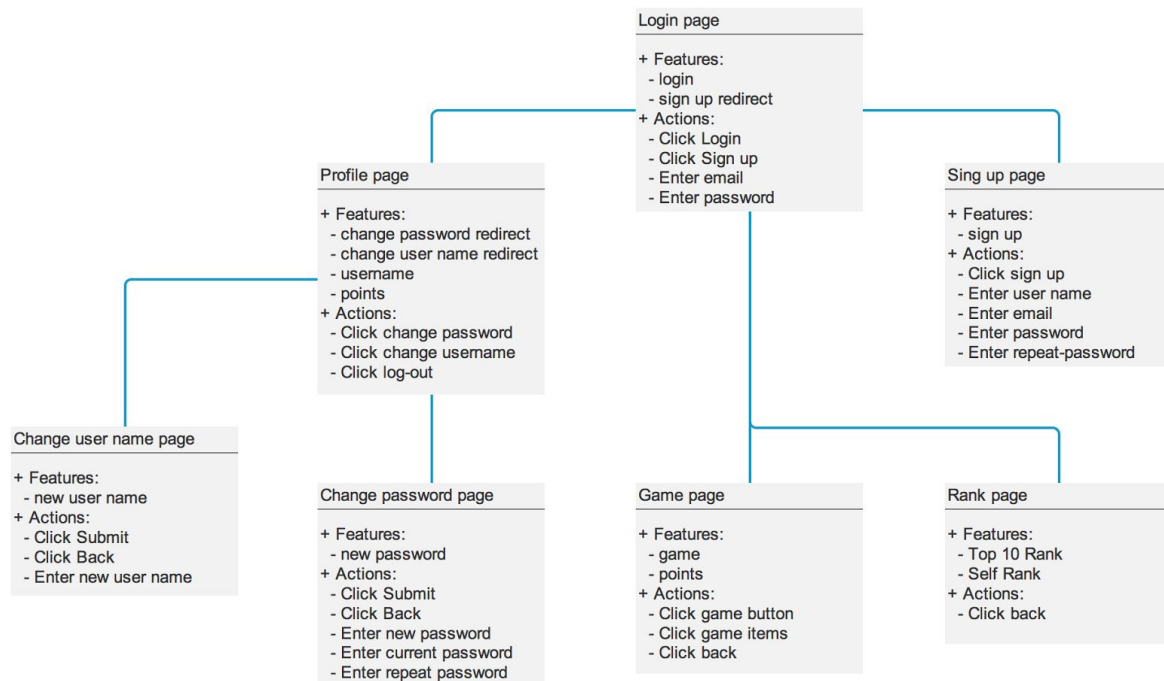


Team 14 : Defect Log

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Design Description



Design Inspection Defect Log

Product	Minesweeper
Date	10/12/2017
Author	Team 14
Moderator	Dan Luo
Inspectors	Wenya Zhu, Dan Luo, Shirley Fu, Jingzhou Wang, Jay Cha
Recorder	Wenya Zhu

Defect #	Description	Severity	How Corrected
1	GameScene should not be connected to the View	3	Fixed: Created ViewController for the Game
2	No module was assigned to connect the database	2	Fixed: Data view controller was created for database
3	No module was assigned to track the score	1	Fixed: Created gameStats to track the score
4	No module was established to check the rank	1	Fixed: Created rank class to store the rank
5	For a new game, GameViewController module should not evoke another module but itself	2	Fixed: Created a EndViewController to link back to a new game
6	GameTile should not contain logic	3	Fixed: Created GameBoard to contain the main logic
7	One-click to tile and hold onto tile should be different for revealing and flagging	3	Fixed: Created a method in GameScene to differentiate those operations.
8	The view of each tile should not be generated in the tile class	2	Fixed: Created a tile sprit class to generate the view of each tile
9	The view of end game should not be generated in the game view controller	3	Fixed: Created a endgame view for game end
10	No module was used to save the user to the server	3	Fixed: Created a User module to store the data for Firebase server
11	No view has been created for updating user profile	2	Fixed: Created a ChangeControllerViews for username and password
12	After purchasing in-game items, the amount of coins on profile page didn't change	3	Update the amount of coins in database, and fetch the number from database every time loading the profile page

13	There's no place to store the purchased items	2	Instead of storing multiple purchased items, users can only purchase items during the game, and the item will be used immediately after buying it.
14	GameViewController should implement game screen as the screen controller	2	Created a game Screen class with implementation of SKScreen and connect the game screen with game view controller
15	there is no place to hold game information	1	game board class was created to record all of the information during the game and after the game.
16	there is no place to send out the record to the database	1	Game board class implements a function to connect with database and update the data.

Code Inspection Defect Log

Product	Minesweeper		
Date	10/12/2017		
Author	Team 14		
Defect #	Description	Severity	How Corrected
1	The latest (x, y) position of previous game remains on the new game, causing new game to crash.	3	Fixed: Made a separate variable to keep track whether the game ended or not. Used the variable to re-initialize entire board.

2	Connect the move label to the right view controller	1	Fixed: Delete the wrong connection and connect the move label to the game view controller
3	Recursion on revealing empty (no mines) neighboring tiles crashes on tiles on the edges (diagonal).	3	Separated original algorithm and made a diagonal property to bypass the cases
4	The same recursion stated above runs slow	1	Instead of making one big function, separated the function into 3 different functions
5	Fetch username using not matched reference, causing firebase to send error message	2	Fixed: Automatically find reference by using uid of the current user.
6	Retrieving bomb images and flag images as local files cause the game to crash	3	Omitted the images and replaced with images given by SpriteKit module.
7	To get top 10 records of different levels, mixed up with records of other levels	2	Create directories for the records and ranks of each level on database.
8	Compare the current record with ranked records, while rank is empty	2	Added size check before compare rank and current record.
9	Current record has same score with the ranked records, it will just overwrite the data	2	Fixed: Instead of overwriting, it will create a new record and update the whole rank data.
10	After number of coins goes to zero, or less than the price of items, the number can still get decreased, even negative, after trying to purchase an item	2	Check the amount of coins after receive the request of purchasing. Ignore the request if number of coins is not sufficient.
11	the size of each cell was signed to a fixed number	2	Fixed: instead of having a fix size, size of the cell can be determined by the number of the row that require and the size of the view
12	During the game when user touch	2	use touch.fist to let program

	the screen with multi finger, the game crashed		only reacts with the first touch of the program
13	Game gives immediately reaction to user's touch with delay nor animation	3	delay animation was added to the game when the game reacts with user interaction

Unit Testing Defect Log

Product	Minesweeper		
Date	10/12/2017		
Author	Team 14		
Defect #	Description	Severity	How Corrected
User Authentication Module			
1	Tested sign-up page with length of username is empty, error message not shown	2	Added in checks to test whether the input is empty
2	Tested change-username page with length of username is empty, error message not shown	2	Added in checks to test whether the input is empty
3	Tested sign-up page with password is not match, error message not shown	2	Added in checks to test password and repeat password are equal
4	Tested sign-up page with e-mail input legitimacy, error message not shown	2	Added in checks to test email format is valid
5	Tested sign-up page with length of username is greater than 15 characters, error message not shown	2	Added if statement to check if the input is too long
6	Tested sign-up page with length of	2	Added if statement to check if

	username is less than 4 characters, error message not shown		the input is too short
7	Tested sign-up page with length of password is greater than 16, error message not shown	2	Added if statement to check if the input is too long
8	When giving invalid inputs for registration, though the account cannot be created, the application can proceed to the next view and the alert cannot be shown	1	Instead of using the action that, proceed to the next view immediately when click the button, use “performSegue”, which directs to the next view, after checking if the inputs are valid
9	Giving multiple invalid inputs for username, password and email, only one error message show	2	Instead of using “&&” when checking all conditions in an if statement, check them separately
Profile Module			
10	When changing the password, give an invalid password, change can still proceed	2	Added same error-checking function for changing password as what is used for registration
11	Tested change password page with current password is incorrect	2	Added in checks to test current password is correct
12	Number of points on profile page cannot be shown properly	2	Force cast the integer to string and then pass the value to the label
13	When redirect to chang user name page, can not see the full label.	1	Change the label view width and height size.
14	When redirect to chang password page, can not see the full label.	1	Change the label view width and height size.
Game Module			
15	When starting the new game, everything such as timer, number of flags should be re-setup	1	reset the all of the game vale when new game button is clicked
16	During the game, the number of	3	keep updating the move label

	move did not change, and the number of unused flag is not correct		and number of unused flag as game process
17	three tiles did not show the correct value	3	implement the correct logic for calculated the the value
18	When enter the game, can not see the every tiles	3	change the tile's background color which can make it different with the game background color
19	When a mine was clicked, game did not end	3	make the right connection with end_game view and game controller view
20	When a game is finished, number of discovered mines and time were incorrect	3	fix the result calculation and the timer
21	flag did not respond when user press a tile for a long time	3	fix the timer issue on the flag respond function
22	Even the flag was on the correct the mine but system still recognized as mine is clicked	3	change the tile flag value when the flag function is called
23	After end of the game, cannot add user record into the ranking system and users history	2	correctly connect the ranking module and user module in the end game view controller
24	After clicked the game level button, cannot show up correct version	1	correctly connect the game view page in the game view controller
25	When user try to login after logging out, the app will crash sometimes	2	correctly user successfully logs before sending user to login page
26	When the user points is not enough, it still can buy an item in the game.	2	fix the points the calculation and pop up dialog box
27	During the game, the cell did not react with the touch	2	correctly connect the touch trigger to the game cell
28	During the game, random blocked shows up with clicking on it	2	correctly checkout all of the neighboring cell