
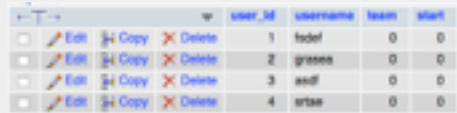











Criteria E – Evaluation



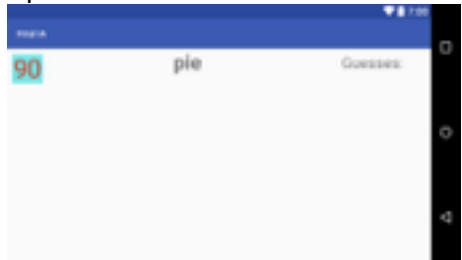
Test Plan

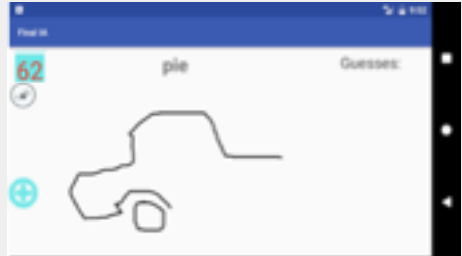


	Success Criteria	Test	Expected Result	Actual Result
1	The application must run on the Android operating device	Run Application on android device or android API	The program does not crash and works as expected	<p>The application opens up as normal and worked without crashing</p> 
2	The application must be able to read from and write to a MySQL database so that connection between players can be made	<p>Perform all necessary functions:</p> <ul style="list-style-type: none"> - Create table in database with unique name - read data from existing table - create records in table - update records in table - delete table in records 	The communication between database and program will be smooth and games will be made which people can join and play in.	<p>The program writes to the database, makes tables, add to, update and read from tables smoothly.</p> <p>Here is an image of one of the tables made by, written to and read from by the application:</p> 

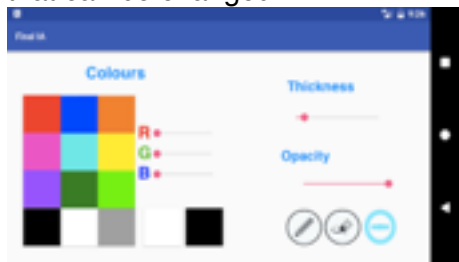


	Success Criteria	Test	Expected Result	Actual Result
3	<p>When a user enters the application they should be provided with the option to join a random game, join a private game or create their own game. Depending on the selection a different set of instructions will be followed to set up the game.</p>	<p>2 Tests</p> <ol style="list-style-type: none"> 1. Click on private game button 2. Click on random game button 	<ol style="list-style-type: none"> 1. After the button is clicked, a new intent should be launched which has the option of creating a game or joining one 2. It should prompt the user to input their preferred username 	<p>Works exactly as expected</p>  <p>Test 1 result:</p>  <p>Test 2 result:</p> 


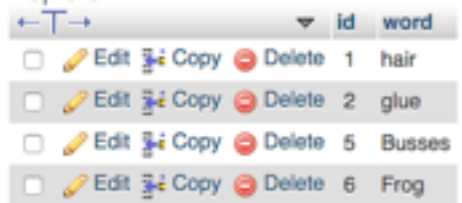
	Success Criteria	Test	Expected Result	Actual Result
4	The application should be able to connect between 4-8 players per game in the game type chosen	Try running the game with less than four players, between 4 and 8 players, and then with over 8 players.	The program should give errors for games outside the 4 to 8 range and launch into splitting teams if the number of players in acceptable	<p>Works as expected.</p> <p>Message if there are less than four people: (message says “Not enough people in the game (minimum 4 player)”</p>  <p>Message if there are more than 8 players: (message says “Too many people in the game (Maximum 8 players)”</p>  <p>If it is within the range it splits the teams randomly and equally: (There were 4 players in this game)</p> 

	Success Criteria	Test	Expected Result	Actual Result
5	Everybody inside a game should have a "unique username" ⁸² so that everybody is identifiable	Try entering a unique username and then repeating that username	The program should accept the username the first time it is entered, but give an error the subsequent time.	<p>Works as expected. There is no error the first time the name "Daniel" is entered to the game:</p>  <p>On subsequent attempts it gives an error that says "login failed (username is taken)":</p> 
6	Once the game begins, it must be able to split users into "2 random teams" ⁷²	Open the intent to split the teams	The teams will split randomly with even numbers on both teams	<p>The teams are split randomly with equal number of people on both teams</p> 

	Success Criteria	Test	Expected Result	Actual Result
7	There will be 2 roles in each team for each round, drawer and guesser. The opposing team will just be spectators for the round. The drawer and guesser must change every round so that through the game all players play every role	Play a full game and keep track of which player had which role in each round	There should have been a rotation through who draws for the team when they are drawing and the team not drawing should all be spectating	<p>It works as expected and there is a rotation.</p> <p>Drawer view:</p>  <p>Guesser View:</p>  <p>Spectator View:</p> 

	Success Criteria	Test	Expected Result	Actual Result
8	The drawing board must show a real-time image on all devices from the device that is being drawn on	Use multiple devices and draw on one and observe on the others	The image drawn should appear on the other devices almost instantly	<p>The drawings appear on all the devices within a second because that is the refresh rate to read from the database.</p> <p>Drawer view:</p>  <p>Guesser view:</p>  <p>Spectator View:</p> 

Success Criteria	Test	Expected Result	Actual Result
9 "The pen should also have different drawing colours, opacity and thickness." ⁶⁸ These are important as it makes drawing accurate representations of the word given much easier. The colours will use RGB sliders so that there are more than 16 million different colour possibilities	Try different colours, thicknesses and opacities to ensure they do intact work. Also try using the RGB sliders to chose the drawing colour to ensure that a great range of colours is possible	Whenever any of the properties are changed, the subsequent lines drawn will be using the values that have been changed to.	<p>The canvas works as expected: The page with all the properties that can be changed:</p>  <p>The board after changing colour, thickness, opacity and selecting colour from RGB sliders:</p> 
10 The application must have an eraser	Use the eraser button to go over something that is drawn	When the eraser is used, it should give the impression of having deleted the areas that the person went over and if the clear button is pressed, the whole canvas should become blank.	<p>The eraser works as expected because it draws a line over the previous ones in the same colour as the background giving the impression desired</p> 
11 There must be a random number generator from 1 to 6 to mimic a dice roll so that teams can advance on the board	Press the button many times to ensure it goes from 1 to 6 and is random.	The value should be different most of the time with a probability of 1/6 for each number	The dice roll gives a random value between 1 and 6 every time it is used

	Success Criteria	Test	Expected Result	Actual Result
12	The application must have a "timer" ⁶⁸ so that the round ends after 90 seconds if the word is not guessed correctly	Run the program for 90 seconds in the drawer, guesser or spectator screen	The activity should shut and return true or false for whether or not the word was guessed	The timer works and if the word is not guessed in the 90 seconds the intent closes (The timer is located in the top left corner) 
13	Users should be able to suggest new words to add to the game so that there is a range of words and the game stays interesting	Use the suggest new word button to launch intent from home screen then make a word suggestion	The word should appear on the database waiting to be verified before being put in the game	The words go to the database and all new words initially are not in the game until they are verified. 

Product Evaluation

Overall I am pleased with the way the application turned out because it met all the success criteria and was an application that challenged me to learn new software and programming languages, but it was certainly an application I enjoyed making. My client also liked the final product as Kaasvi said "This is just the application I was looking for because I can now play with my friends on the go" in the final interview. While showing the application, my client also said that the app is intuitive and easy to use, something that is essential for applications because if users get frustrated they are able to switch and use another software.

I believe my solution to this problem has been smart and effective because I used OOP to ensure that once any single part of the project was complete, I could leave it alone and not run the risk of it being spoilt. I also decided to store all the PHP files online which reduces the memory needed for anybody who decides to download the application which is beneficial for anybody with little memory on their phone.

All in all, the program has performed its task and I believe it has been made to a good standard that as it can be used by many people without bugs, something that is very common in games.

Recommendations For Improvement

Based off of some of my observations, client feedback and beta-testing with a small group of friends and family, I believe there are a few things that could be improved.

1. I could implement hints when people are trying to make guesses. This would be relatively simple as I could see how many letters of the guessed word match with the real word or

compare if the actual word is a synonym of the guessed one. The reason I have receive this feedback and believe it could be beneficial is because if the people are together, they are likely to react if the guess is close to the word they are trying to guess, hence hints would make the game feel that much more interactive and enjoyable

2. In a private game, there should be some flexibility or function that allows players to chose which team they want to be in because they might have preferred teammates. This seems like a good idea because, like the hints, it adds a bit to making the game feel like it is more in real life and makes it more fun for the players.
3. Change some of the colour themes in the application because the blue and orange can be a bit too hard to make out in some situations. Although this was not my personal opinion, it was one that I got frequently from friends and will consider changing if I was to change the application in future