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[M00737296]

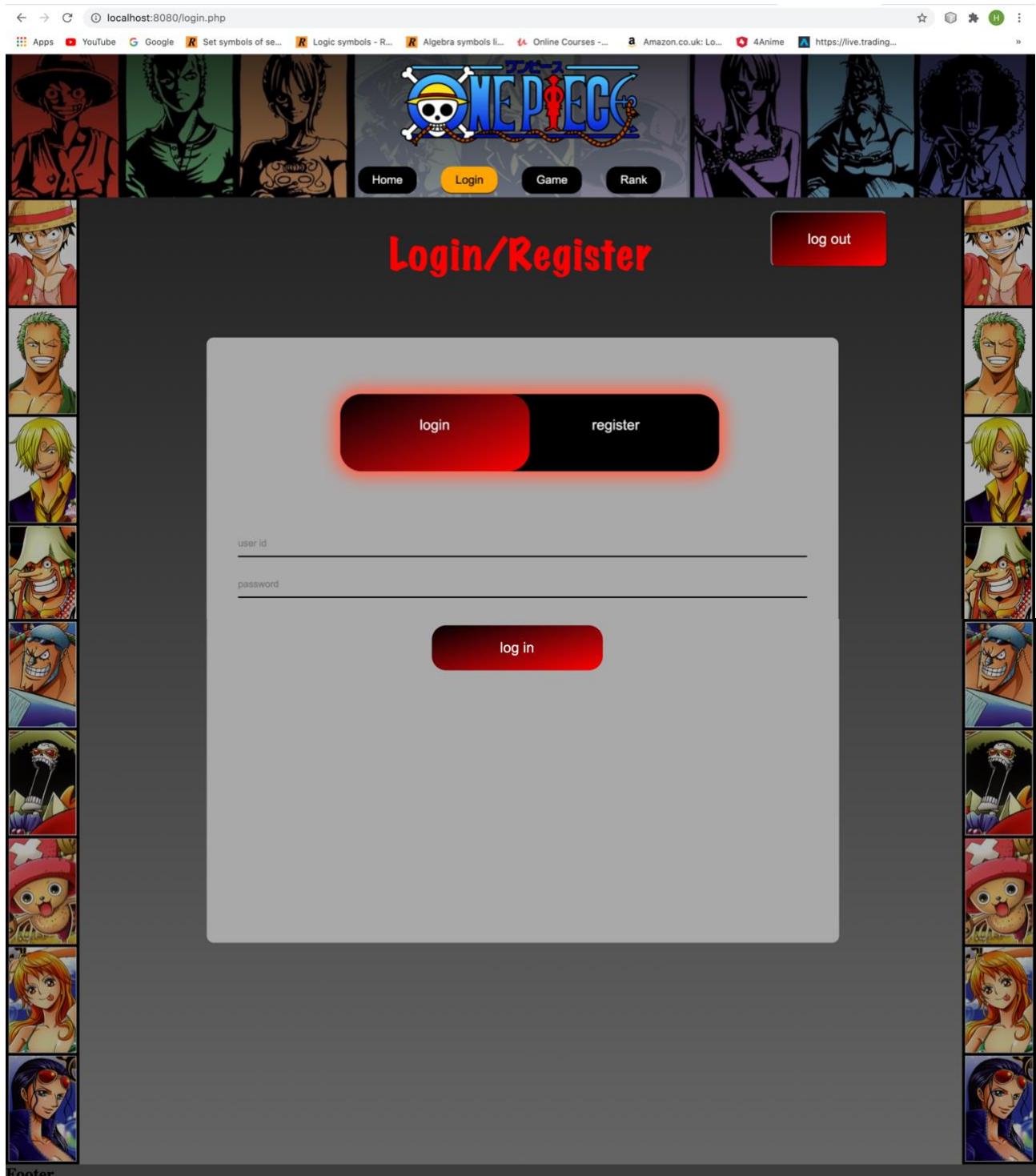
PROJECT REPORT

[Coursework 1 / Game Website]

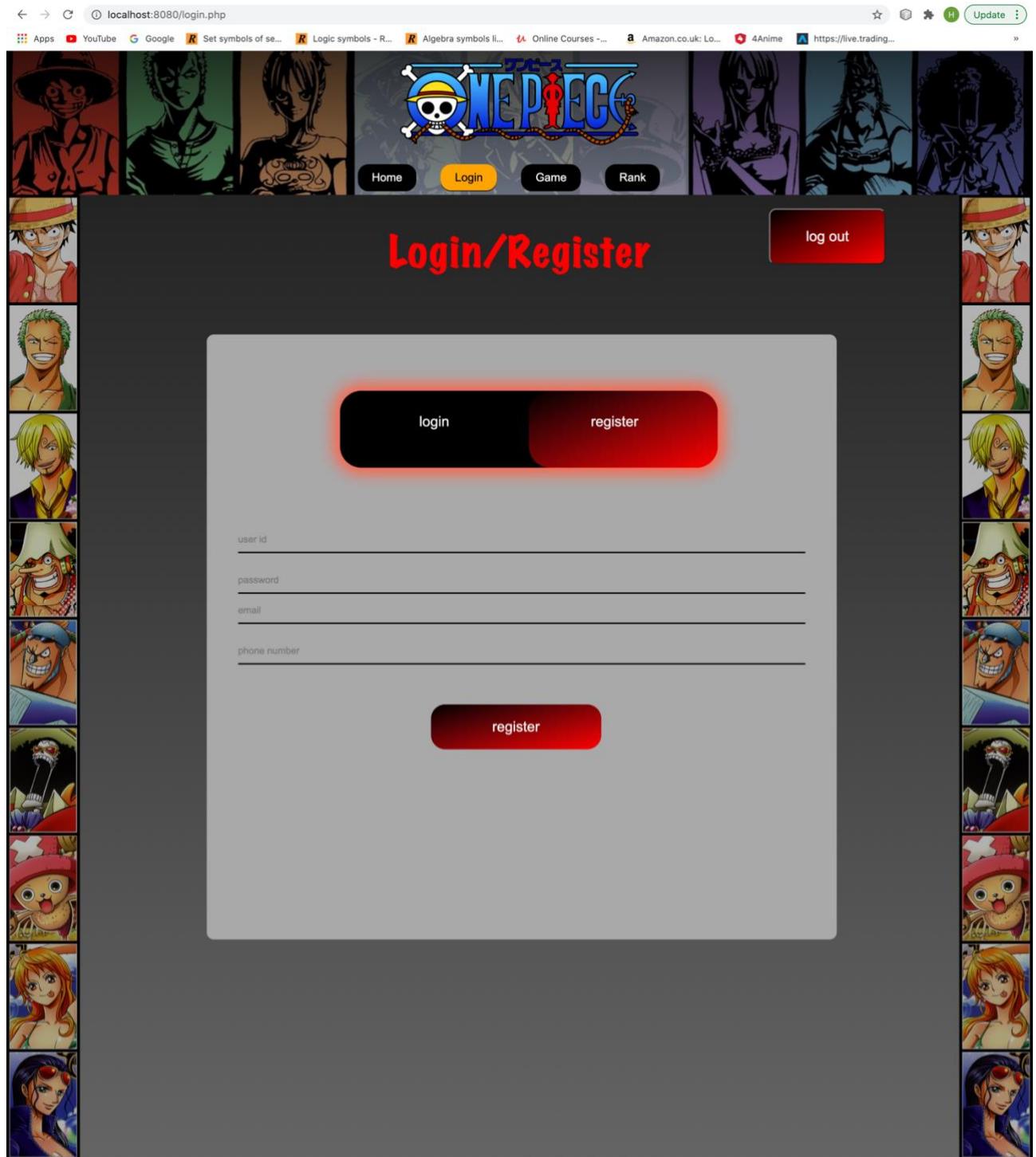
1. Summary

In this project report I will be explaining how the game works, the registration, login, error handling, input validation and rankings functionality in detail.

2. Login/Registration

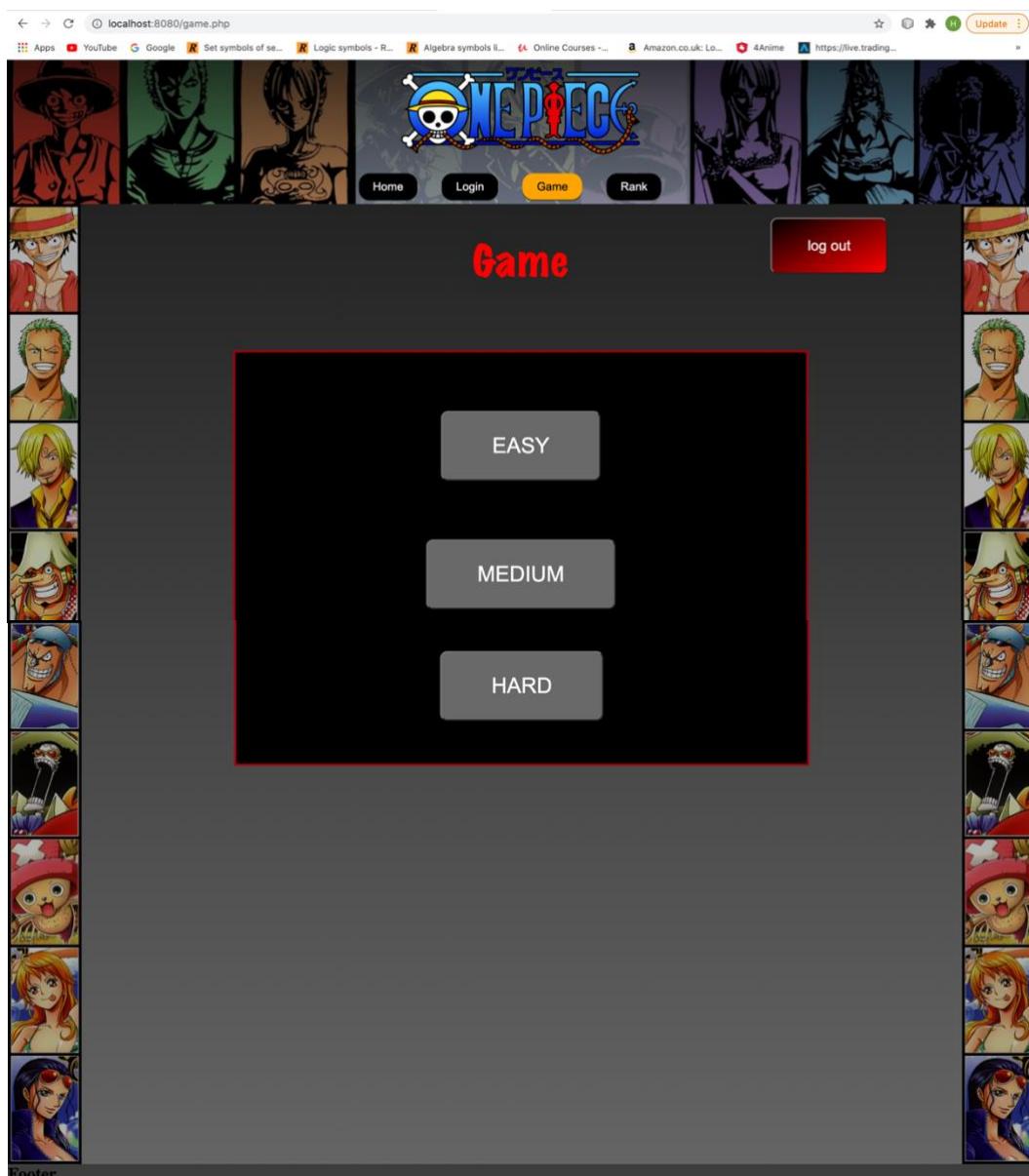


The login page consists of 2 buttons “login” and “register” (along the top of the box), this is used to switch between the “login” and “register” pages. Within the login page it includes 2 text field boxes “user id” and “password”. These boxes need to be filled in order to login, if not it informs the user to do so. The functionality checks if the user inputs matches the information within local storage and for this to happen the user must register or have an existing account. If the user misspelt the “user id” it will inform the user with the text “User or password not recognized. Do you have an account?” and if the user misspelt the “password” it will inform them with the text “User or Password not correct. Please try again”. when the user gives the correct details (which matches local storage) it informs the user has logged in.

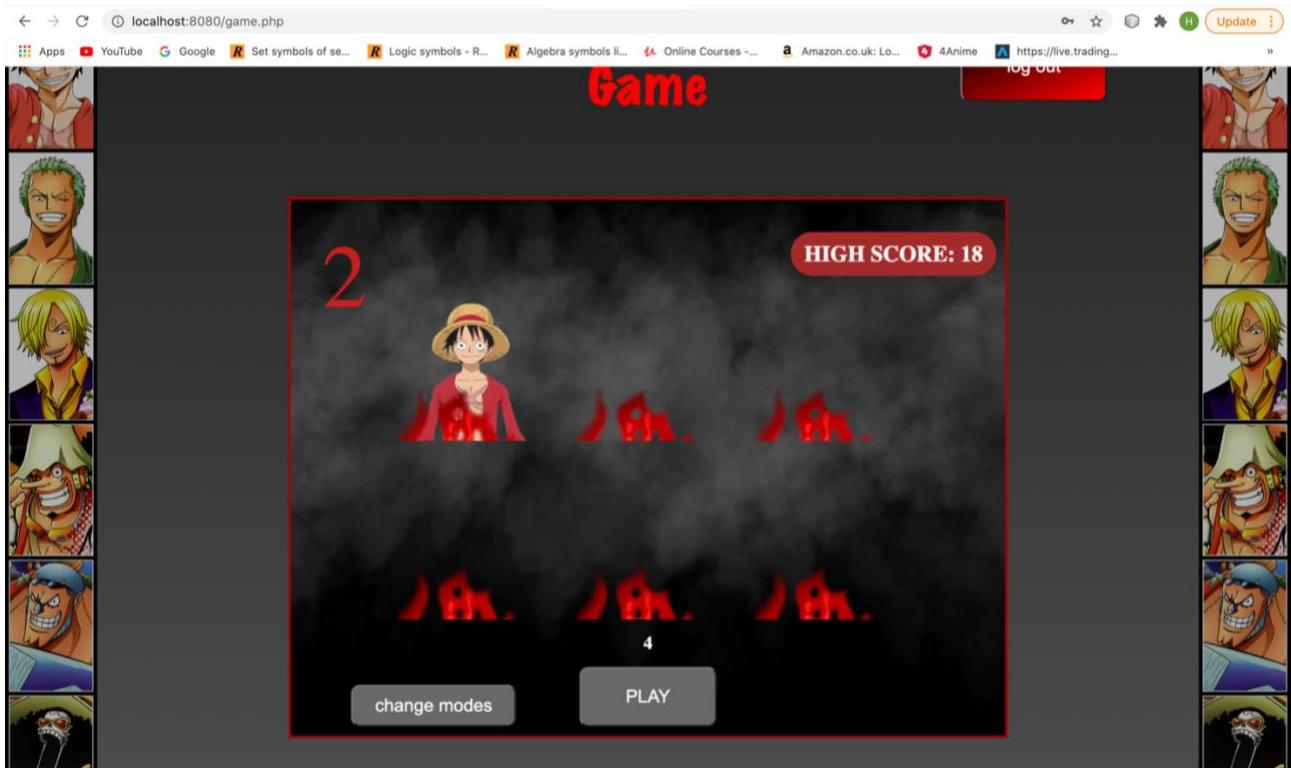


If the user does not have an account, they can register by pressing the “register” button. The register has more text box fields, such as email and phone number, which requires to be completed before registering, else it will inform the user to fill in the missing data. The functionality within the “user id” text field, is that if the user inputs an existing “user id” it will inform the user with the text “user already exist choose another”. The functionality within the “password” text field is that the password must be 5 characters long else it will prompt the user with “password must be 5 characters”. Within the email text field, I used an regular expression for the functionality. This regular expression checks if there is an @ character and any dots after it. It also checks if there are spaces, multiple @ and if the dot is the next character after @ making the email invalid. For example “bob@gmail.co.uk” and “bob@gary@gmail.com” will both be invalid. If the email is invalid it informs the user with the text “You have entered an invalid email address!”. Within the phone number text field, I used a regular expression for the functionality. This is based on the UK phone number template which includes 11 digits along with the first 2 digits being “07”. After the user completes the form correctly it will inform the user with “Registration successful.” Now the user can log in.

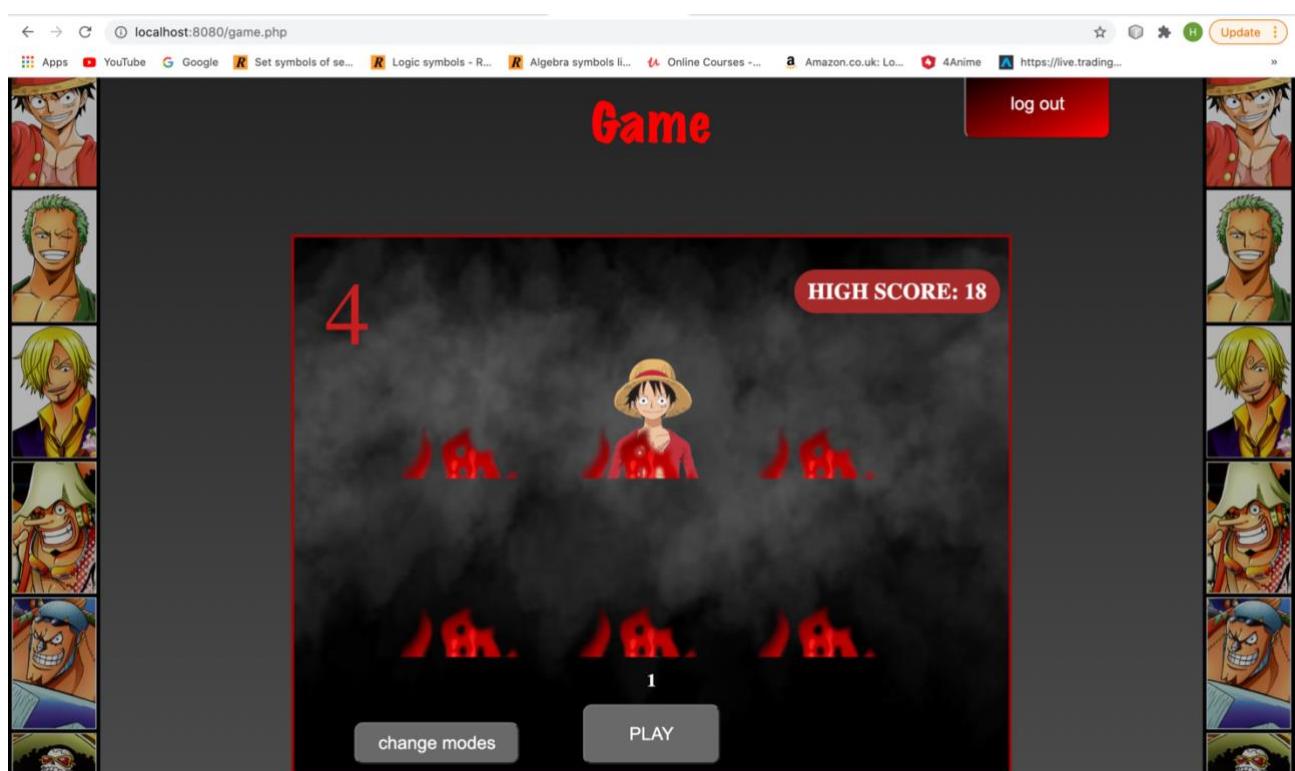
3. The Game



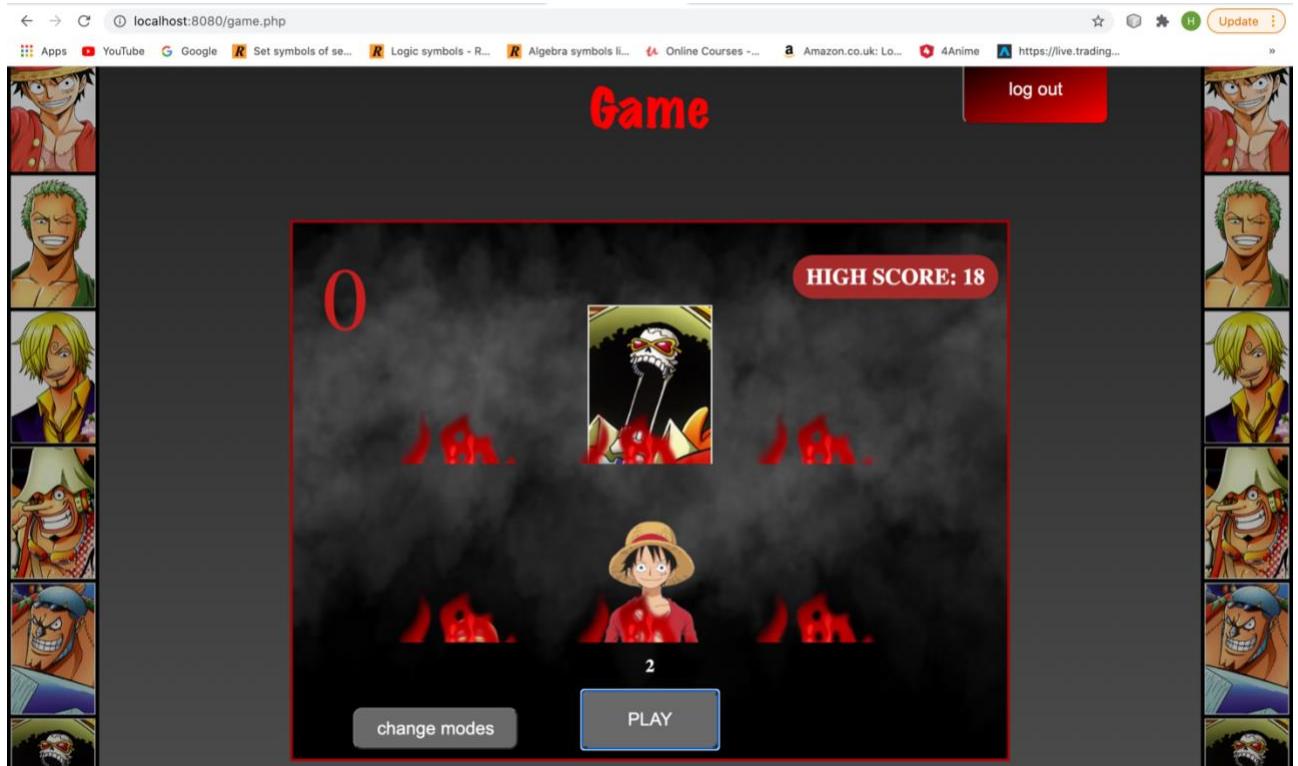
EASY MODE



MEDIUM MODE



HARD MODE



The game I chose to make is based on the classic “whack a mole” game. The game consists of 6 holes in which the character pops up at random, for a while, before hiding back. Points are awarded by clicking the character (with the straw hat) as it appears out of the hole. The more character you click the higher the score. However, the user has a time limit to hit as many of the characters possible, if the time hits 0 second the game is over, and the score will be recorded in the ranking table along with other users.

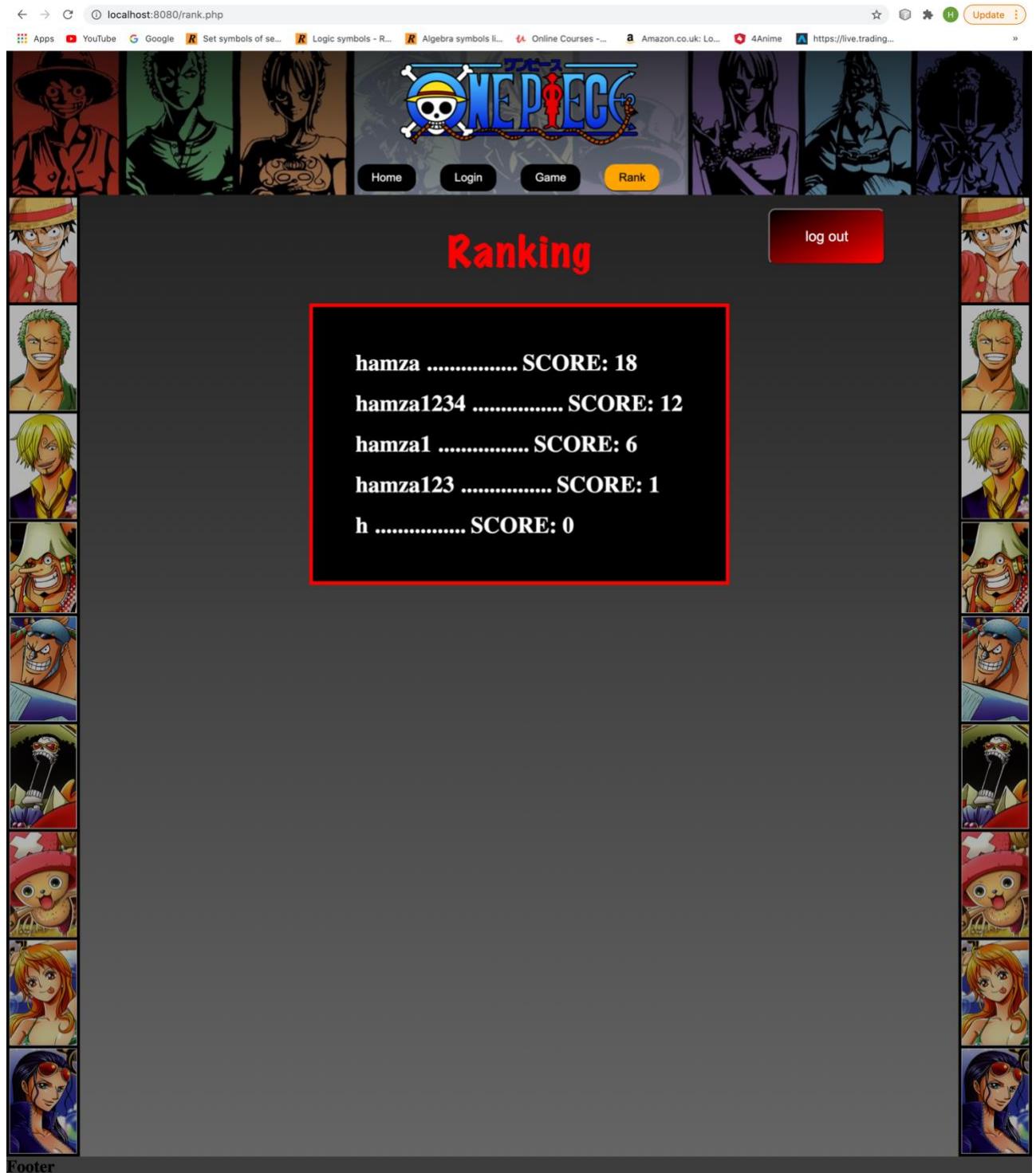
In order to make the game challenging I add various game modes making it harder to hit the character. This was done by reducing the time between the character being seen and the time it hides back (in the hole).

In the easy mode the user has a time limit of 20 seconds. The time for the character to be seen is much longer, than the other game modes, giving the user more time to click on the character. However, the user only gains 1 point when hitting the character unlike the harder game modes.

When playing medium game mode, the user has a reduced time of 10 seconds to play the game. Also, the time between the character being seen and the time it hides back (in the hole) is reduced, making it harder to hit the character. However, when the user hits the character, they gain 2 points.

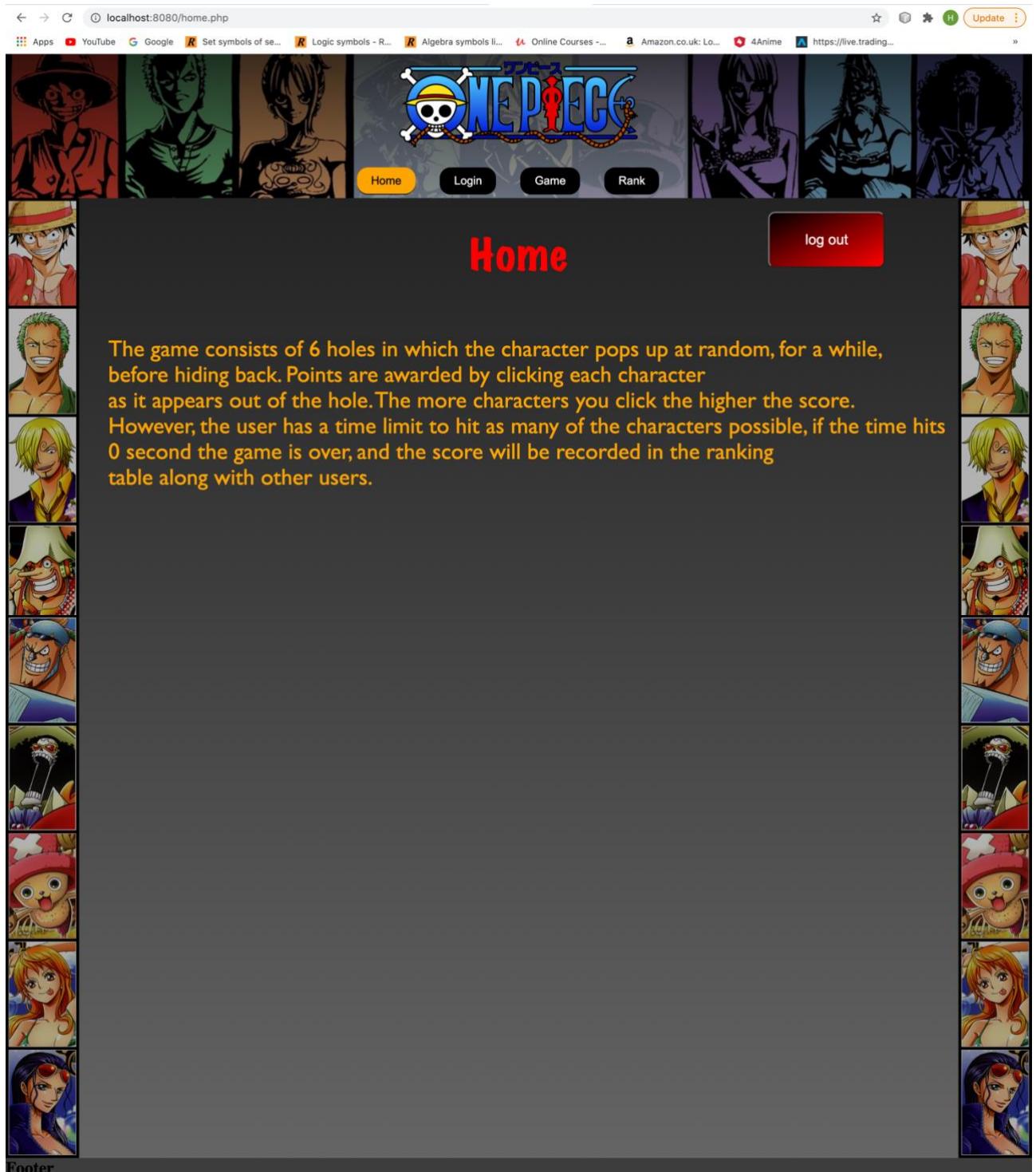
Within the hard game mode, a skeleton pops out of random holes. If the user clicks on the skeleton the user will lose a point. If the user clicks on the character, with the straw hat, the user gains 3 points. The user has 10 seconds to play the game before the game ends.

4. Ranking



This is the ranking page in which the user will be ranked, based on their performance when playing the game. The more points the user gets the higher they are placed within the ranking table (top being the highest). This also gathers the scores for other users and sorts the scores from high to low. The user id is placed on the left side of the ranking table followed by a number of dots and the scores is placed on the right side of the ranking table. All these scores are stored in the local storage along with the user id.

5. Home



Within the Home page I have described how to play the game and what happens after the user played the game.

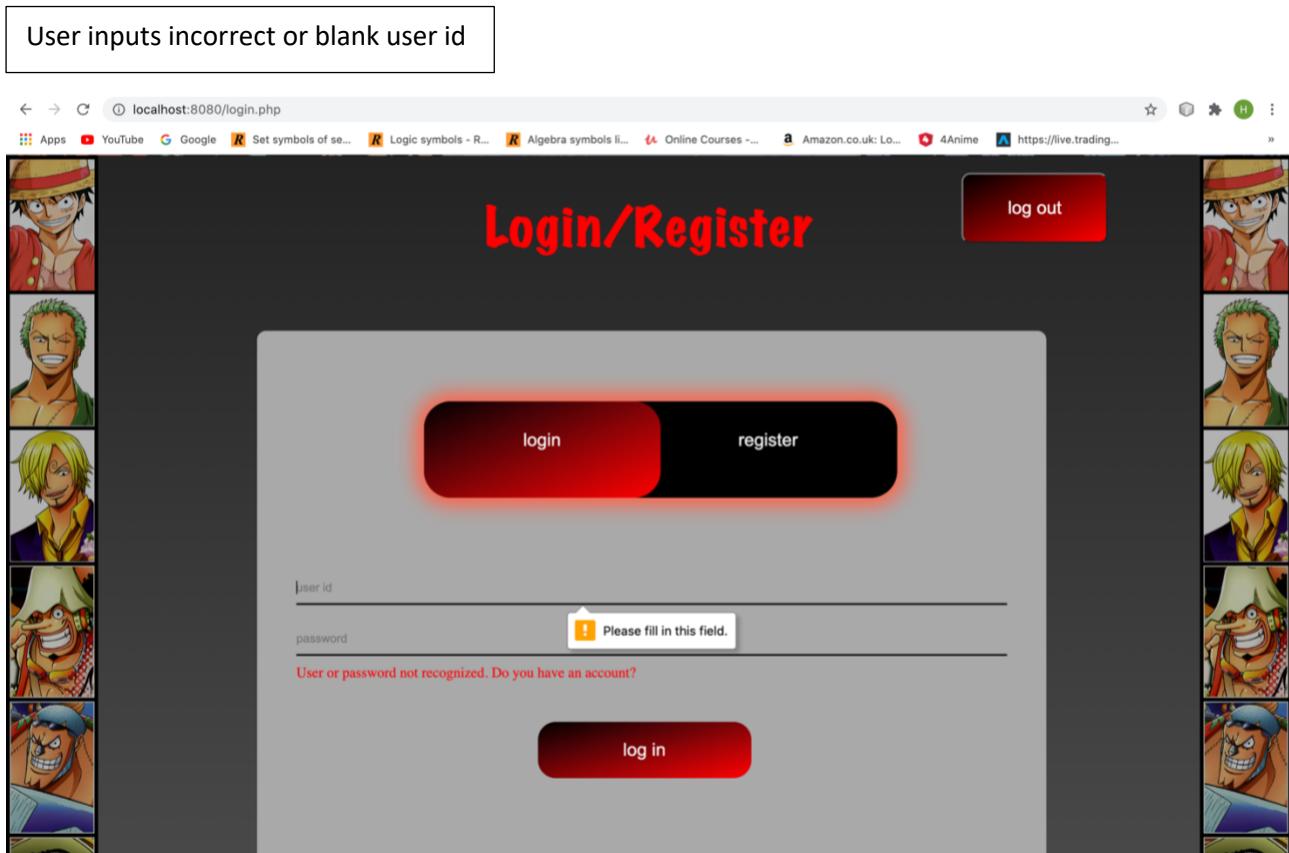
6. Extra Function

The extra functions I have added are: -

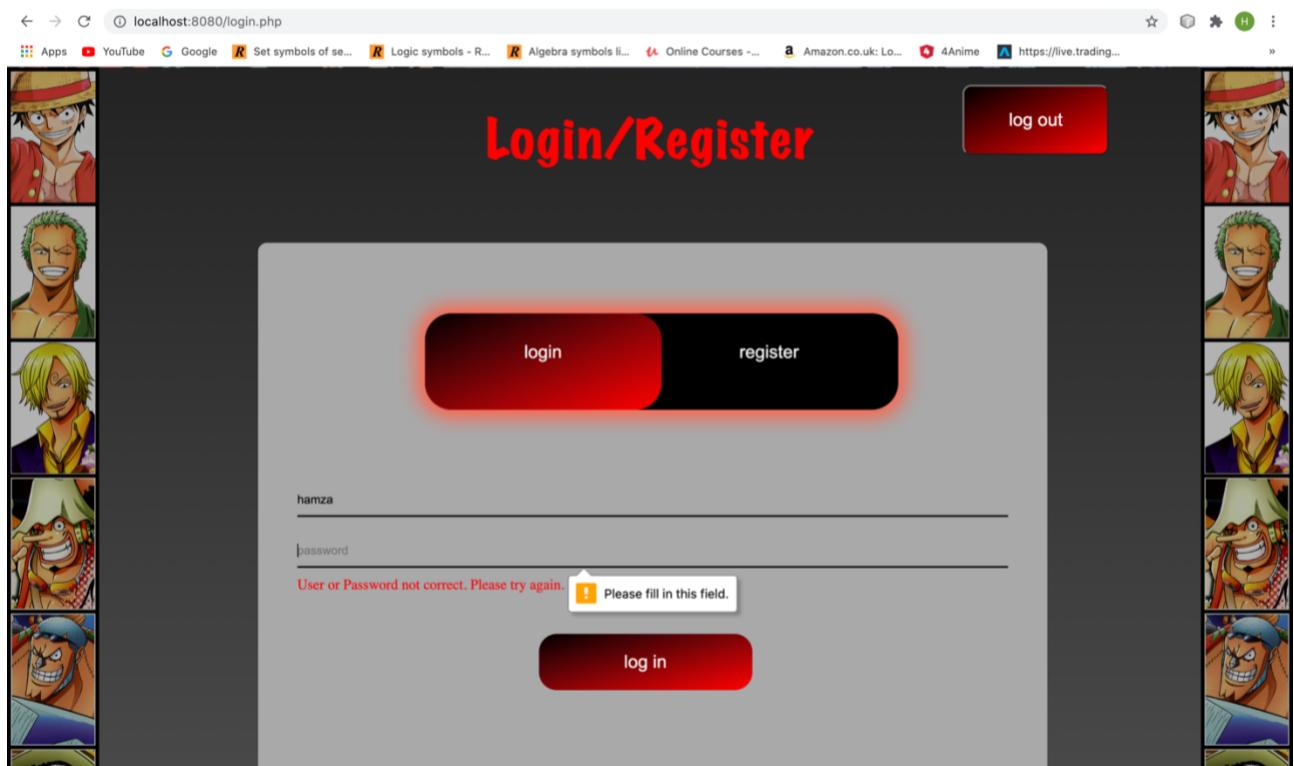
- Log out button – logs the user out by clearing the session storage.
- Change game mode button – this reloads the page allowing user to choose their game mode.
- Ordered ranking table

7. Additional Images

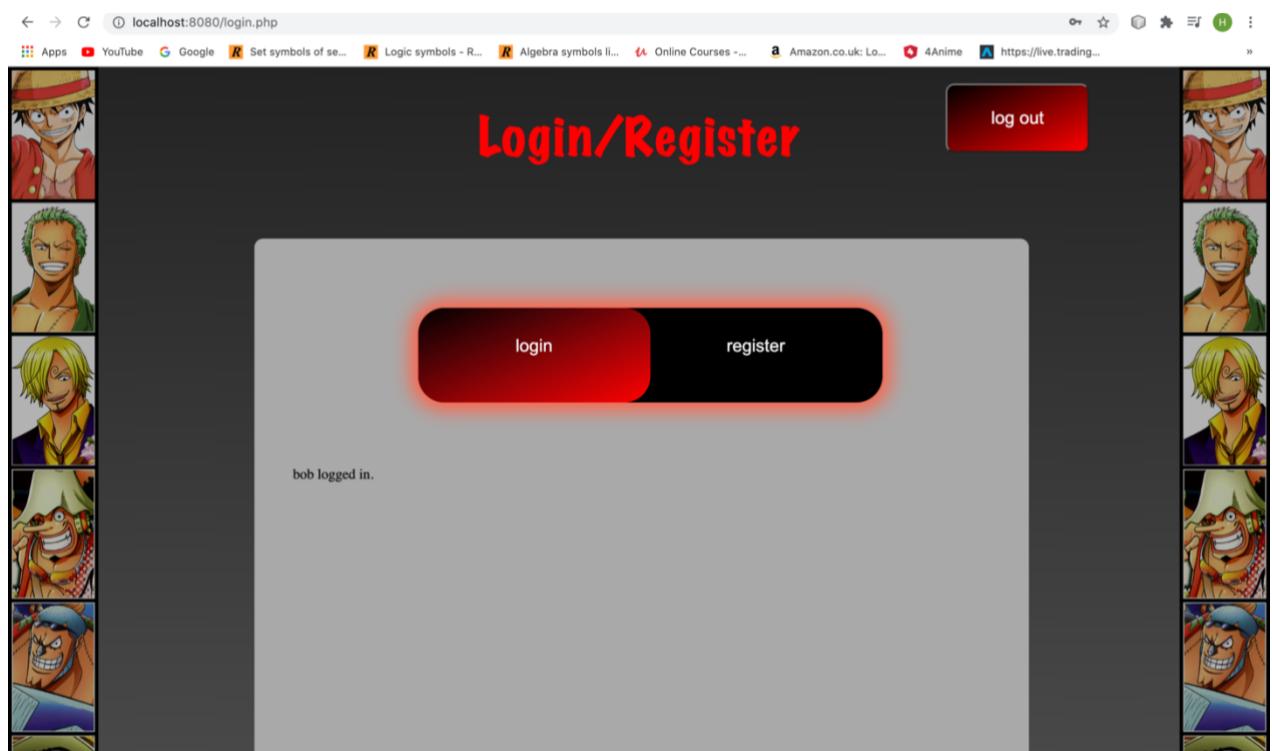
Below there are many images showing the functionality of the webpages.



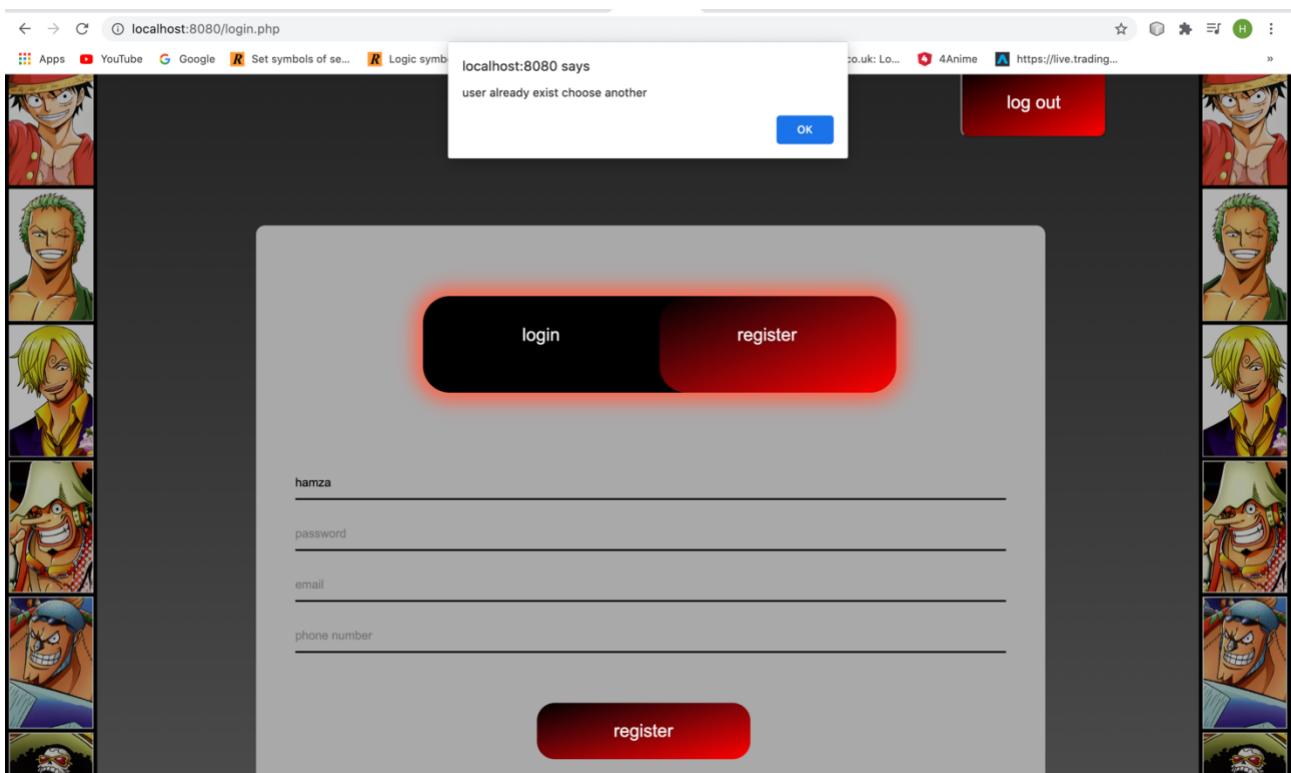
User inputs incorrect or blank password



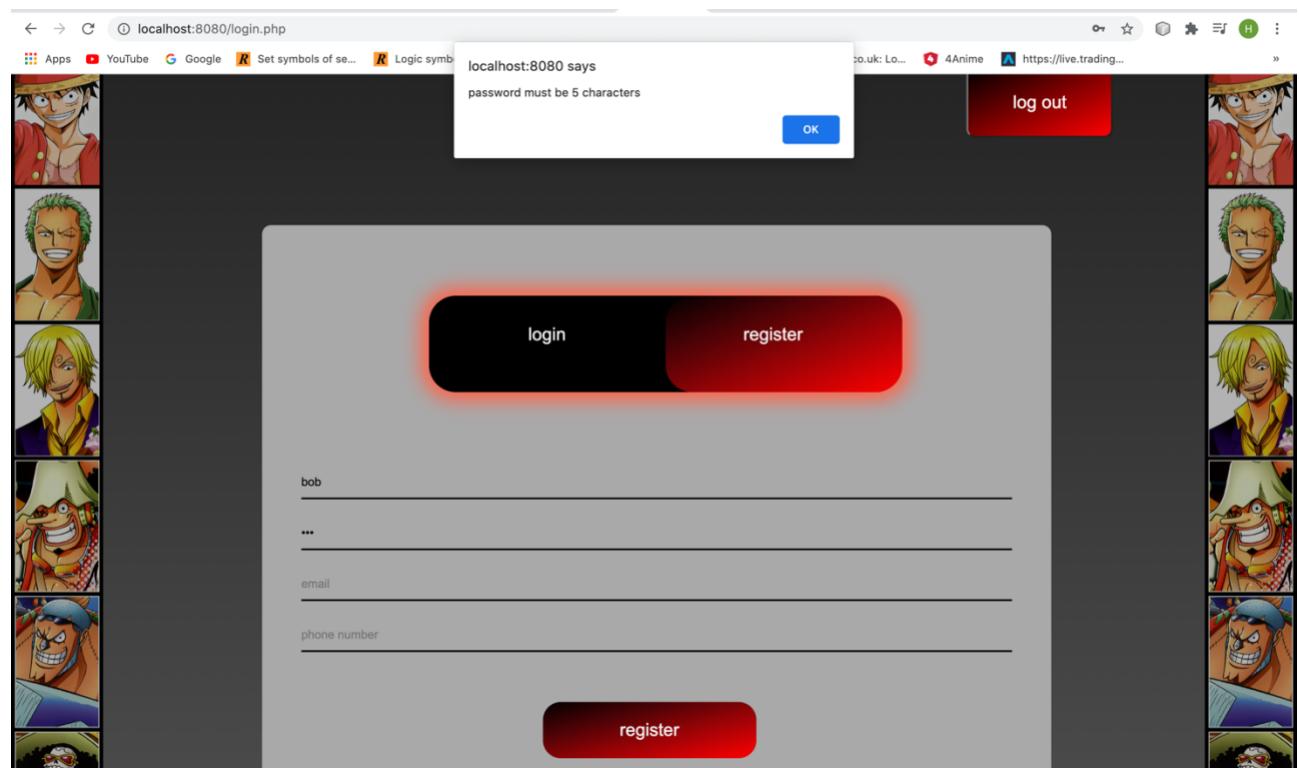
Informs user logged in



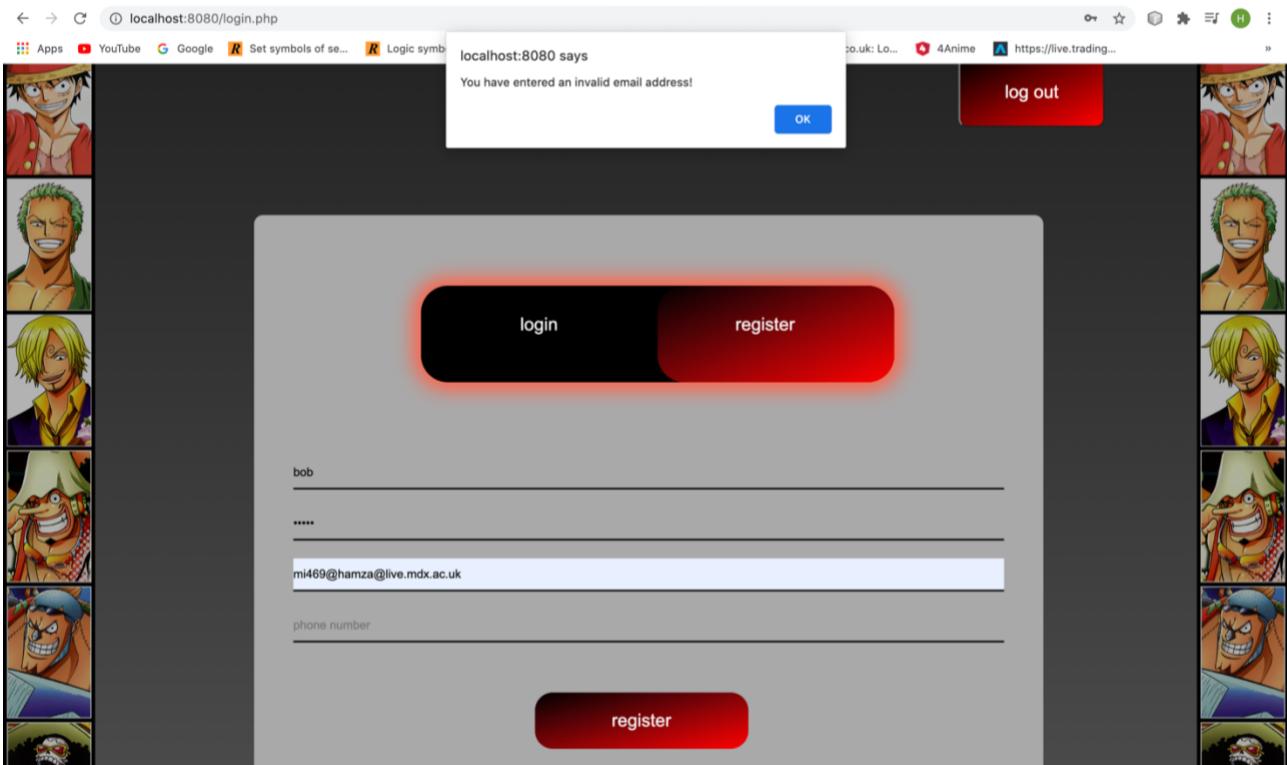
User inputs existing user



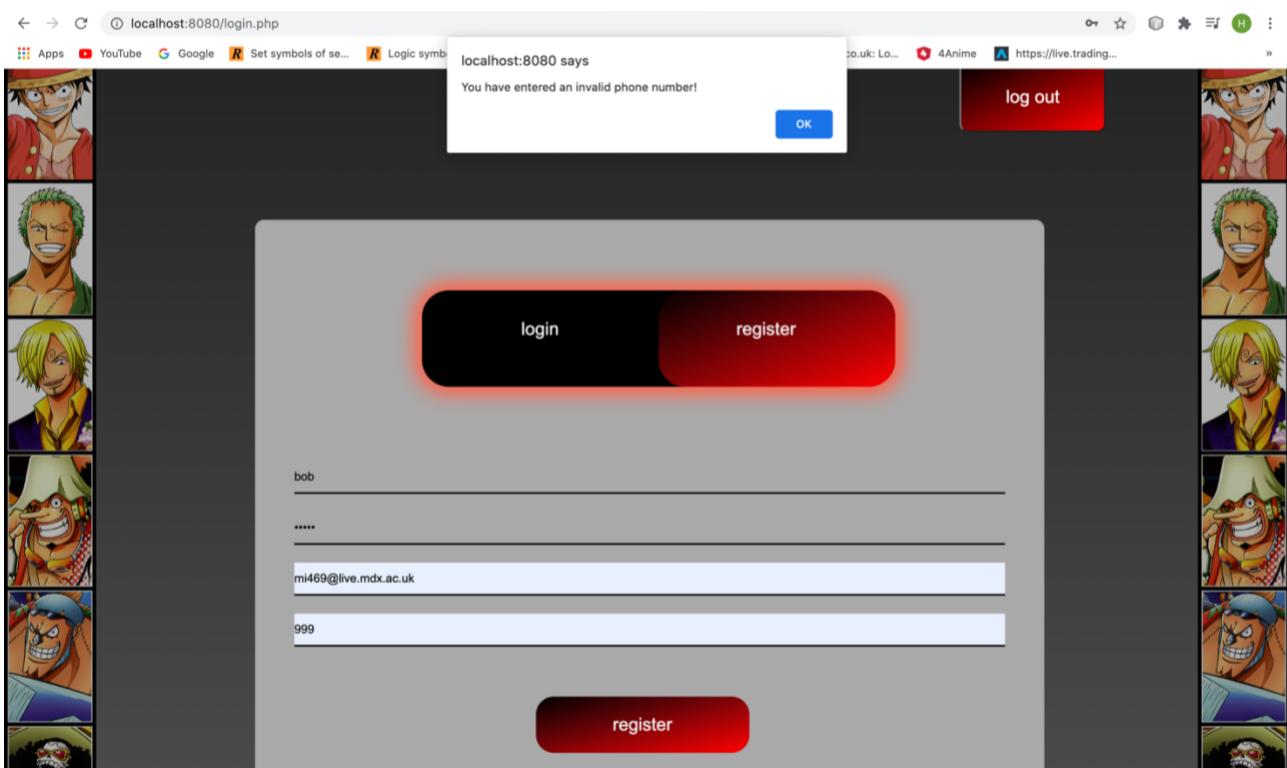
User passwords less than 5 characters



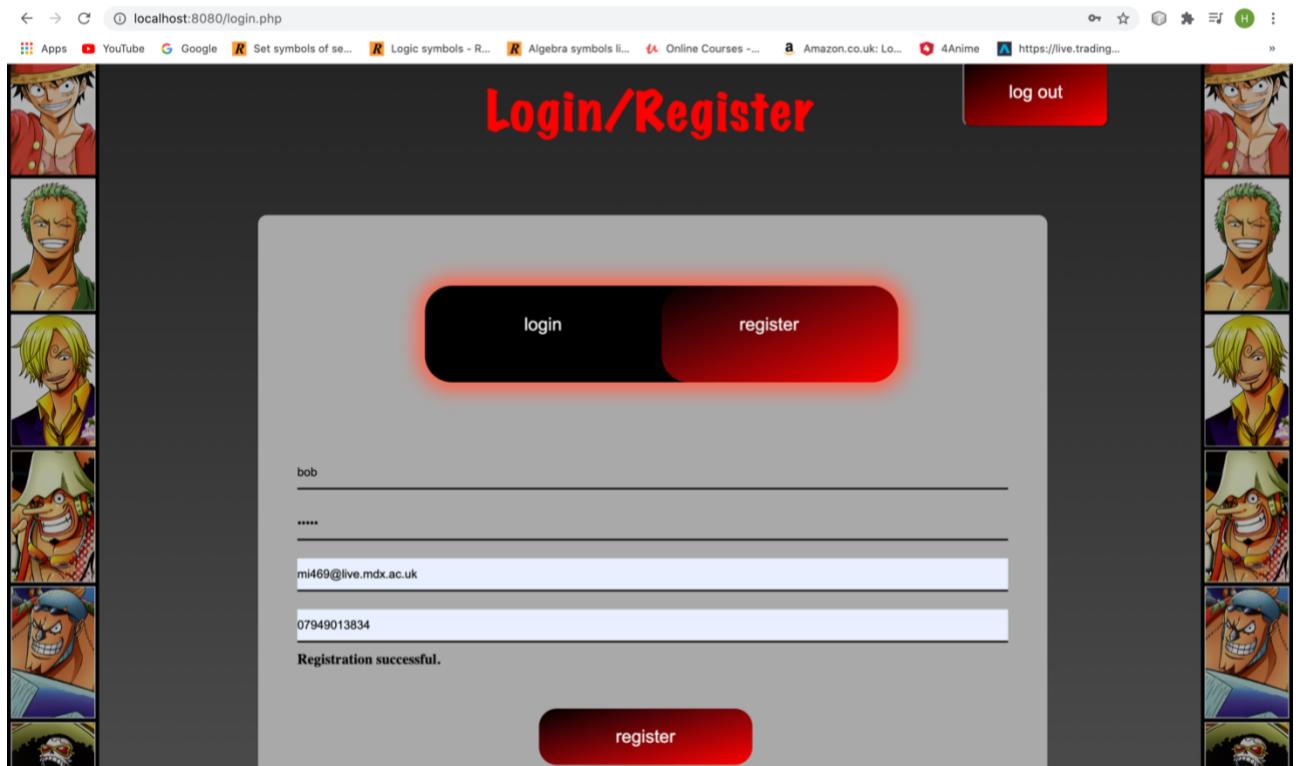
User inputs invalid email



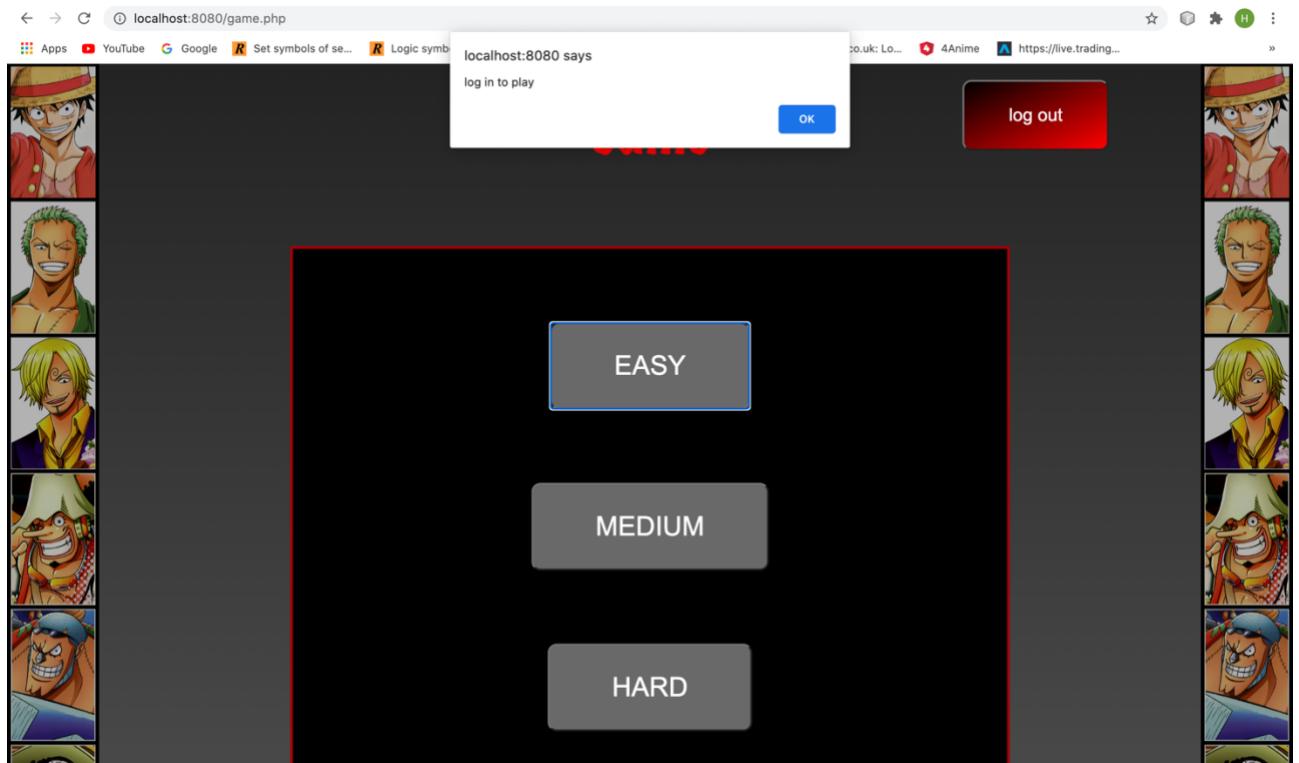
User inputs invalid phone number



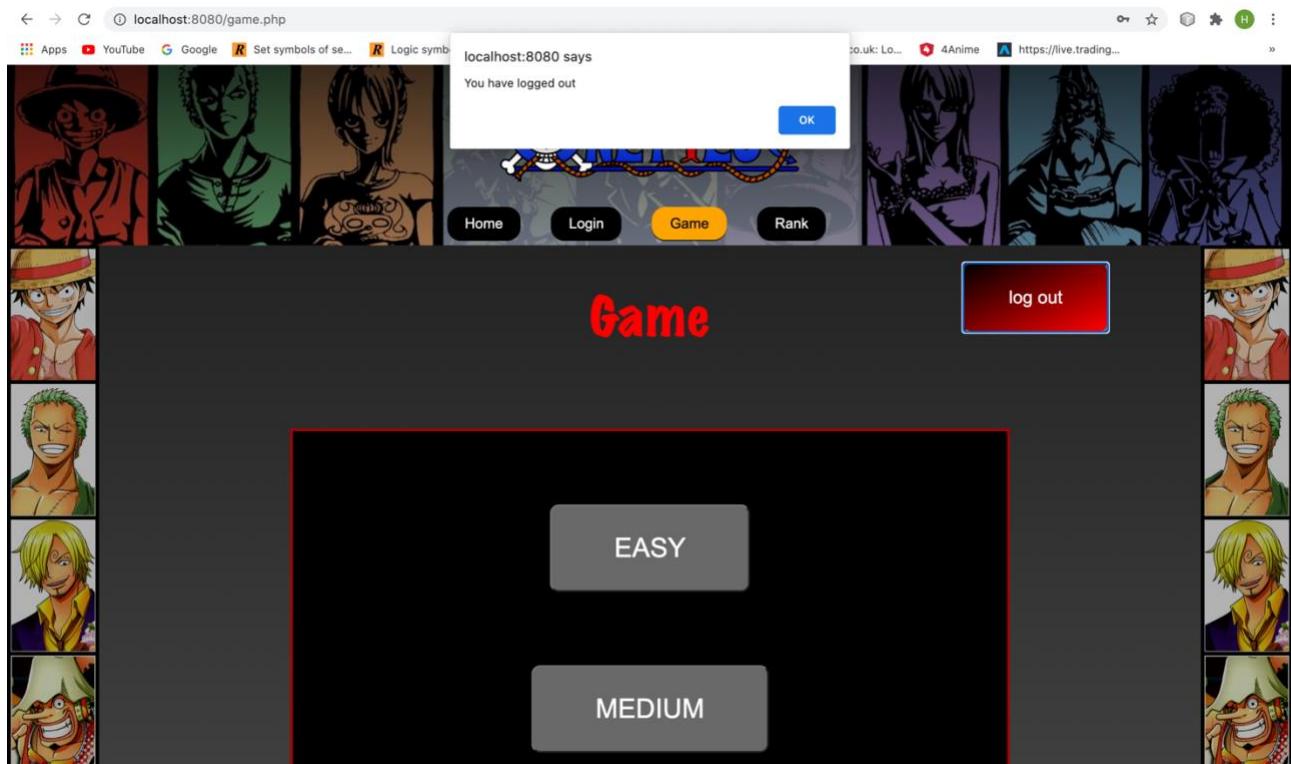
Informs user successfully registered



User must log in to play the game



When user clicks on the log out button



8. Resources for this Coursework

- https://www.youtube.com/watch?v=toNFFAaWghU&list=PLu8EoSxDXHP6CGK4YVJhL_VWetA865GOH&index=30
- <https://www.w3schools.com/js/default.asp>
- <https://stackoverflow.com/>

If you are unable to play the video demonstration for the game website, you can use this link:
https://youtu.be/rSis_OFY3qw