The user can open the server.py using a get header and reading all the backend logic which will display all the code in the server file this means the user can read all the logic therefore possibly finding another way to bug or trick the system into giving them access or breaking it. this vulnerability could easily be fixed by checking if the user is searching for the server.py file while using the get method, And if so denying access and redirecting them to another page.

There was a vulnerability when a User typed an unaccepted value, if the user entered a value that wasn’t accepted it would crash the entire server, I fixed this by adding a check for the 2 possible input types, (either ints or the reset button). This declined the input and didn’t let the other player take a turn therefore entering a unaccepted value doesn’t crash the server anymore

User trying it add a piece to a taken position if the user tried to add a piece to a position that’s taken by either the computer or player this means players can’t cheat because the input of the user is used to change the index not replace items in the list, this means if there was a piece already placed in the 5th position then the user could replace that without checks, I fixed this by checking the square for x or o’s before adding anything and giving the computer and option to play a piece. I could have also fixed this by replacing matching items in the list meaning that if position 5 had already been changed then it can’t be edited again because it would no longer exist.

If the user types in a webpage that doesn’t exist on the site then it redirects said user to a 404 page not found page, this prevents the server from crashing as the file cannot be found, I fixed this by adding a try except with a File not found error so that if the file can’t be opened a hard coded 404 page filename can be opened.

Because the input box doesn’t link to any database or displayed code messages it means that nothing input into the text box is displayed on the screen, this means no xss security issues will be raised by anything. And the changing of items on the game board are hard coded into the game logic so nothing from the text box is ever displayed.