

Test Case ID	How I fixed the issue	Evidence (Key Words)
Example	"At first, when I clicked the Add button, nothing happened. I realised I forgot to connect the command= in the Button to the function. I fixed this by adding command=add_task."	<b>command = function()</b>
1	At first when I initiated the programme, the supposed txt file had not been created. I realised that the programme was putting the txt file in the folder that I had open being my assessment repository. Therefore I fixed this by opening a new vs code studio to test temporarily the conditions of how txt file saving works.	(Nil)
5	At first when I initiated the programme it had only accessed the keys of the dictionary. I noticed that I did not include the values that correspond with the keys in the dictionary inside the txt file. Therefore I fixed this by added the ability to check the dictionary for its values.	<pre>with open(file_path, "r") as file:     for line in file.readlines():         print(line.split())         # Automatically assigns values to the vars in list         value, key = line.split()         newerlist[key] = value</pre>
8	At first when I opened the scoreboard menu, it displayed the correct amount of 10 placings available. However I noticed that there was an error regarding the amount of placings in the list available. Therefore I fixed this issue by adding a variable limit counter everytime a placing was displayed.	<pre>for player_val in sorted_player_dir:     if line_max &lt;= 9:         player_data = f'{placings[line_max]} {player_val[1]} {player_val[0]}'         self.score_display.insert("", "end", values=player_data)         line_max += 1</pre>
9	When I tested the capabilites of the back button during PVE it did not proceed to the popup but rather came up with an error. I noticed that it would be hard to reuse the same function when refering to a button that does another different task. Therefore I created a separate function for a different purpose.	<pre>def exit(self):     self.grandparent.deiconify()     self.destroy()</pre>

10

At first when I opened this confirmation popup via the pve section it did not showcase all entry widget. I had noticed that I had repeatedly used the wrong variable when placing a entry widget on the widget frame interface. Therefore I fixed this by changing the vairbale reference.

```
self.letter1 = ttk.Entry(self.widget_frame)
self.letter1.grid(column=0, row=1)
self.letter2 = ttk.Entry(self.widget_frame)
self.letter1.grid(column=1, row=1)
self.letter3 = ttk.Entry(self.widget_frame)
self.letter1.grid(column=2, row=1)
```

```
self.letter1 = ttk.Entry(self.widget_frame)
self.letter1.grid(column=0, row=1)
self.letter2 = ttk.Entry(self.widget_frame)
self.letter2.grid(column=1, row=1)
self.letter3 = ttk.Entry(self.widget_frame)
self.letter3.grid(column=2, row=1)
```

16

At first when I was testing the pve gamemode, the ai did not make another decision to place another circle tile. I had noticed that I added a limit to how many times the ai could move. Therefore I fixed this by removing the limit.

```
if possible_moves != [] and game_won == False:
    for win_scenario in win_list:
        if len(set(x_list) & set(win_scenario)) >= 2:
            test = (set(x_list) ^ set(win_scenario)).pop()
            if test in possible_moves:
                win_list.remove(win_scenario)
                print(f"WIN LIST:{win_list}")
                self.record_list[test].config(text="o", state=tk.DISABLED, style="Circles.TButton")
                o_list.append(test)
                o_list.sort()
                possible_moves.remove(test)
                looking = False
                disable_count += 1
                self.win_cond()
                break
            else:
                while looking:
                    a = random.randrange(1,9)
                    for move in possible_moves:
                        if a == move:
                            self.record_list[a].config(text="o", state=tk.DISABLED, style="Circles.TButton")
                            o_list.append(a)
                            o_list.sort()
                            possible_moves.remove(move)
                            looking = False
                            disable_count += 1
                            self.win_cond()
            else:
                while looking:
                    a = random.randrange(1,9)
                    for move in possible_moves:
                        if a == move:
                            self.record_list[a].config(text="o", state=tk.DISABLED, style="Circles.TButton")
                            o_list.append(a)
                            o_list.sort()
                            print(move)
                            possible_moves.remove(move)
                            looking = False
                            disable_count += 1
                            self.win_cond()
```

17

At first when I had changed the reference of all the global variables the programme did not work. I realised that when I referencing the variables, I was not giving them time to reset after a game had finished. Therefore I created a separate function that will be called to reset these variables

```
# Resets all game properties to default state
def game_set():
    game_properties.win_list = [
        [1, 2, 3],
        [4, 5, 6],
        [7, 8, 9],
        [1, 4, 7],
        [2, 5, 8],
        [3, 6, 9],
        [1, 5, 9],
        [3, 5, 7]
    ]
    game_properties.game_won = False
    game_properties.disable_count = 0
    game_properties.crosses = True
    game_properties.x_list = []
    game_properties.o_list = []
    game_properties.possible_moves = [1,2,3,4,5,6,7,8,9]
    game_properties.record_list = {}
```