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| --- |
| Testing — up to 10 marks   * Test Plan — up to 5 marks designing test plan and test cases. This may include the development of test harnesses. * Test Runs — up to 5 marks for running, documenting and evaluating test runs |
| Documentation — up to 5 marks  Up to 5 marks for developing appropriate user documentation — this may also include online help features |

Test plan:

1. I’m going to get a friend to black box test first to try to identify any issues with my game.
2. I’m going to use in-line prints to identify if functions correctly run by running source code in PyCharm. (I can also try to run all the exceptions in my try and catches)

I have used cx\_freeze (a program I am familiar with due to using it in class) to turn my main.py file into a .exe so that I perform an accurate blackbox test, I have shown no code or told my friend nothing about the contents of the games (I will only guide him on how to play)

Blackbox folder contents: Graphical user interface

Description automatically generated

https://youtu.be/qJc2776CVPc

From the above video there is one bug evident and one feature that could be added.

Bug: The way reaction time saving works is that it will only save the time if its GREATER than the previous time (score saving logic for this game should be different as a lower reaction time = better score)

**Fixed:**

a nice single character



QOL Feature/bug: when drawing the X and O’s game you should be sent back to the menu/

**Fixed:**

Text

Description automatically generated

The left is the amended code.

(added self.quit() so that if after 9 attempts the game will quit and return an error that there was a tie)

Using in line error messages / breakpoints in functions to determine if they work as intended.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Run (Item Tested) | Data Used | Expected Result | Actual Result | Action Taken |
| def on\_click(self): | im going to click instantly | print("user clicked before is\_safe method was called aka before the button turned green") return messagebox.showerror("Too early!", "The left box hasnt even turned green yet!")  (a windows error box will show up saying “too early!...” + a console print will alert “user clicked before is\_safe method was called) | [Too early! (gyazo.com)](https://gyazo.com/a6f22c4d75995b65aaf216d09975085e) | None |
| Same as above | Im going to click when its actually green to see if the error box/ console print gets shown regardless of it being late | It shouldn’t open the windows error or print the in line print error message | [Winner! (gyazo.com)](https://gyazo.com/13ba5672c58cfd6d2b49f9dbad869726)  The program ran as intended – didn’t print to console or create the windows error | None |
| def reset\_game(self):  + def is\_safe(self): | Im going to test both of these functions.  I will give a delayed input for the first run. | both inline prints should be displayed.  1st, is\_safe should be called  2nd, once is\_safe is ran  reset\_game should get shown after the error message was displayed for waiting too long. | [Gu – main.py Administrator (gyazo.com)](https://gyazo.com/28068775a07c502ad65aa04b487e84f3) | None |
| def get\_high\_score(self): | im going to make a new username and get a new high score. | It should load the high score from the json once a score has been saved for the name then it should also check to see if every game was a high score | I found a bug by doing this essentially if you were on a new username the high score would not get saved to the json because the score would never be smaller than 0/ None type | I ended up changing the on\_click function to fix this error [here is the updated on\_click function](https://gyazo.com/ba63f13a6812bc457ef4e0554fe5f249). |
| def start\_light\_runner(self): | simple in-line print to see if the light runner will be created on a separate daemon thread to the game instance | should only print the in-line print when the timer for the light countdown is being ran  (when the user is waiting to click – the thread is only active in said function) | [Mu 1.1.0.alpha.2 - reaction.py (gyazo.com)](https://gyazo.com/423be528df27585d9095012c7f93b10c) | None |
| def on\_click (self):   this time for the 2 other games | clicking all available buttons | should print when it’s a correct or incorrect match and it should print when a X or O is placed | [correct and incorrect on\_click’s](https://gyazo.com/f67623dfaf4c59c91083565078ea33d7)  [valid and invalid X and O’s being placed](https://gyazo.com/0871fabac367c884ec137ce048bc75d3) | None |
| def check\_win(self): | checking to see the X and O’s win checking function | every move it should check to see if the matrix consists of a value from the win\_pattern array | [works as intended](https://gyazo.com/5540220aba2dde8e82df8e4b962b95f4) | None |
| def start\_game(self, game:str): | checking to see if all 3 games can start correctly | all 3 games will start if selected | [works as intended](https://gyazo.com/ca34b28abfc63ef95021d6b90ddb7123) | None |
| Testing above function but with a incorrectly named game (renamed X and O’s to “TicTacToe” | clicking X and O’s | it should throw the windows error exception | [worked as intended](https://gyazo.com/41cc414375fed885f0524a318b4ca5d0) | None |
| Im going to test the entire saving and reading from a save function | creating a new username and getting my first score | it should set my high score to the new score I get no matter what it is ONLY if its < WIN\_AMOUNT | [worked as intended](https://gyazo.com/e5dc3da676e81f324037f924d1d2f284) | None |
| Going to test getting a new high score under a username that already exists | using a username that already exists and getting a highscore | should just update it when the game restarts | [worked as intended](https://gyazo.com/e5dc3da676e81f324037f924d1d2f284) | None |