Helena Trent & Olivia Atheus

CYSE 250 Networking and Programming

Dec 7, 2022

Abstract: This report covers a group project between two individuals using python and techniques learned in class.

Background / Introduction

Python was designed by a dutch man named Guido Rossum in 1991. Python started as a hobby for Rossum as he wanted to develop a language that was more simple than the ones he used at the time. His main goals were increasing the readability and decreasing the amount of code needed to accomplish projects (*History of Python*, 2022). The first version of python consisted of functions, classes, modules, and core data types. Since the first release, newer versions of python have been released to add more functions making it more accessible. Over the years python has grown into one of the most popular programming languages of our time. Programmers who are proficient in python are very valuable in the professional world (Ostrowska, 2022).

In CYSE 250 we focused on essential parts of the python programming to kickstart our understanding of the language. Throughout the semester we covered servers, dictionaries, functions, loops, and more. Using this knowledge we have been tasked with formulating a project to show what we have learned throughout the semester.

Problem Statement

A client wants to create a game to guess words. The client would like the game to be multiplayer and have a select set of words. The other aspects of the game are up to the programmers discretion.

Materials

- Hardware
    - Dell Inspiron
    - MacBook Air
- Software
    - Pycharm version python 3.8
    - Wing 101
    - Zoom

The programming portion of the project was completed using pycharm version python 3.8 and wing 101. Pycharm was used on a dell inspiration and wing was used on a MacBook Air. We used Zoom video conferencing to communicate with each other about the project. As we edited the code we sent the files back and forth through email. A shared google doc was used to complete the report. We also utilized canvas to access supplementary materials from class.

Procedure

First we had to agree on a project idea. This project is not our original idea but we decided that it would be more obtainable for our skill set. Then we discussed the requirements for the project and how we could implement them in our code. This includes lists, dictionaries, loops, and functions. From there we started working on the

code and getting our game to run smoothly. After we were satisfied with the outcome we started on the report, documenting our project.

To write this code we used the techniques used in class and referred back to the powerpoints, textbook chapters, and lectures for guidance. We focused on the requirements for the project to fulfill them with our game.

Techniques Implemented

For our project we implemented an array of functions, loops and dictionaries in the code to execute a successful python program.
Below is a highlight of defined functions presented in the code:
choose() : the program chooses a word
mix() : Shuffles the characters of the chosen word.
final() : Showing the final scores of both players.
winner() : Declares who wins the game
start() : starts the game.
The list is represented by the words used in the game. The loops keep the game going until the user inserts the needed characters to end it.

Further Development/Uses

If further developed this code can be used to create a more complex game that could be used for fun or educational purposes. In our game we used terms from the networking portion of class. If someone else were to use this game they could input any words they wanted. There isn't a limit on how many words can be used either. This game could be improved by adding more players. With more time we could also add more features to the game to lengthen it. Further development could also mean adding a tie breaker. That being said, this game is a solid starting point.

Roles

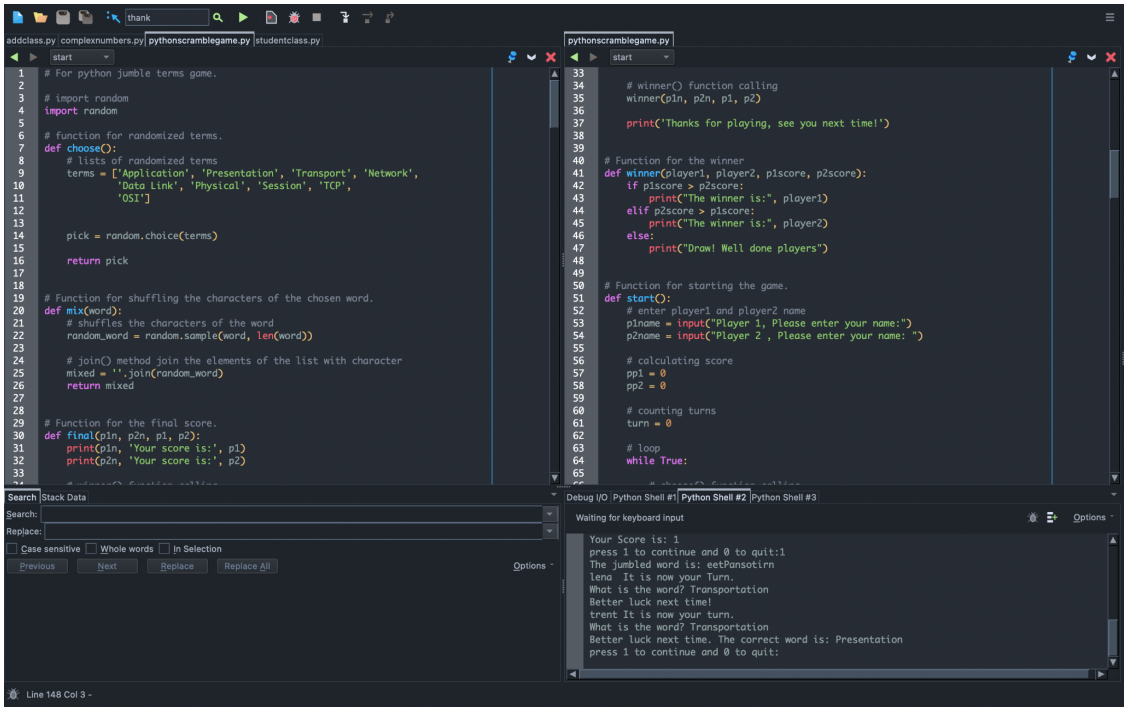
For our group dynamic we decided to split the projects into two parts. One of us was in charge of the report and the other was in charge of the code. While we did do our part on both elements of the project we took a leadership role in one task. Over the course of the project we checked each other's work to keep ourselves on track. We also decided to split the presentation.

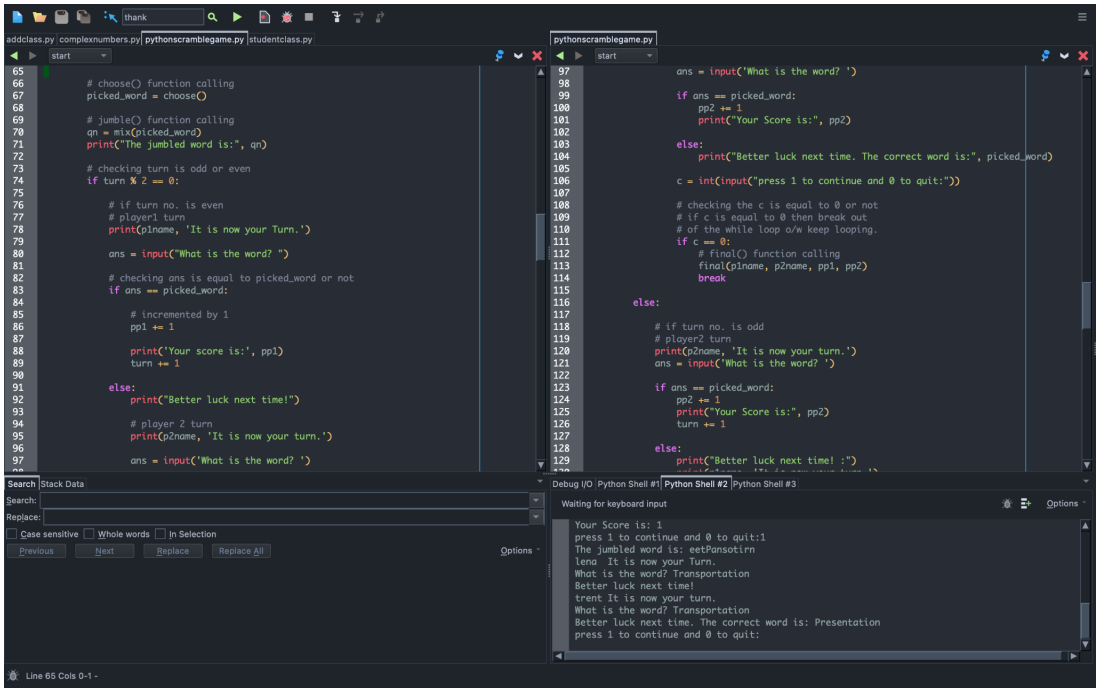
Conclusion and Project Overview

Overall this project was a learning experience. Python has so many amazing uses and we have only scratched the surface. Through this project we have been exposed to the difficulty of programming. While neither of us intend to be programmers. This experience has provided us with a further understanding of programming and respect for those who complete complex projects.

Appendix

These pictures are screenshots of our code with the line numbers labeled. The pictures are on a split screen.

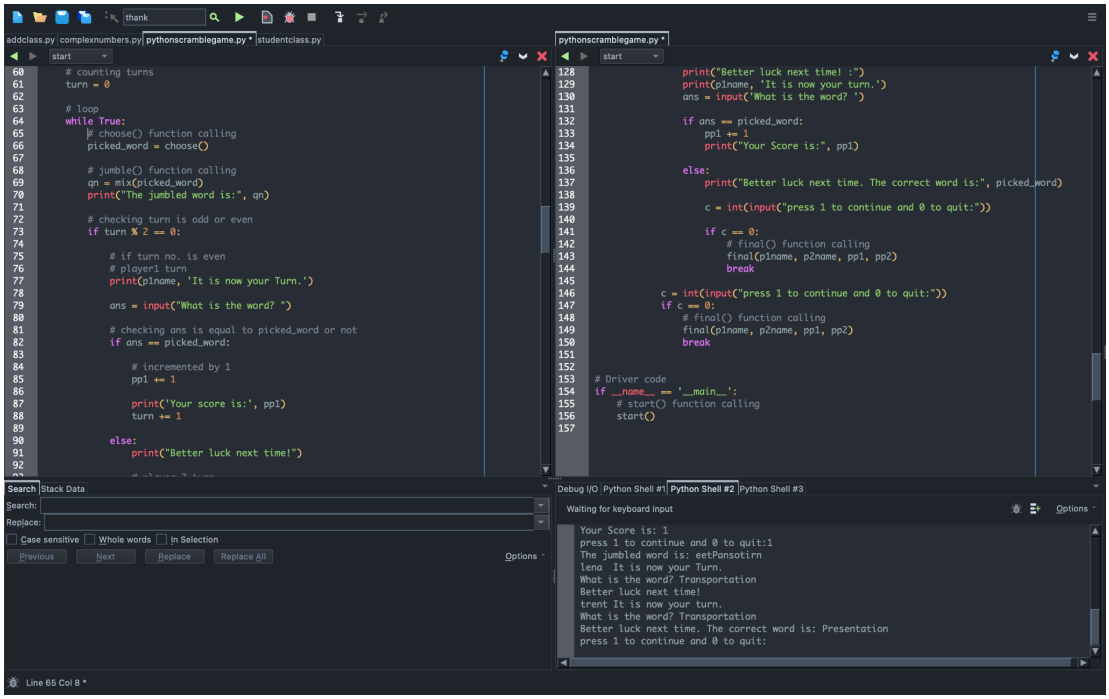




```
# choose() function calling
picked_word = choose()

# jumble() function calling
qn = mix(picked_word)
print("The jumbled word is:", qn)

# checking turn is odd or even
if turn % 2 == 0:

    # if turn no. is even
    # player1 turn
    print(p1name, 'It is now your Turn.')

    ans = input("What is the word? ")

    # checking ans is equal to picked_word or not
    if ans == picked_word:

        # incremented by 1
        pp1 += 1

        print('Your score is:', pp1)
        turn += 1

    else:
        print("Better luck next time!")

        # player 2 turn
        print(p2name, 'It is now your turn.')

        ans = input('What is the word? ')
```

```
        ans = input('What is the word? ')

        if ans == picked_word:
            pp2 += 1
            print("Your Score is:", pp2)

        else:
            print("Better luck next time. The correct word is:", picked_word)

        c = int(input("press 1 to continue and 0 to quit:"))

        # checking the c is equal to 0 or not
        # if c is equal to 0 then break out
        # of the while loop o/w keep looping.
        if c == 0:
            # final() function calling
            final(p1name, p2name, pp1, pp2)
            break

    else:

        # if turn no. is odd
        # player2 turn
        print(p2name, 'It is now your turn.')
        ans = input('What is the word? ')

        if ans == picked_word:
            pp2 += 1
            print("Your Score is:", pp2)
            turn += 1

        else:
            print("Better luck next time! :")
```

```
Your Score is: 1
press 1 to continue and 0 to quit:1
The jumbled word is: eetPansotirn
lena  It is now your Turn.
What is the word? Transportation
Better luck next time!
trent It is now your turn.
What is the word? Transportation
Better luck next time. The correct word is: Presentation
press 1 to continue and 0 to quit:
```



```
    # counting turns
    turn = 0

    # loop
    while True:
        # choose() function calling
        picked_word = choose()

        # jumble() function calling
        qn = mix(picked_word)
        print("The jumbled word is:", qn)

        # checking turn is odd or even
        if turn % 2 == 0:

            # if turn no. is even
            # player1 turn
            print(p1name, 'It is now your Turn.')

            ans = input("What is the word? ")

            # checking ans is equal to picked_word or not
            if ans == picked_word:

                # incremented by 1
                pp1 += 1

                print('Your score is:', pp1)
                turn += 1

            else:
                print("Better luck next time!")
```

```
            print("Better luck next time! :")
            print(p1name, 'It is now your turn.')
            ans = input('What is the word? ')

            if ans == picked_word:
                pp1 += 1
                print("Your Score is:", pp1)

            else:
                print("Better luck next time. The correct word is:", picked_word)

                c = int(input("press 1 to continue and 0 to quit:"))

                if c == 0:
                    # final() function calling
                    final(p1name, p2name, pp1, pp2)
                    break

        c = int(input("press 1 to continue and 0 to quit:"))
        if c == 0:
            # final() function calling
            final(p1name, p2name, pp1, pp2)
            break


# Driver code
if __name__ == '__main__':
    # start() function calling
    start()
```

```
Your Score is: 1
press 1 to continue and 0 to quit:1
The jumbled word is: eetPansotirn
lena  It is now your Turn.
What is the word? Transportation
Better luck next time!
trent It is now your turn.
What is the word? Transportation
Better luck next time. The correct word is: Presentation
press 1 to continue and 0 to quit:
```

References

History of Python. (2022, November 26). GeeksforGeeks. Retrieved December 6, 2022, from https://www.geeksforgeeks.org/history-of-python/

Ostrowska, K. (2022, June 20). *A Brief History of Python*. LearnPython.com. Retrieved December 6, 2022, from https://learnpython.com/blog/history-of-python/