Wordy Application Final Project
Documentation
9442-Group 2

Team Members:

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To be submitted to:
Sir Roderick Makil

1. Process on how your group created the non-Java client program (non-Java). Include the issues encountered and solutions that were taken into consideration.

NOTE: Pycharm and Python 3.8 were installed properly before the following.
We have set up Python and Pycharm on our own terminal by following the steps below:

1. First, we installed Python 3.8 by executing the python-3.8.10-amd64.exe file. During installation, we made sure to check the checkbox "Add to PATH".

2. After installing Python 3.8, we located the folder where it was installed. Typically, this can be found in the C drive -> Users -> <Current User> -> AppData -> Local -> Programs -> Python -> Python 38 directory. We copied the current file path.

3. Next, we searched for "Edit environment variables" in the Start Menu and opened it. Under System Variables, we clicked "Path" -> "New" -> then pasted the folder path we just copied. Afterward, we clicked OK.

4. To check if Python 3.8 was installed successfully, we opened CMD (Command Prompt) and typed the command "python –version". The output should show "3.8" as the Python version.

5. After installing Python, we proceeded to install Pycharm by executing the pycharm-professional-2023.1.exe file. Once installed, we opened the Pycharm Icon.

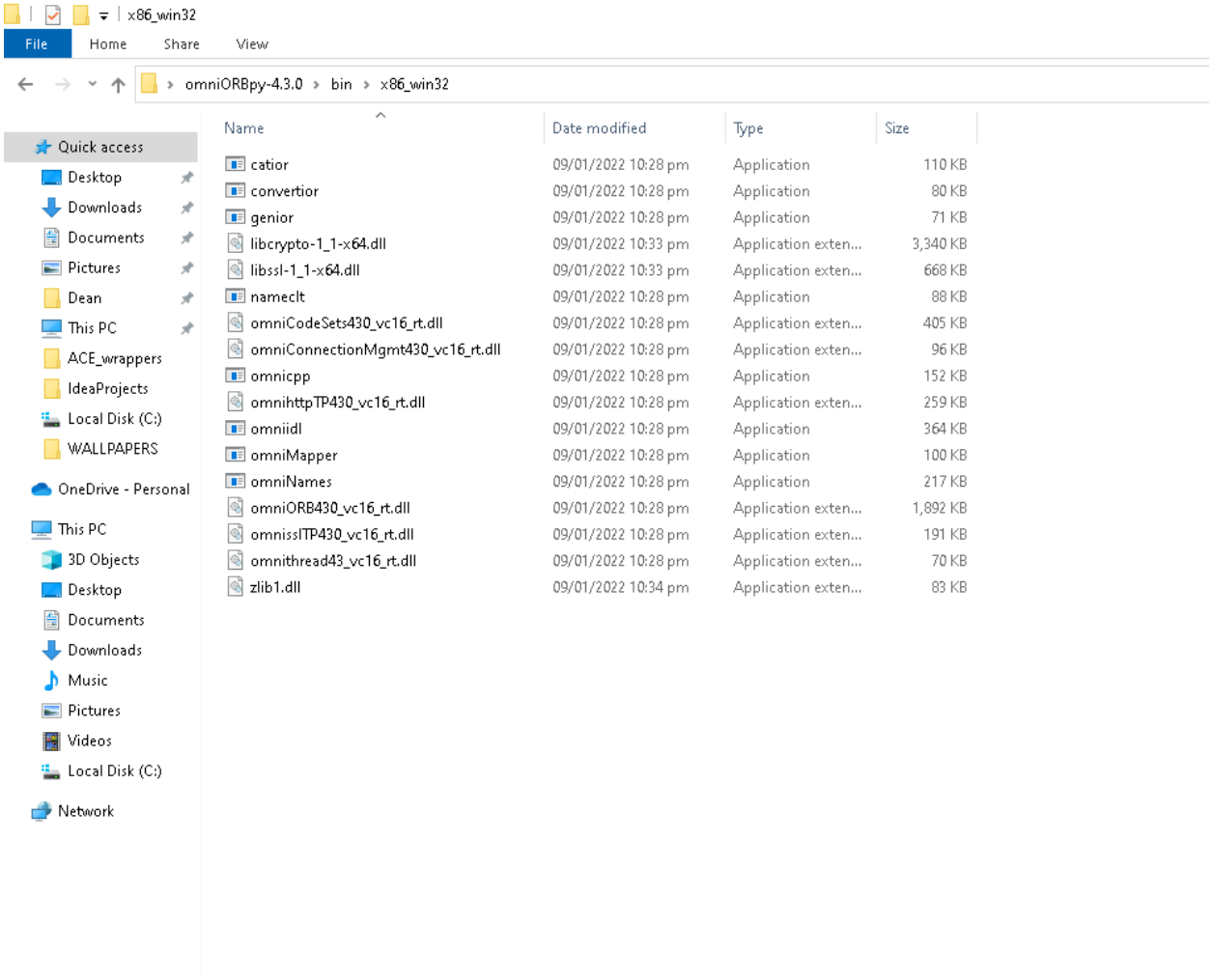
6. We then set up the Python Interpreter by navigating to File -> Settings -> Project:<Project name> -> Python Interpreter. From there, we clicked on "Python Interpreter".

7. Under Python Interpreter, we clicked on "Add Interpreter" -> "Add Local Interpreter". Another window appeared, and we clicked on "Existing" under Environment. Then, we located the path file of the Python 3.8 installation folder and clicked on the python.exe file.

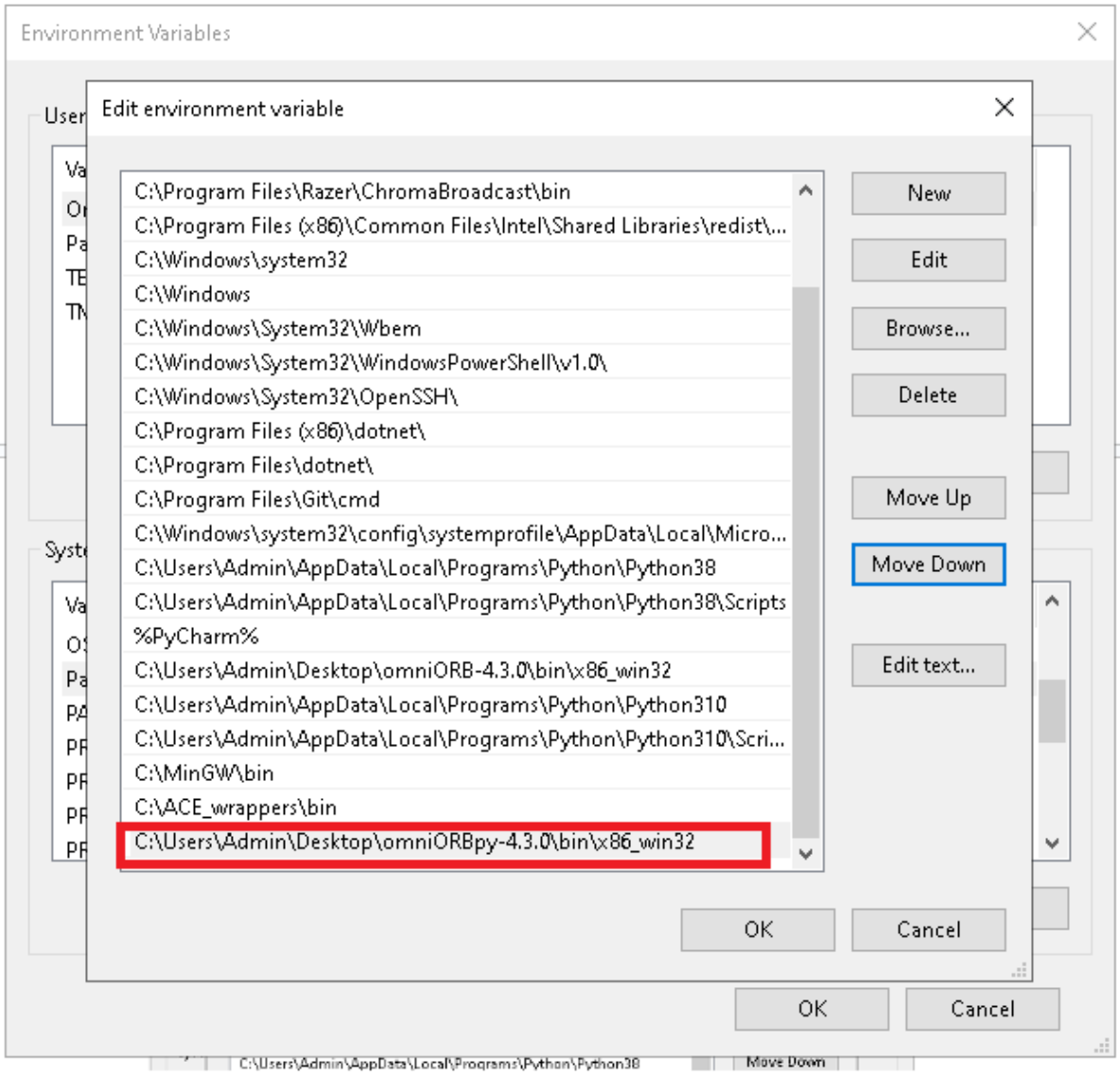
8. Finally, we installed the "omniorb-py" package in Pycharm by clicking on the “+” icon and searching for it. A message would appear if it was installed properly.

FOR OMNIORB:

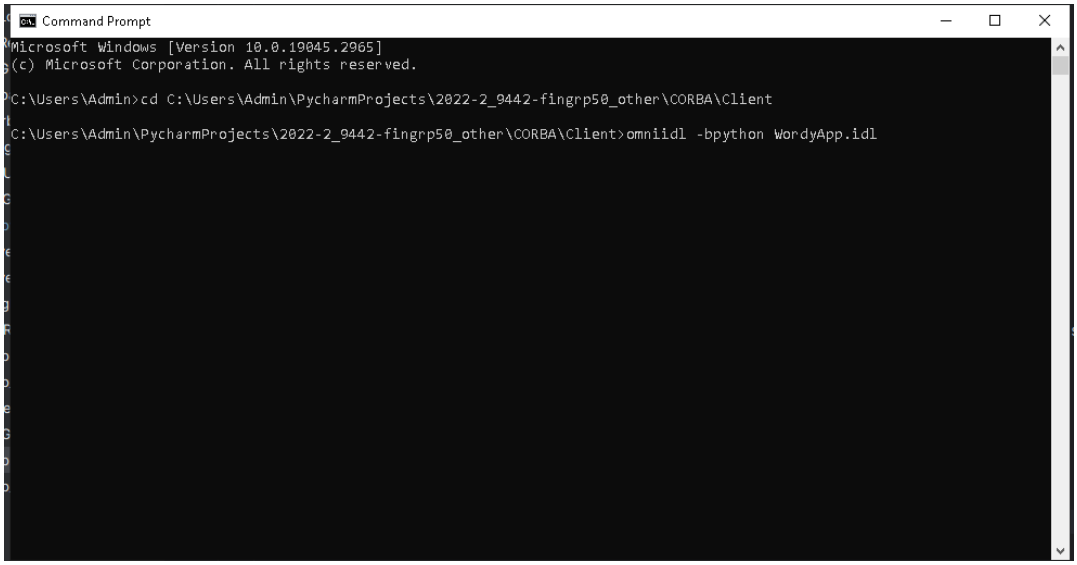
- We installed omniORBpy-4.3.0 from *sourceforge.net/projects/omniorb/files/*



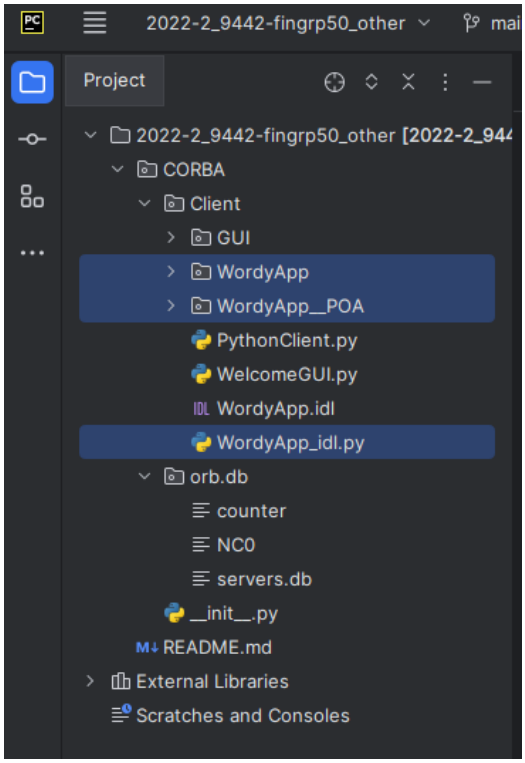
- We copied the file path of their respective bin folders, and added them as a new Path under System Variables.



- Then we downloaded the 3.10.1 version of Python because this is necessary for compiling the client-side of Python
- After that, we copied the absolute path of our IDL file which is “WordyApp.idl” and traveled to its directory in command prompt
- We entered the command: omniidl -bpython WordyApp.idl

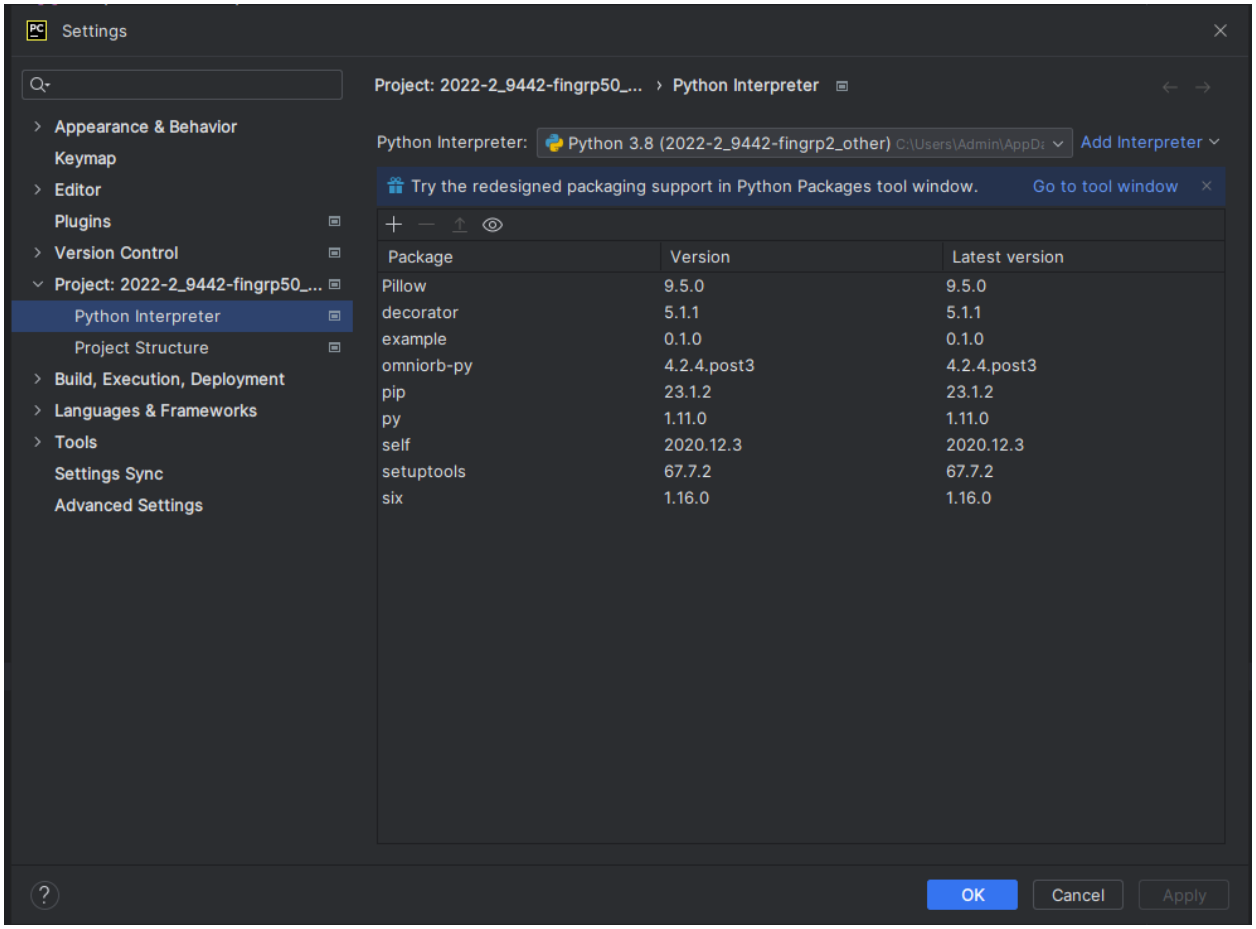


- Then there are 3 files that are generated into the directory where our IDL file is located which are: WordyApp, WordyApp_POA and WordyApp_idl.py

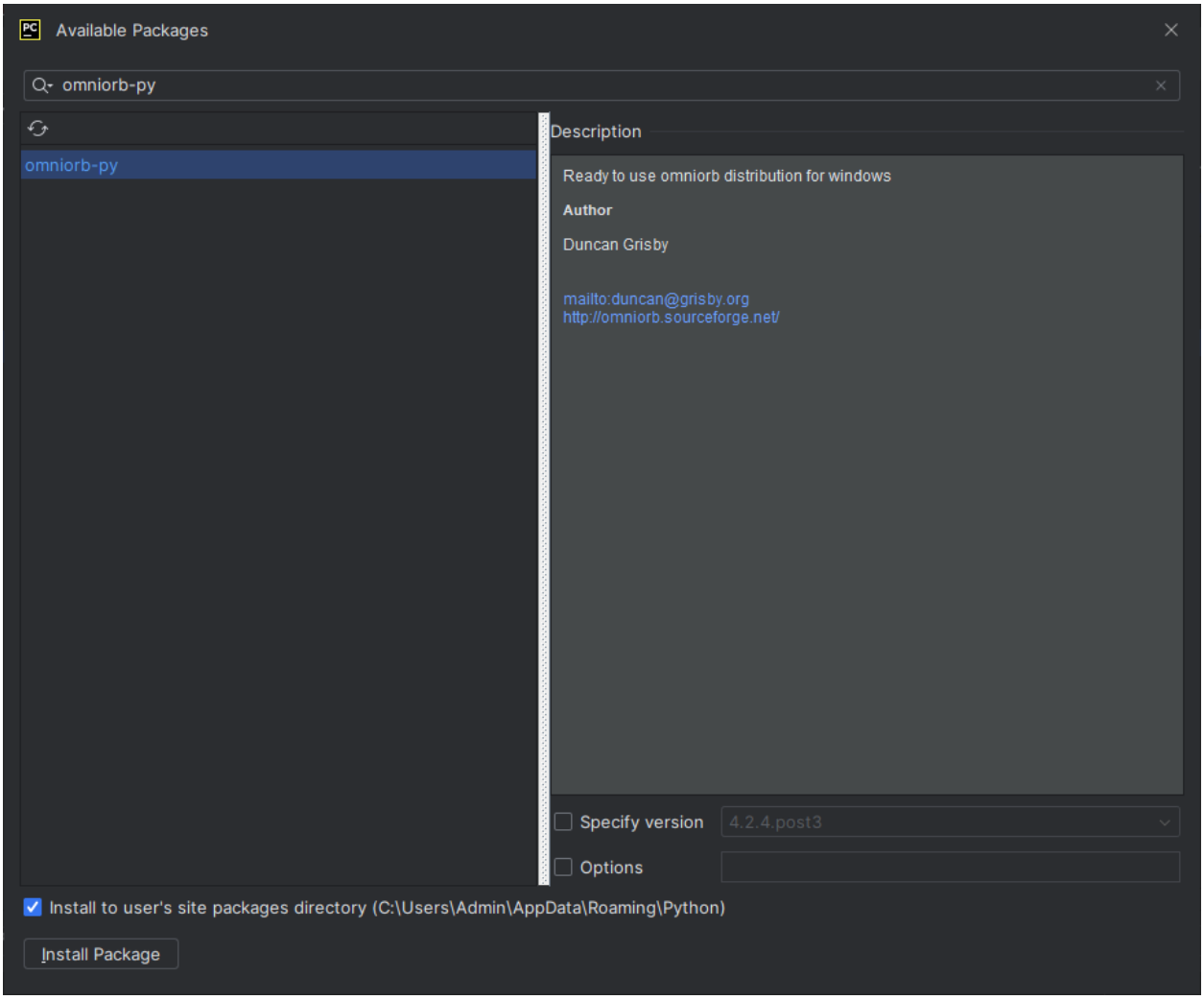


In Pycharm:

- First we downloaded the 3.8.10 version of Python
- Then add it as your interpreter for your IDE



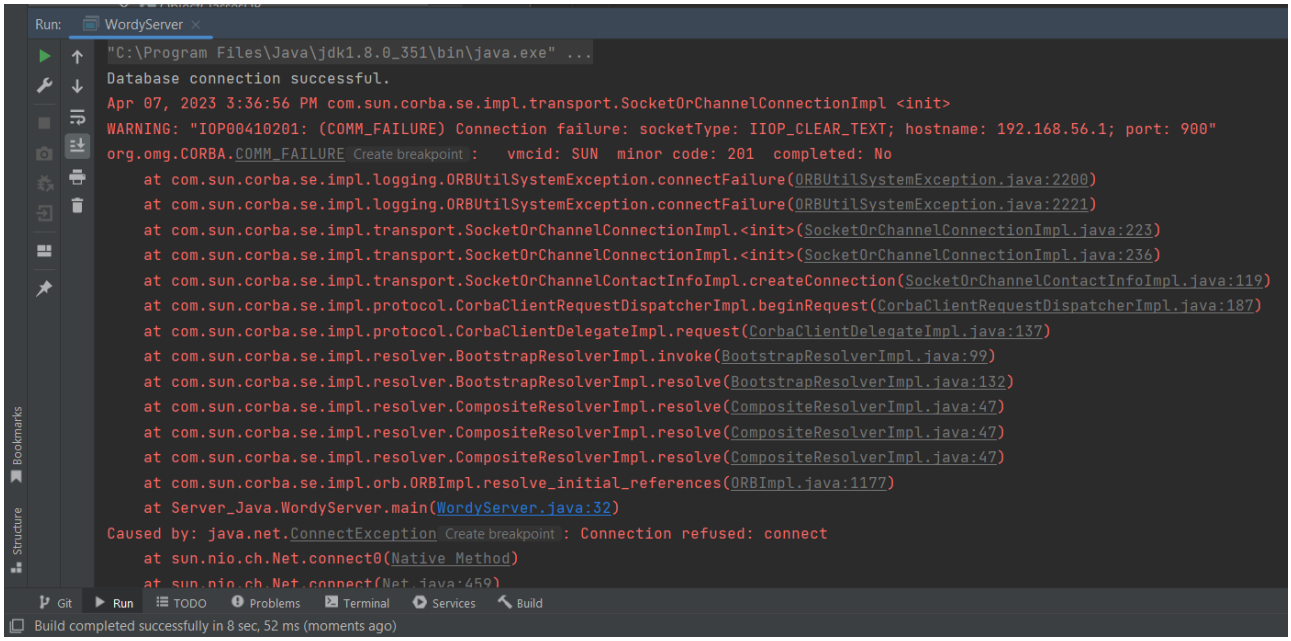
- We installed omniORB-py in PyCharm manually because even though they can be installed in the terminal through the pip installer, they are not automatically included in PyCharm's installed packages.



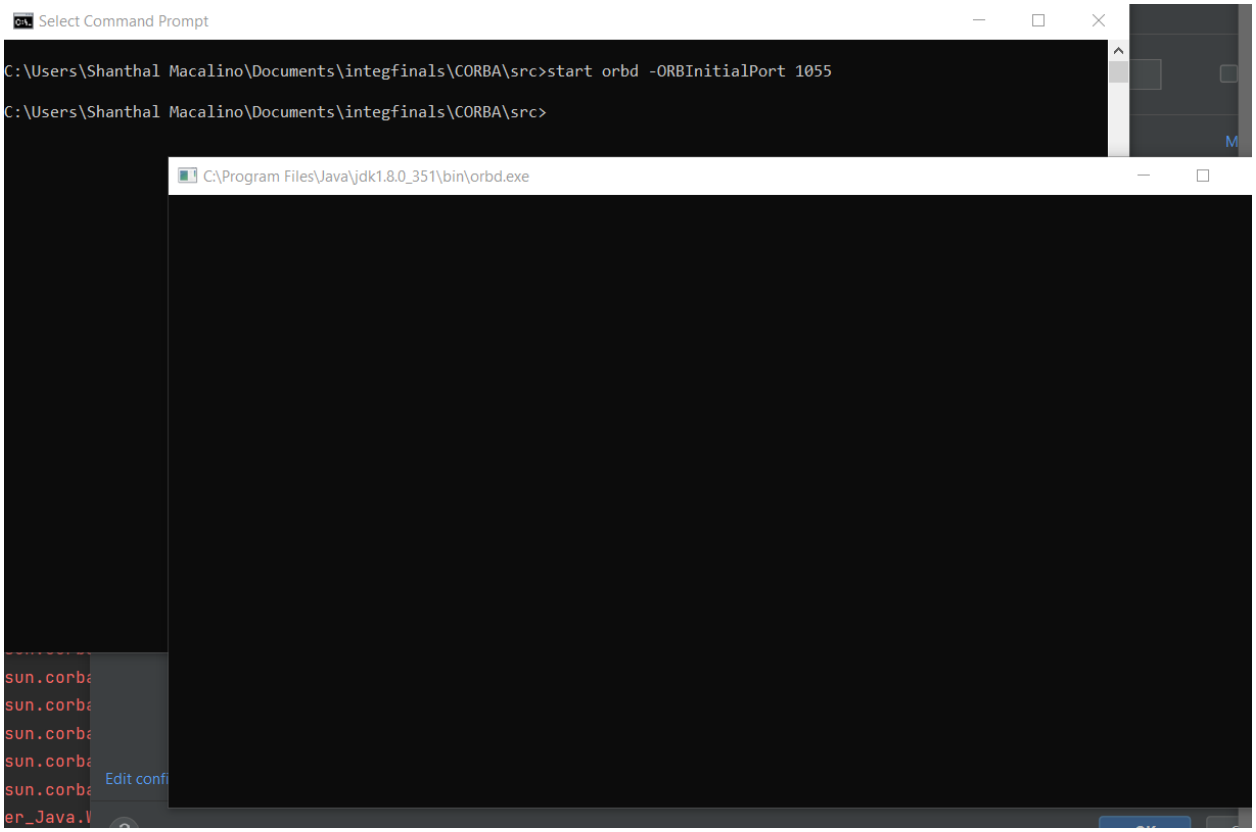
2. Issue/s encountered and how you resolved problem/s specific to the Java programs (server and client).

SERVER CLASS

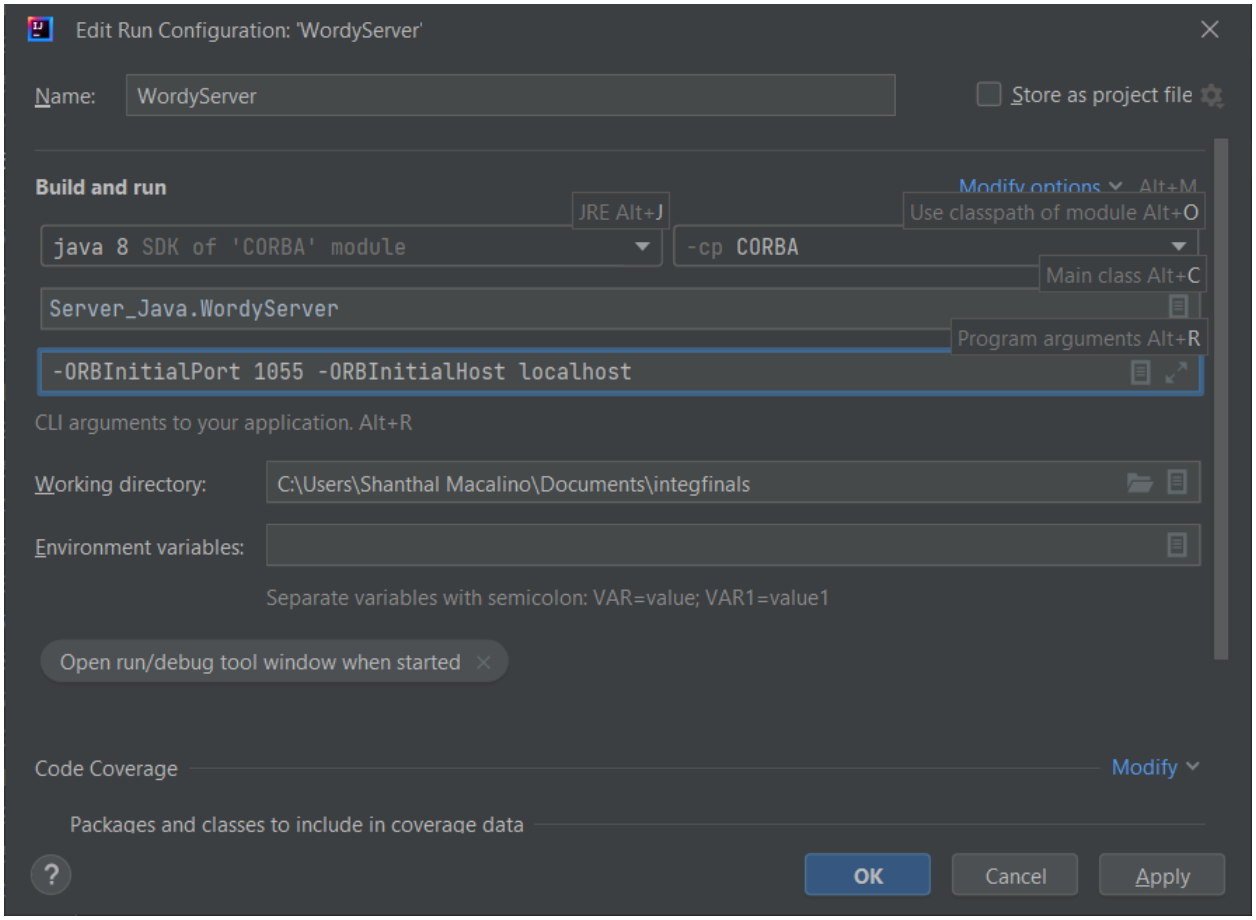
- **Error in Running Server Class**



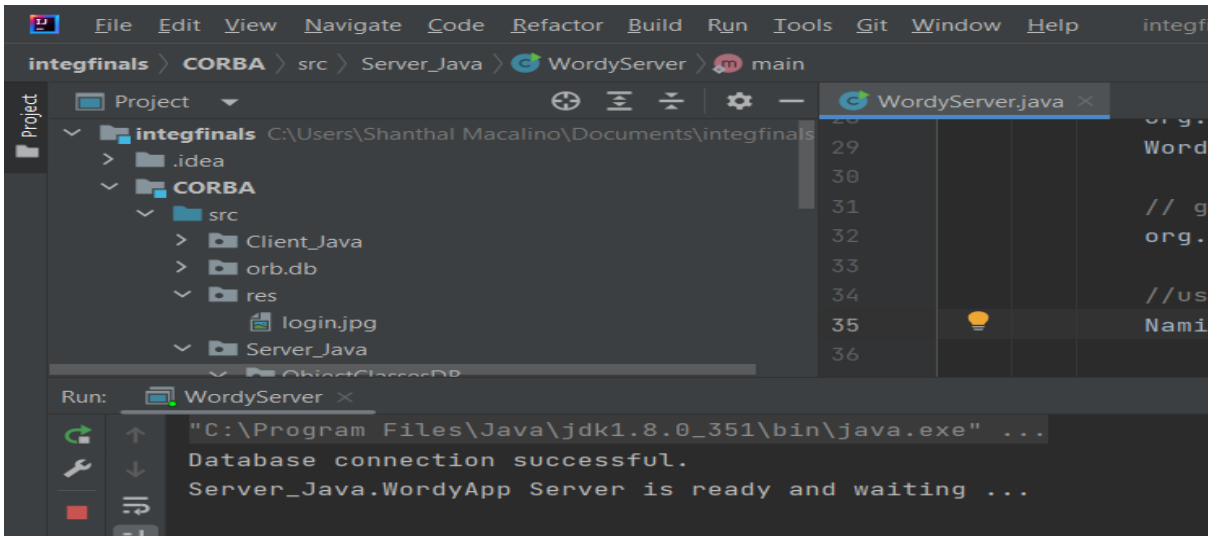
Upon checking the code line by line, there were no errors. I checked if I was using the correct jdk version which is 8, that supports CORBA. After thorough research, in order to run the server java file, the ORBD must first be launched using the command: **start orbd -ORBInitialPort 1055** in CMD. I made use of port 1055 for initial communication with other objects.



Another window would appear namely, orbd.exe if the launch was successful. Afterwards, I went back to the IDE to modify the Program Arguments. Since I was using IntelliJIdea, I **right clicked on the Server java file -> Modify Run Configurations** to locate the **Program Arguments**.



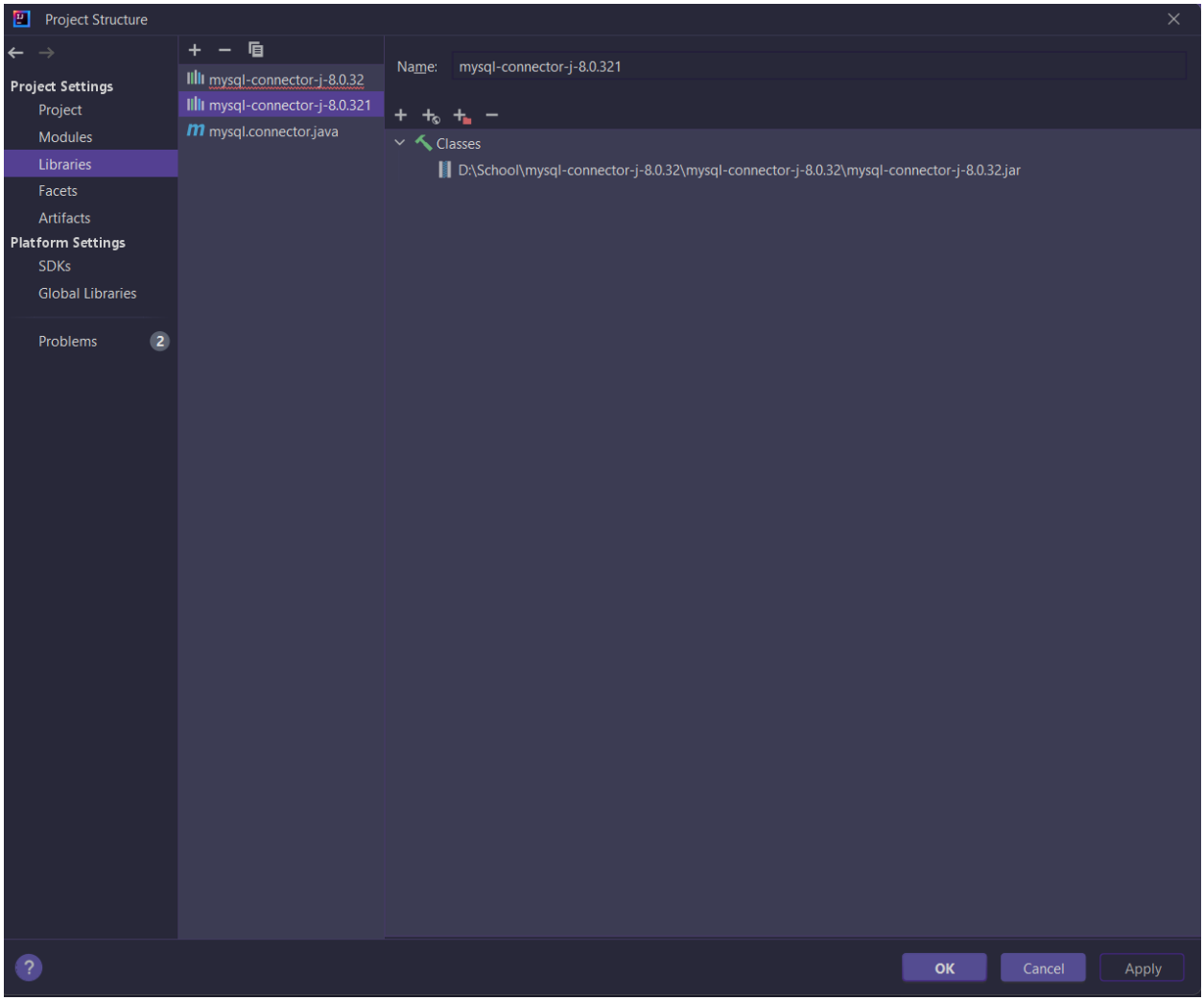
Under Program Arguments, I entered the following command: **-ORBInitialPort 1055 -ORBInitialHost localhost** to initialize the CORBA ORB (Object Request Broker). After making the necessary changes, I rerun the program to check if it's successful.



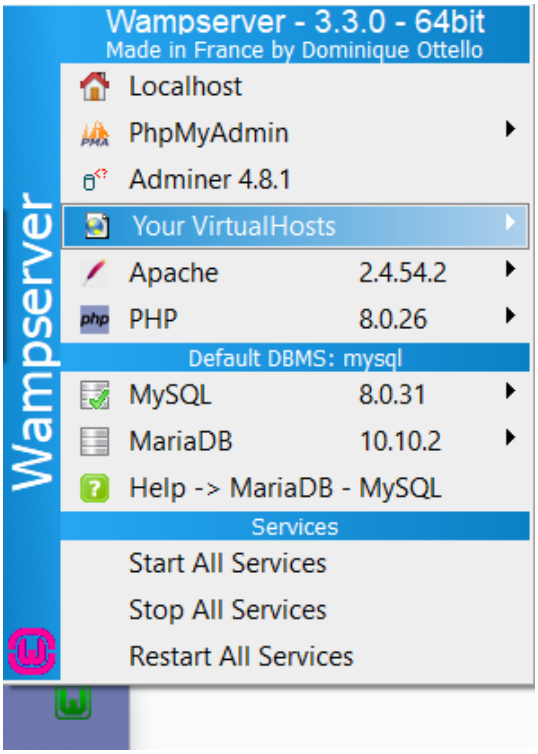
3. Step-by-step procedure on how to run your programs (server and client). The procedure must also include the settings and configurations that must be performed to execute the programs.

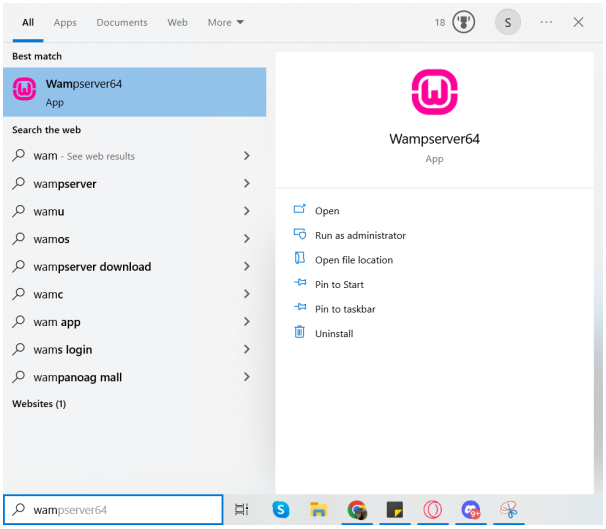
Server

1. Add the **mysql connector (.jar file)** to libraries under project structure to ensure database connection with the program. Click **Apply**, then **OK**.

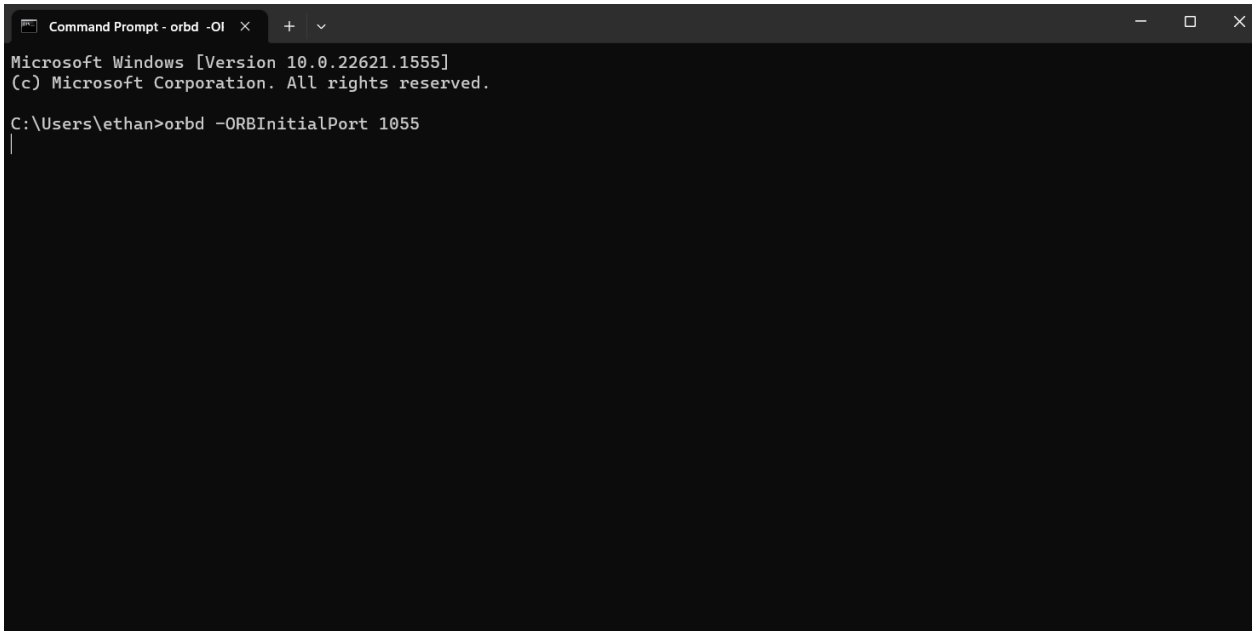


2. Run your Wamp Server and ensure that you have the right database available.

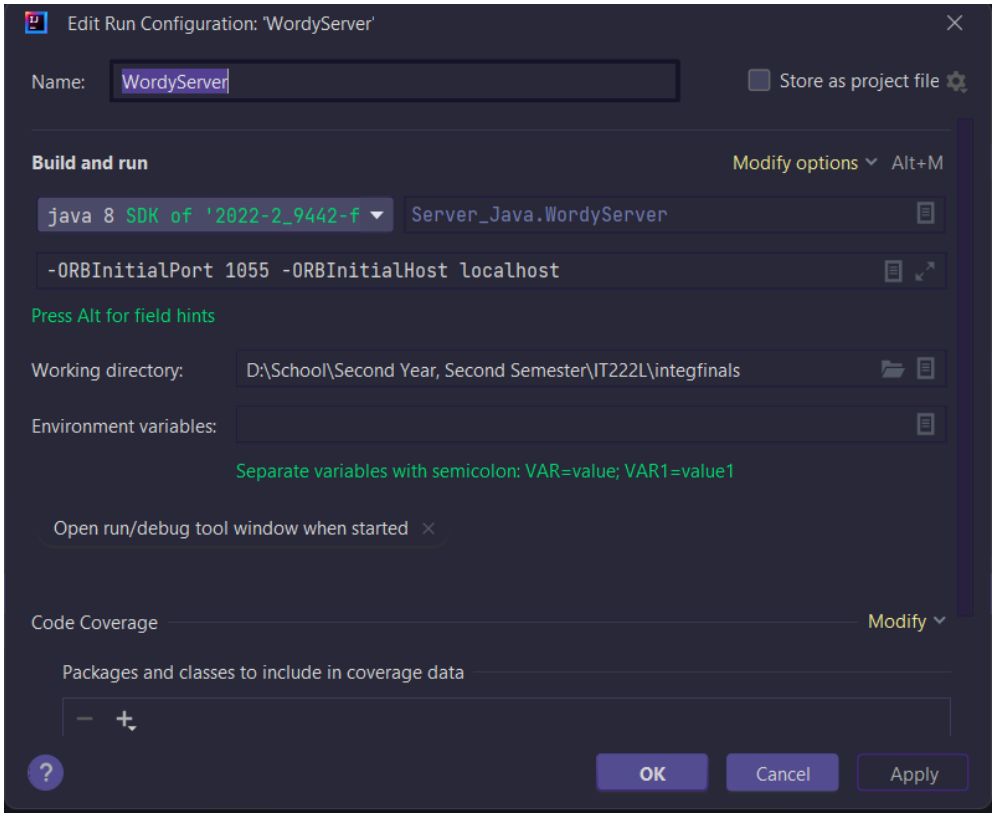




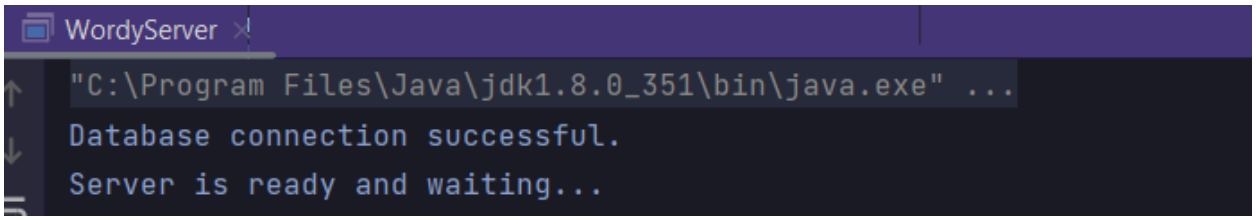
3. Launch the ORBD. To do so, use the command: **orbd -ORBInitialPort 1055**



4. Modify the server class' run configurations of the WordyServer add **-ORBInitialPort 1055 -ORBInitialHost localhost** in the second row of the *Build and Run* section. Make sure the project is running with Java 8 as the JDK.

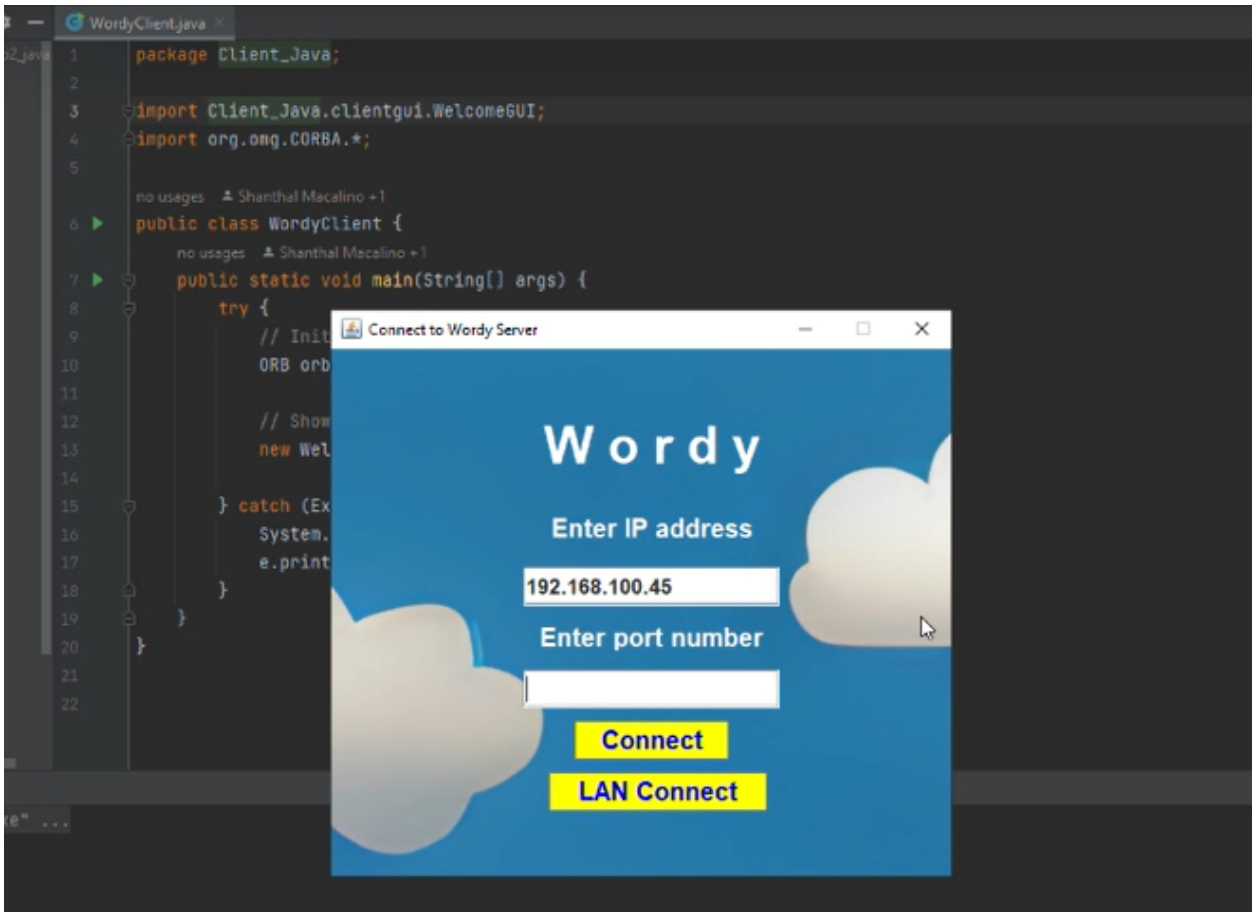


5. Run the WordyServer class. Ensure that the **mysql-connector library** is configured properly.

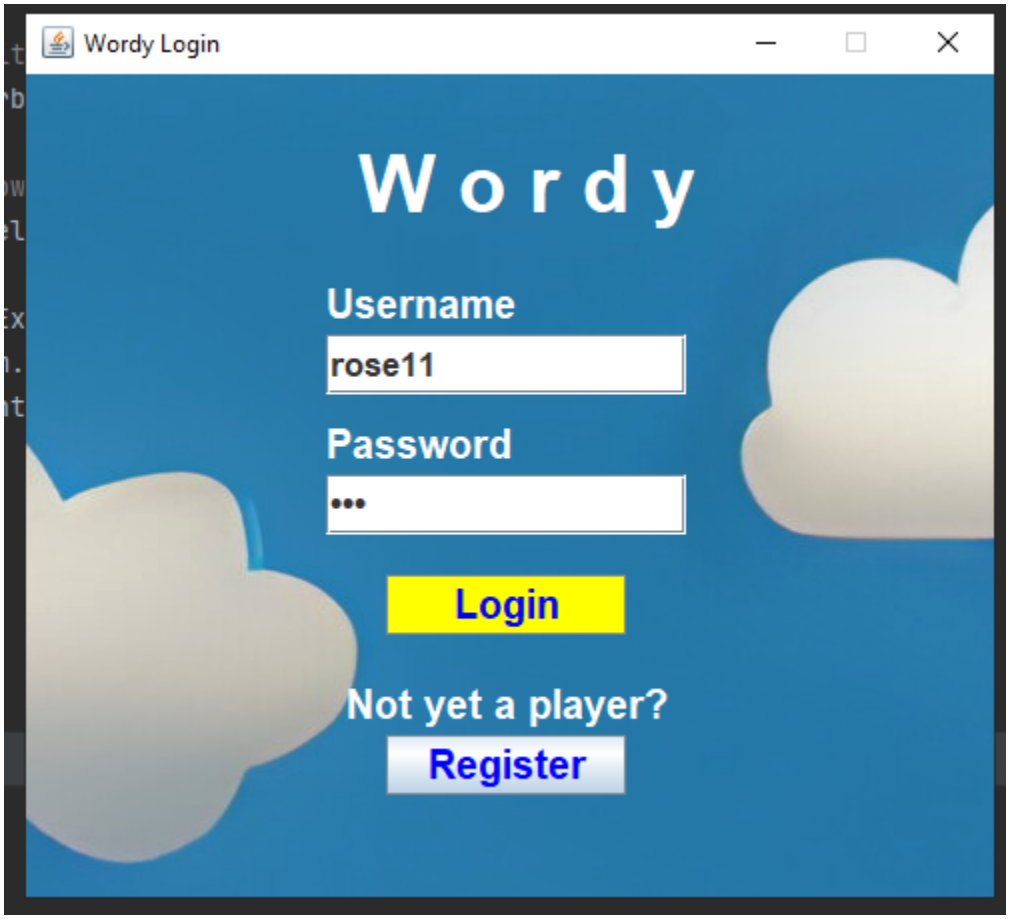


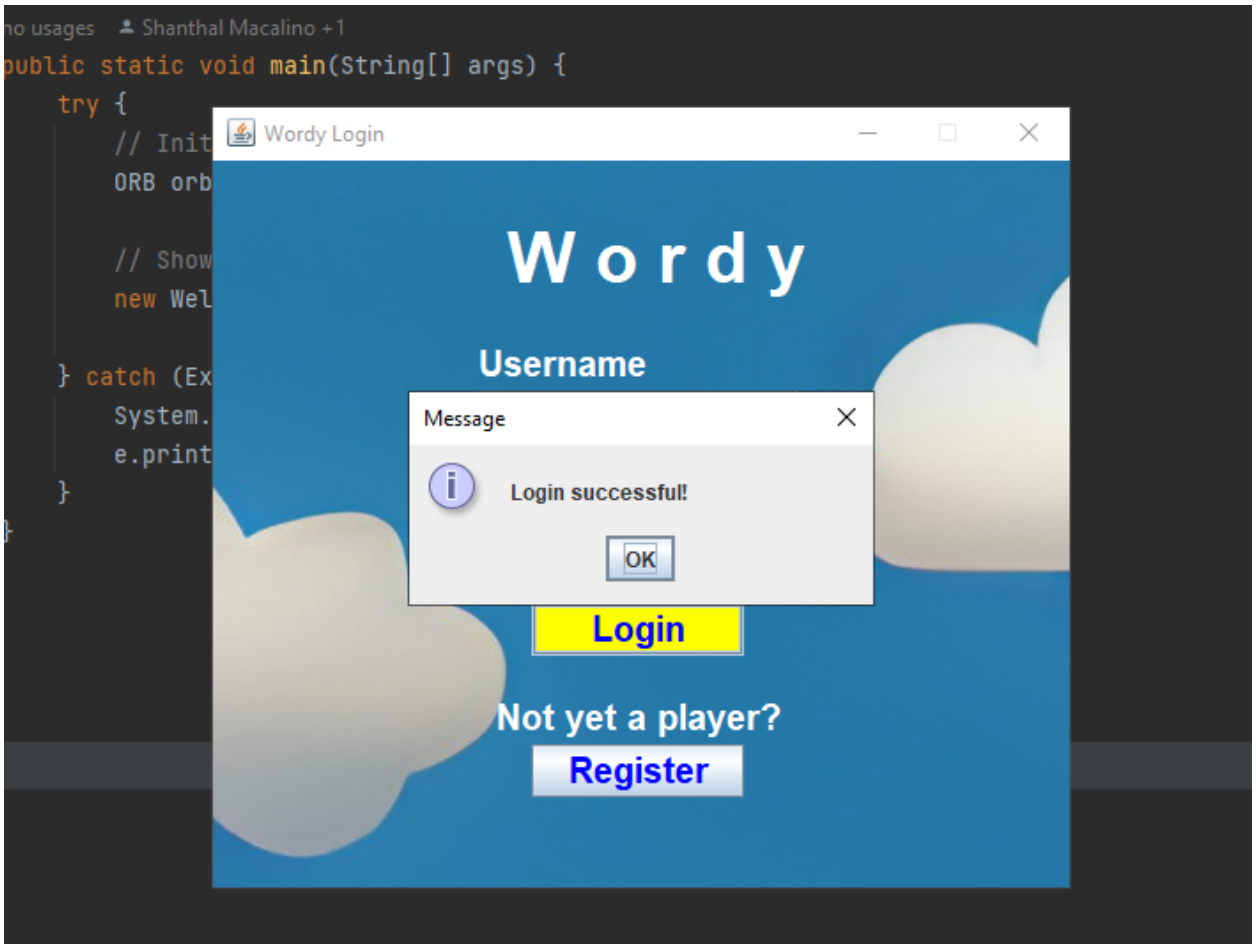
Client (Java)

1. Once the server is up and running, run the WordyClient class. A GUI would appear and would ask for the Server's IP address and Port Number. Make sure to input the correct IP Address and Port Number, then click connect. If you are working with the same terminal, click on LAN Connect, make sure to specify the localhost's port number still.

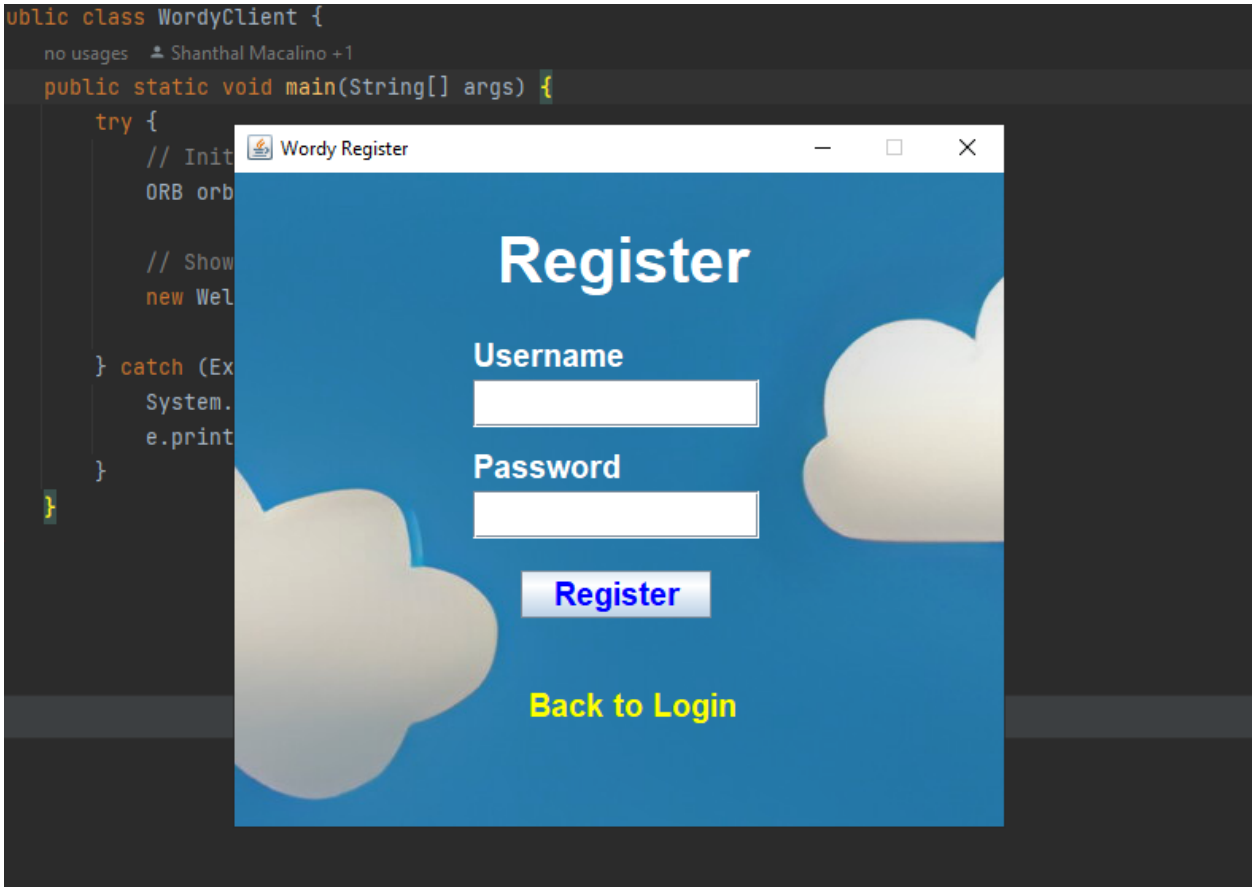


2. After you connect to the IP address of the server, the login page will show up and ask for your credentials. If you do not have an account yet, you can click on the register button.

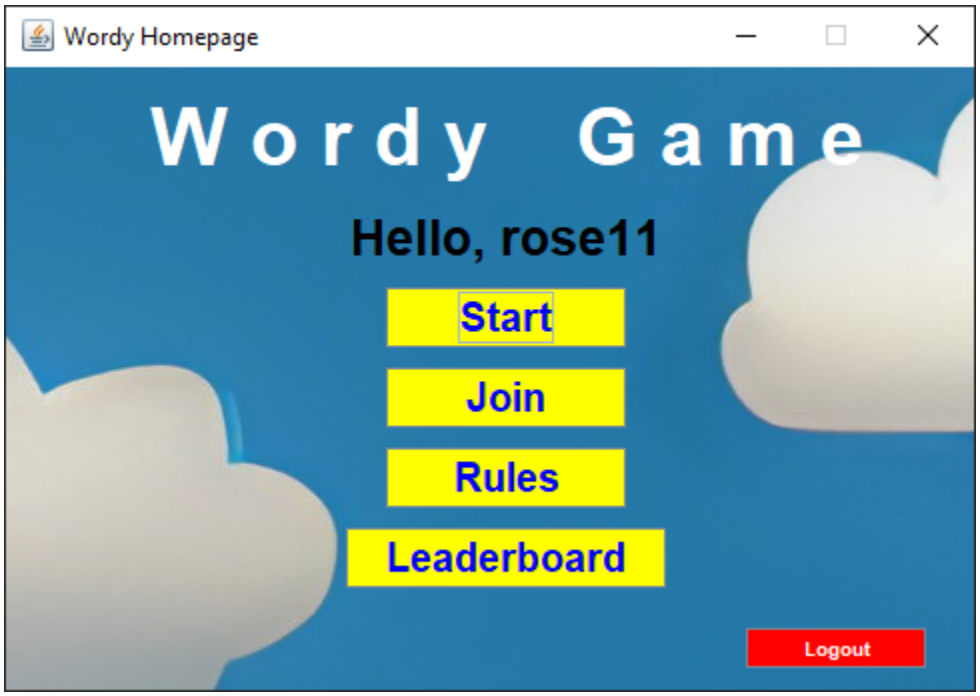



no usages Shanthal Macalino +1
public static void main(String[] args) {
try {
// Init
ORB orb
// Show
new Wel
} catch (Ex
System.
e.print
}
}
Wordy Login
Wordy
Username
Message
Login successful!
OK
Login
Not yet a player?
Register

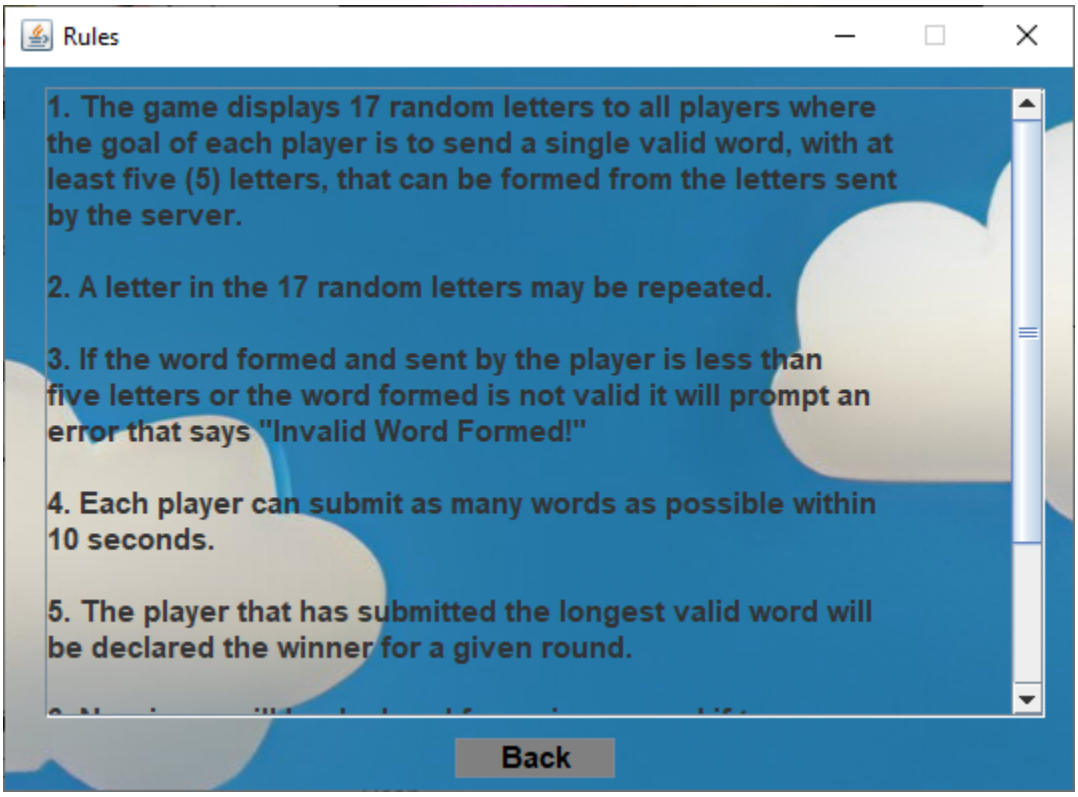
3. Register an account by filling in the username and password fields and pressing the register button. If all the fields are valid, your account should be ready for use.



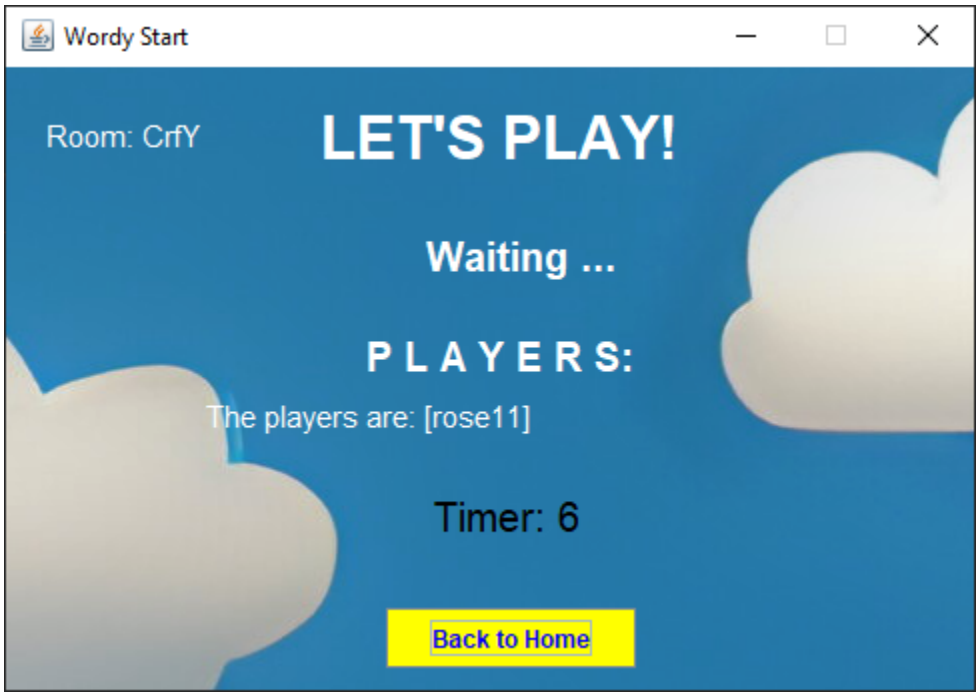
4. When you have logged in successfully, the home page will appear. The home page shows the following options: Start, Join, Rules and Leaderboard.



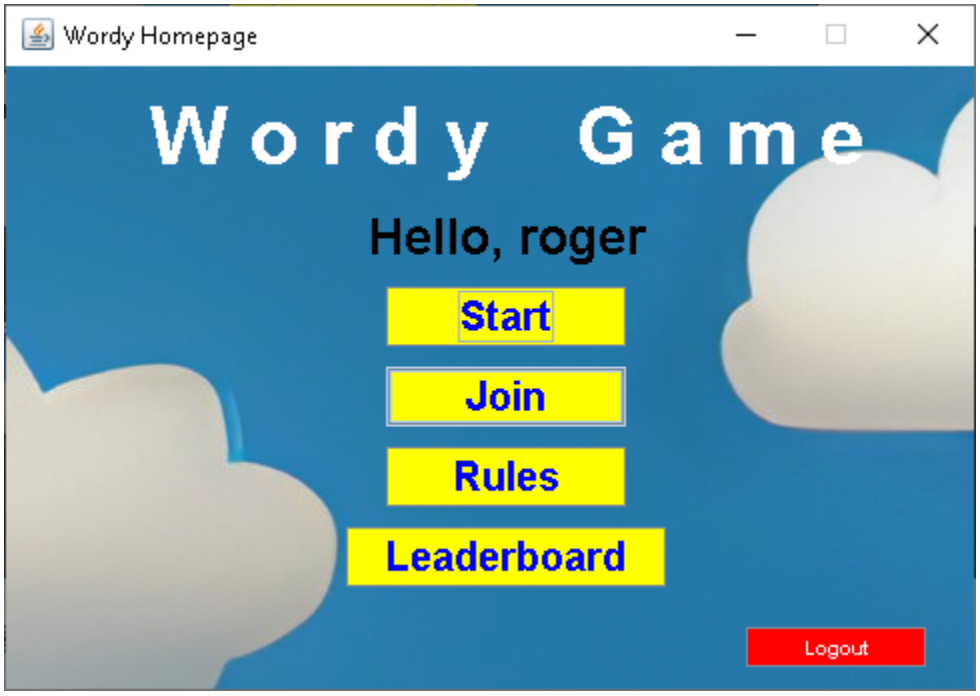
5. If it's your first time playing the game, it is best to read the rules first.



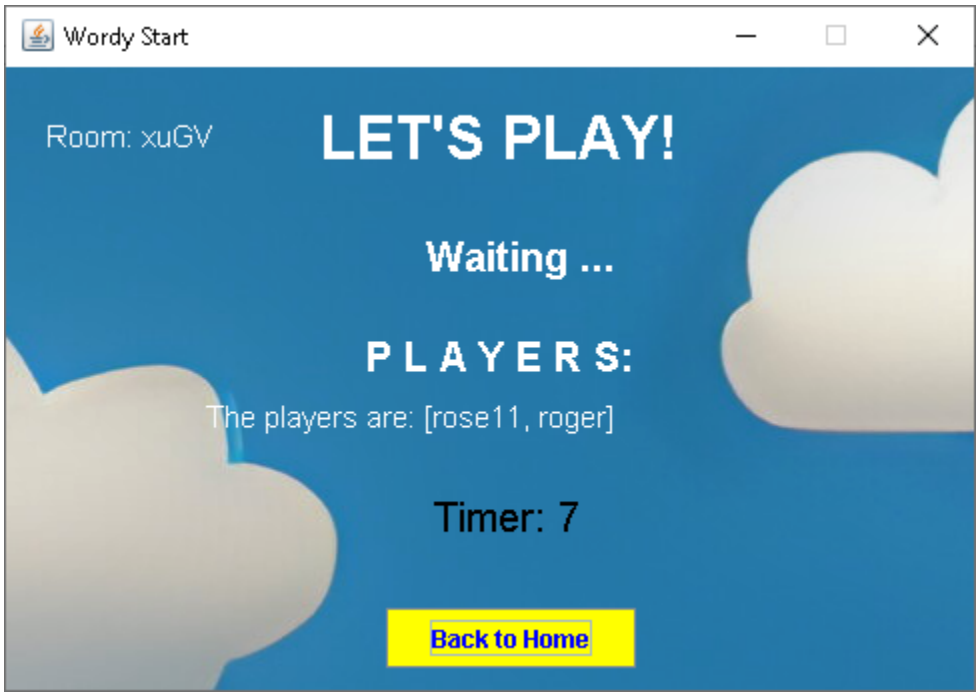
6. The player can then click on Start to start a room. If there is already a room waiting for other players then clicking on Start will display a message to inform you that there is a room available to join.



7. The waiting room will countdown from ten seconds. The game will only start if there is at least another player that is willing to join the game. Otherwise the player will be returned to the home screen.

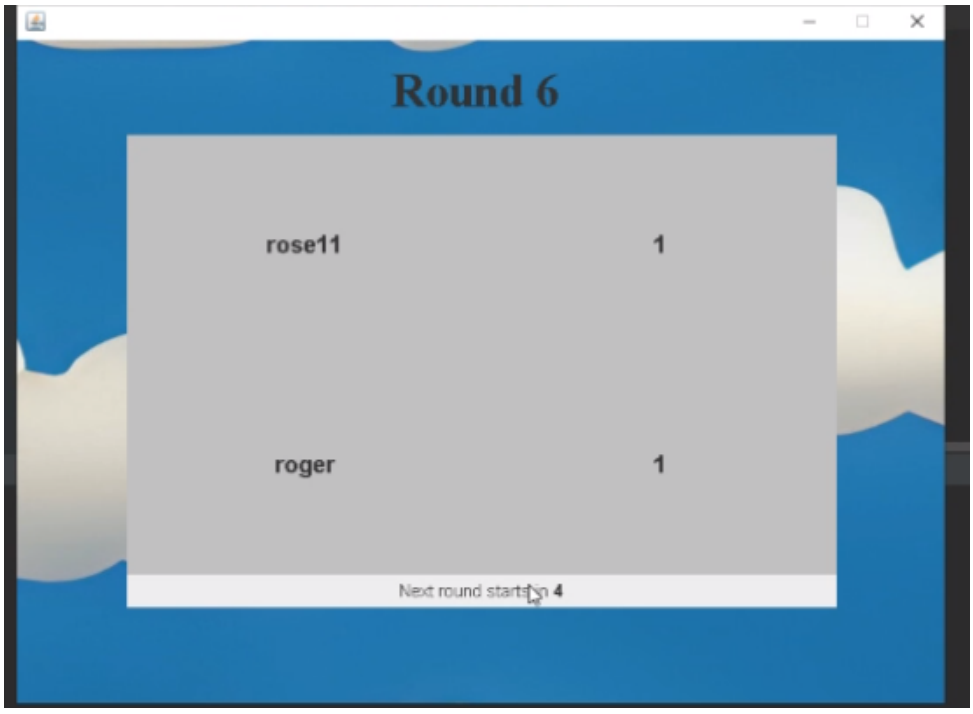


8.

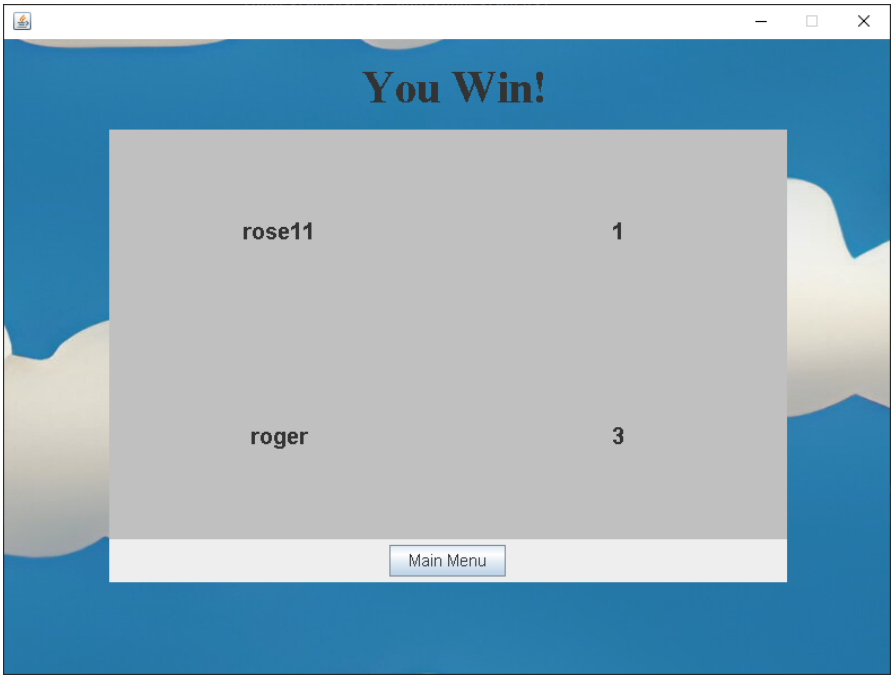


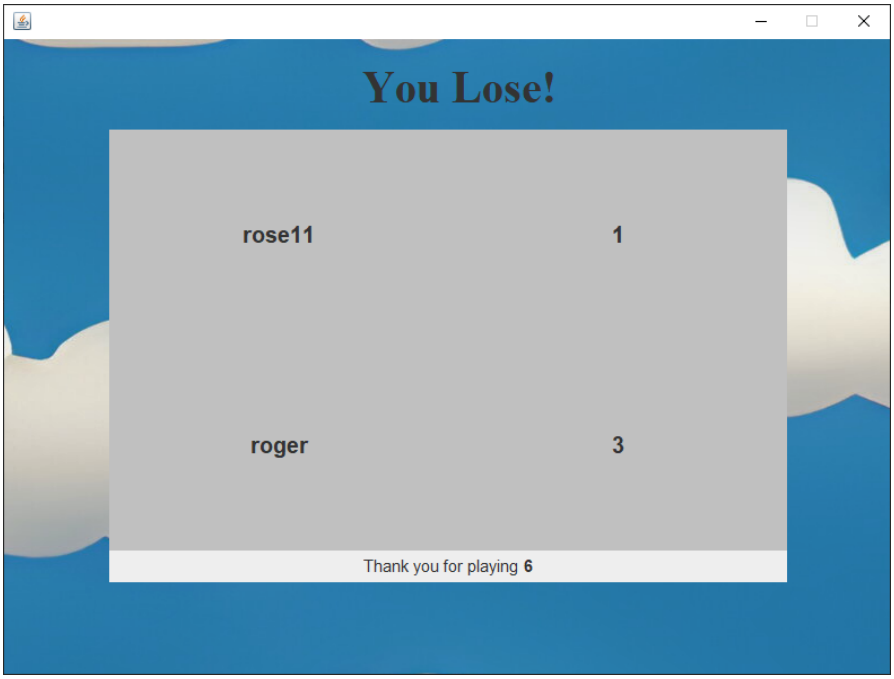
8. If 2 or more players have entered the game room within 10 seconds, a loading page will appear, then the game will start once the countdown finishes. The player must be able to enter as many words having 5 or more letters from the random letters shown. For every word formed from the pool of letters, click ENTER to validate if the word is valid.

9. After every round, the application will show the current scores of each player in the room and will count down until the next round.

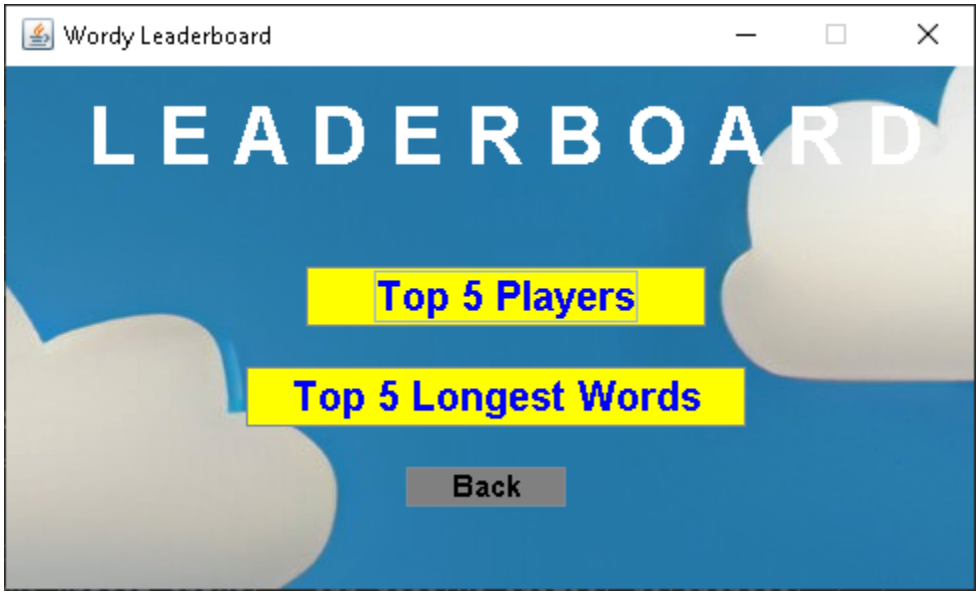


10. The first player to score three points will win the game. The game will then end with the room's leaderboard on display. A button will appear for the user to return to the home screen.

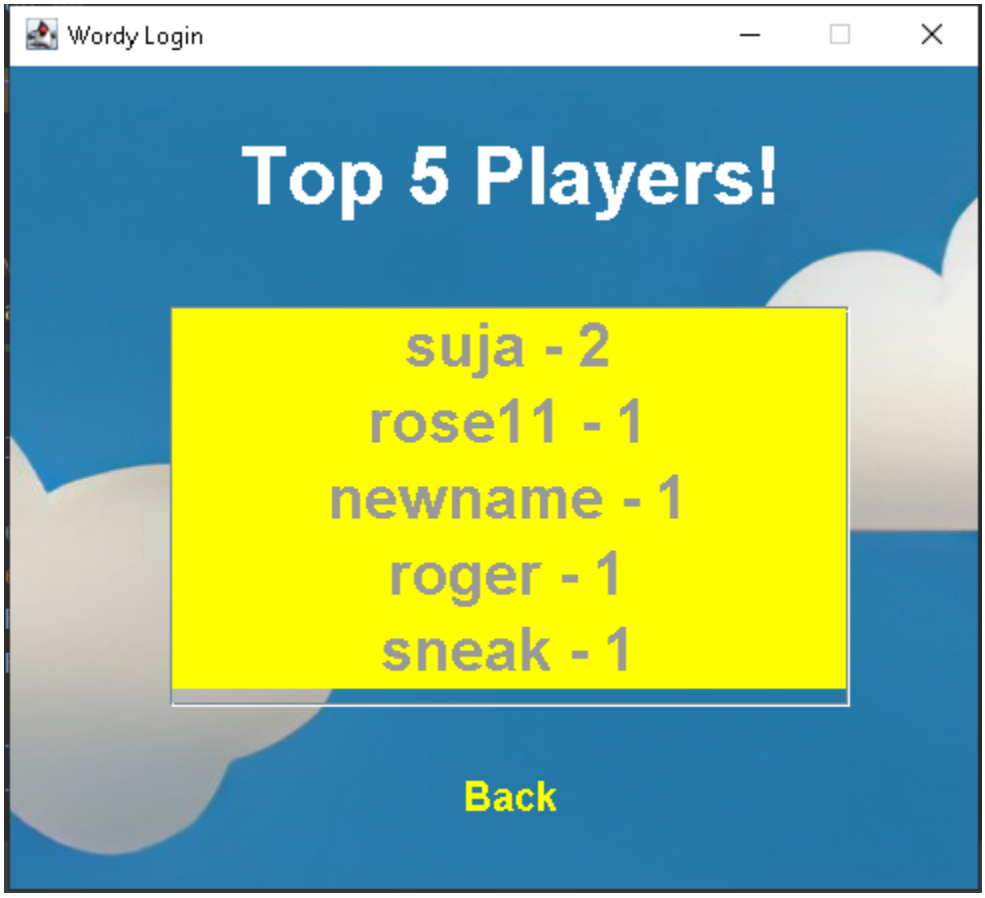




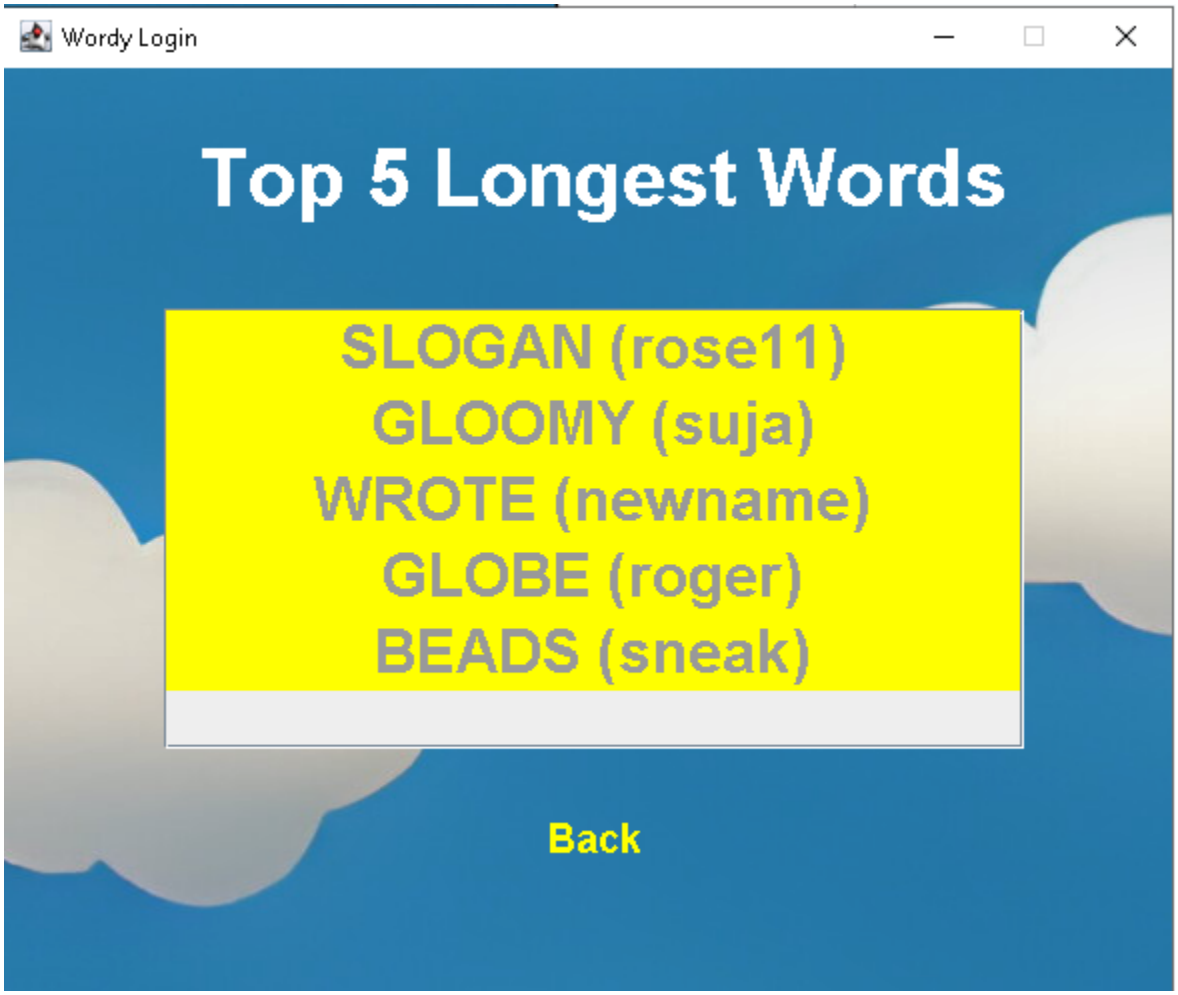
11. To check the leaderboard, you can choose to view the Top 5 Players and Top 5 Longest Words.



- The top 5 players are ranked in descending order based on the total number of matches won and the accumulated points. The player with the highest number of wins and points is ranked as top 1, while the player with the fifth-highest number of wins and points is ranked as top 5.



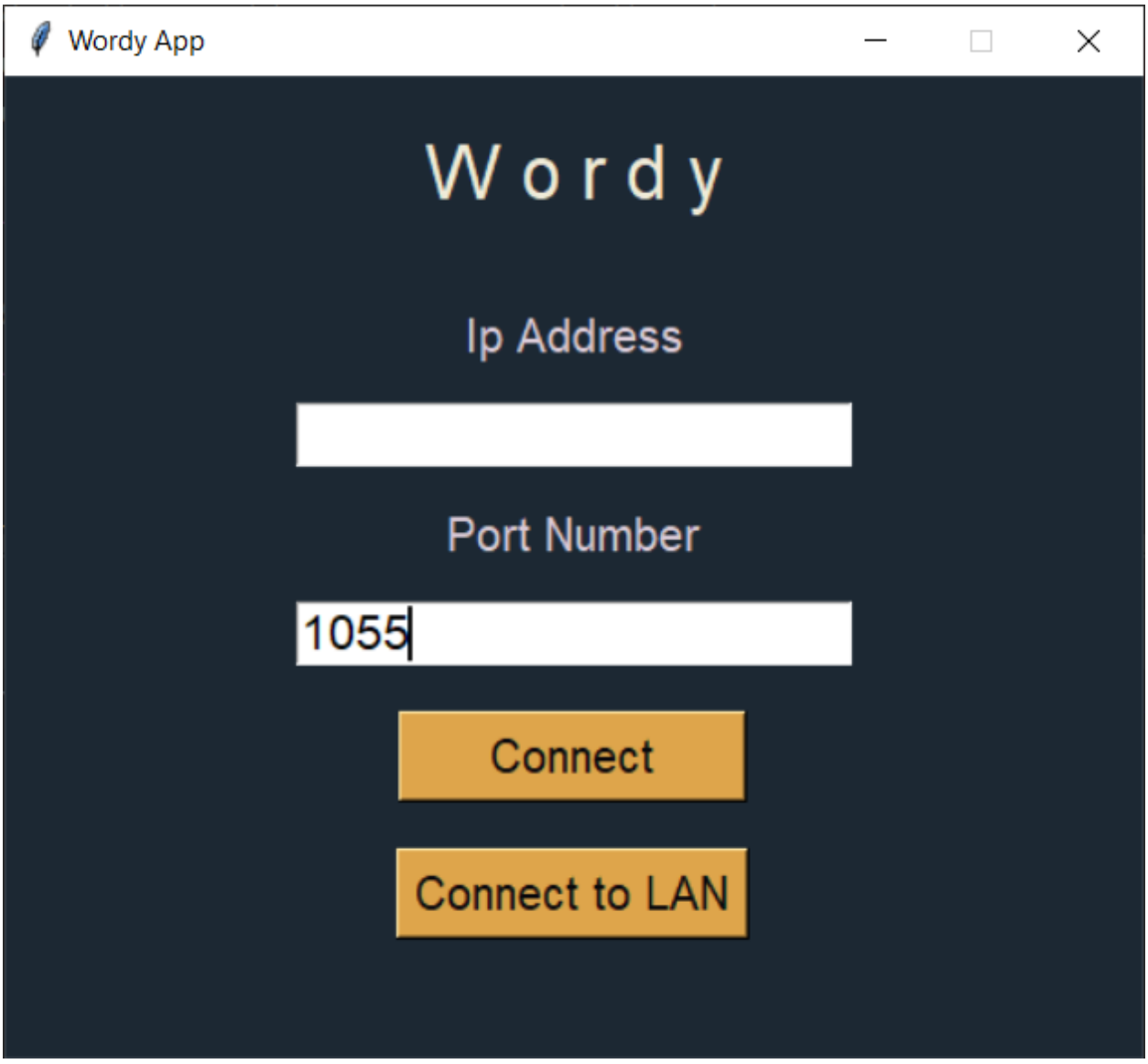
- The leaderboard for the longest words will display the top five longest words ever formed in all games played, along with the player who formed each word. The words will be arranged in descending order of length, with the longest word at the top.



Client (Python)

Running the Client class is similar to running the Java Client program. Although, you will notice a difference in terms of the GUI design.

1. Once the server is up and running, run the WordyClient class. A GUI would appear and would ask for the Server's IP address and Port Number. Make sure to input the correct IP Address and Port Number, then click connect. If you are working with the same terminal, click on LAN Connect, make sure to specify the localhost's port number still.



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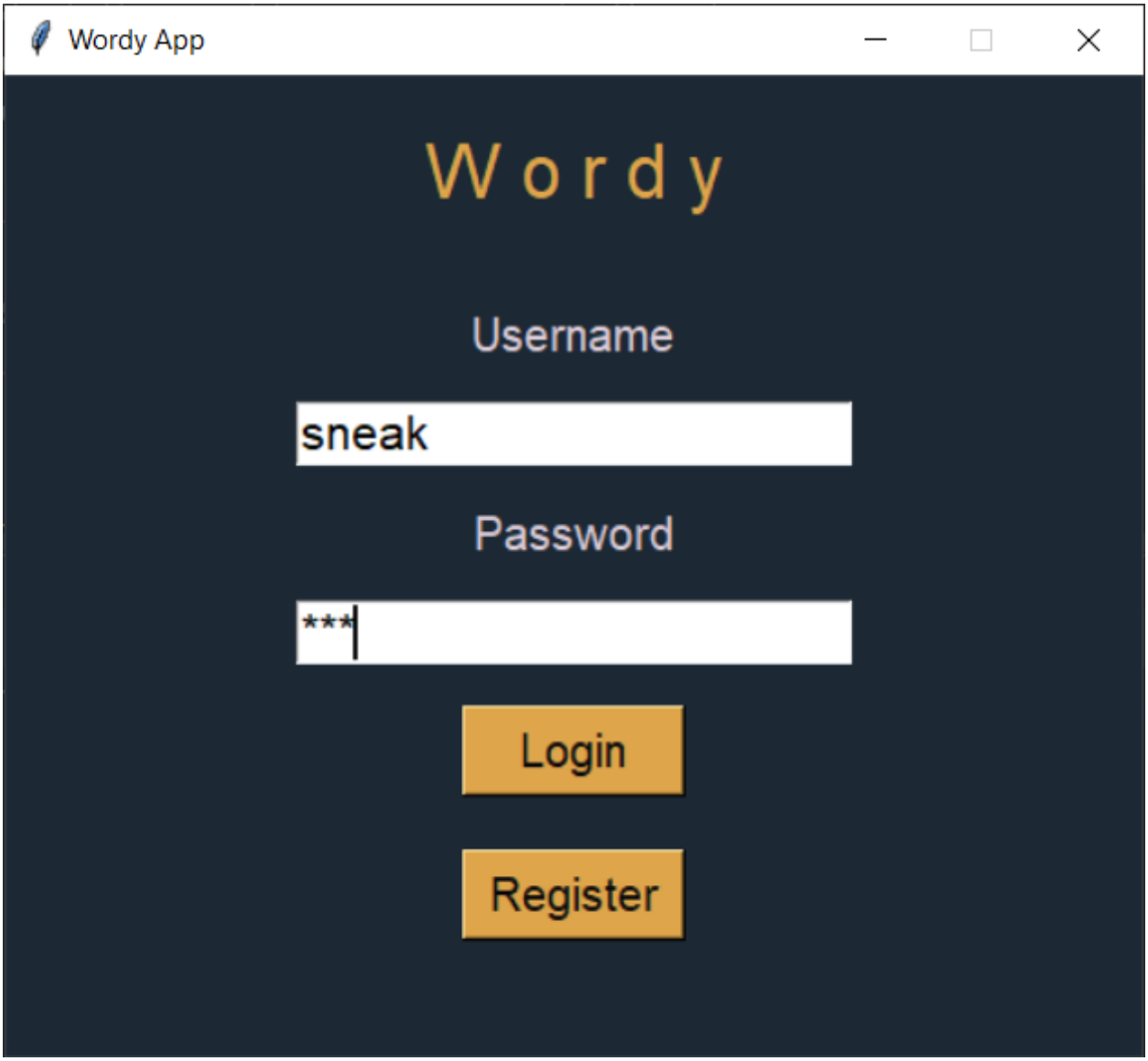
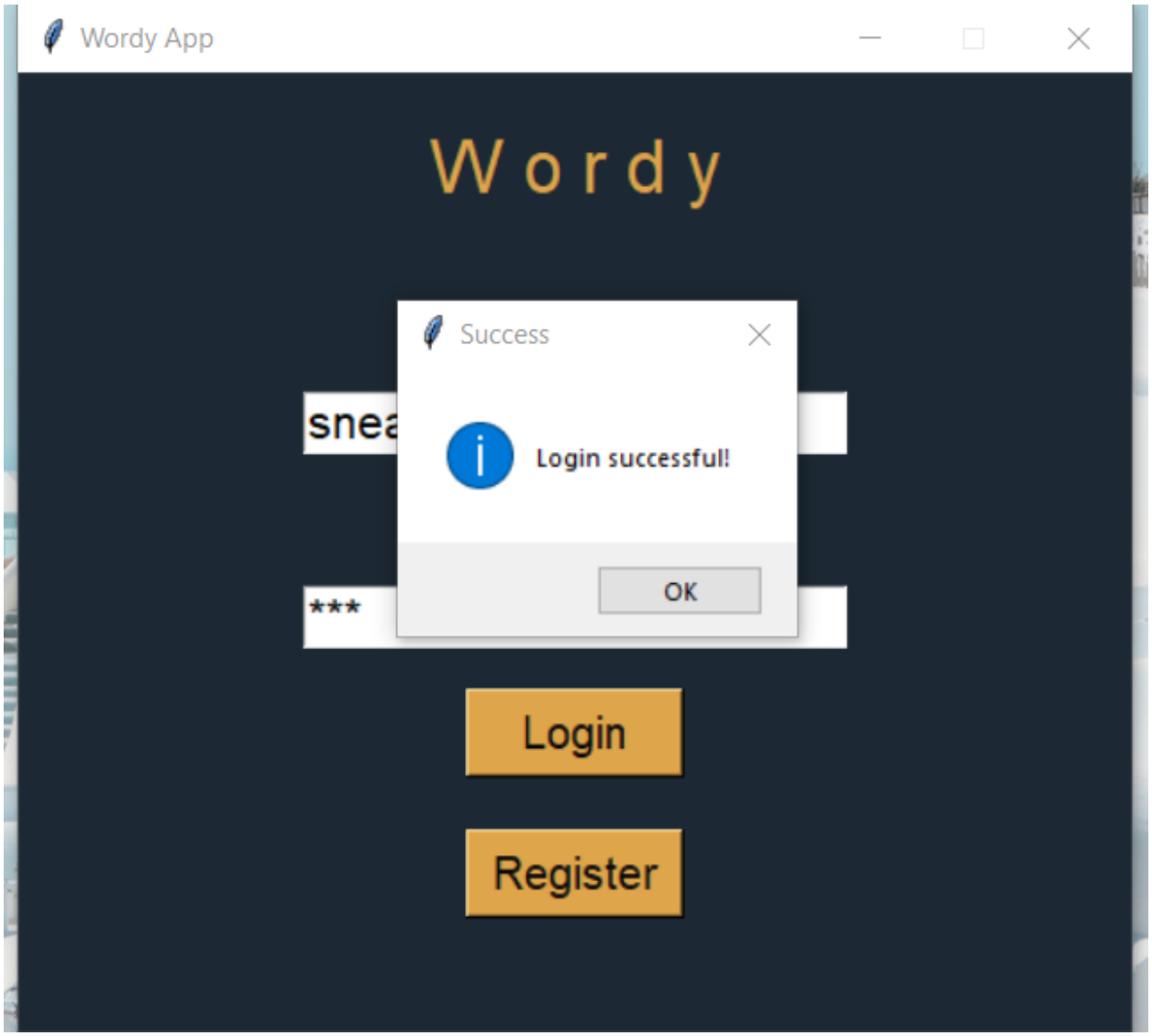
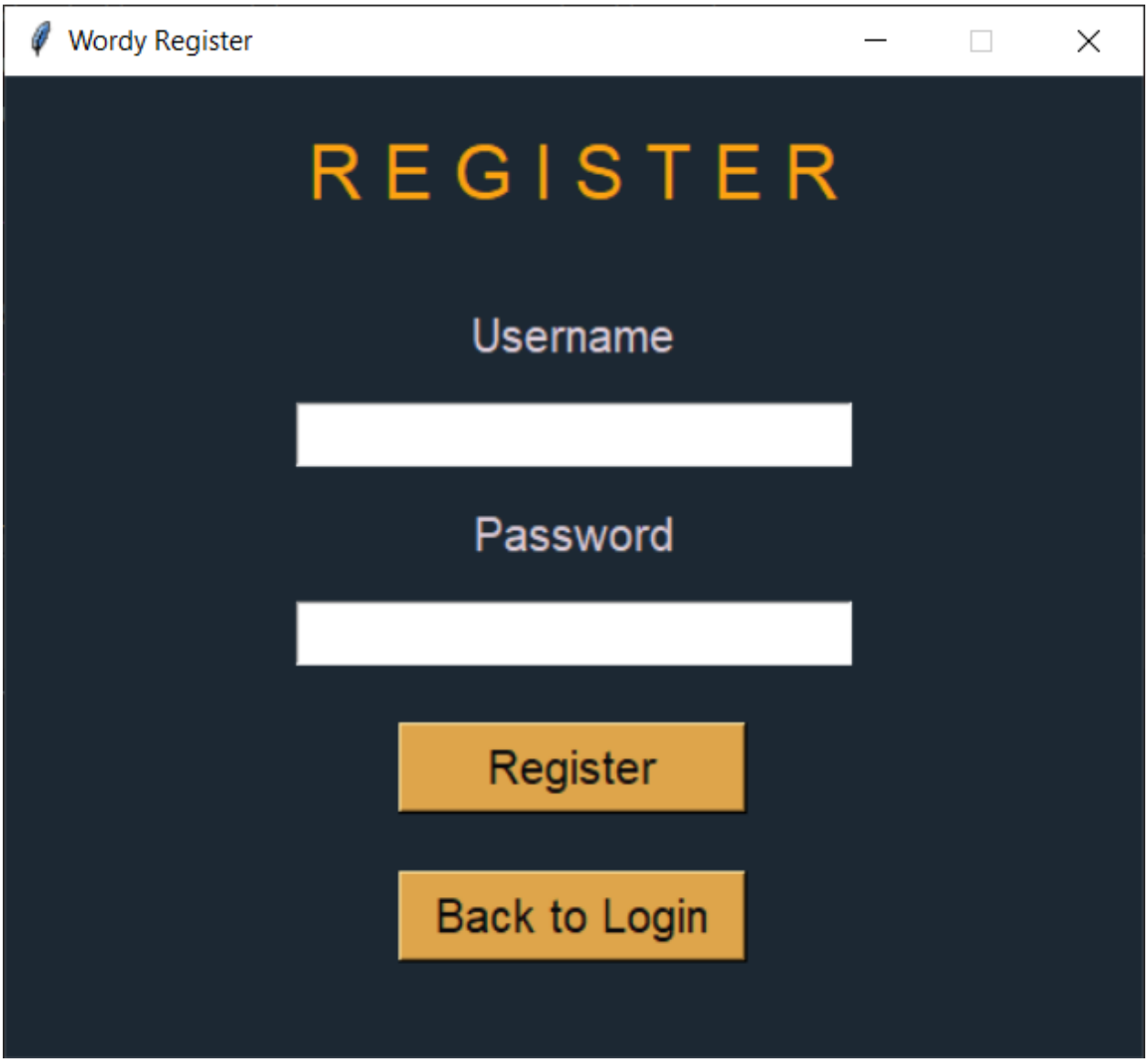
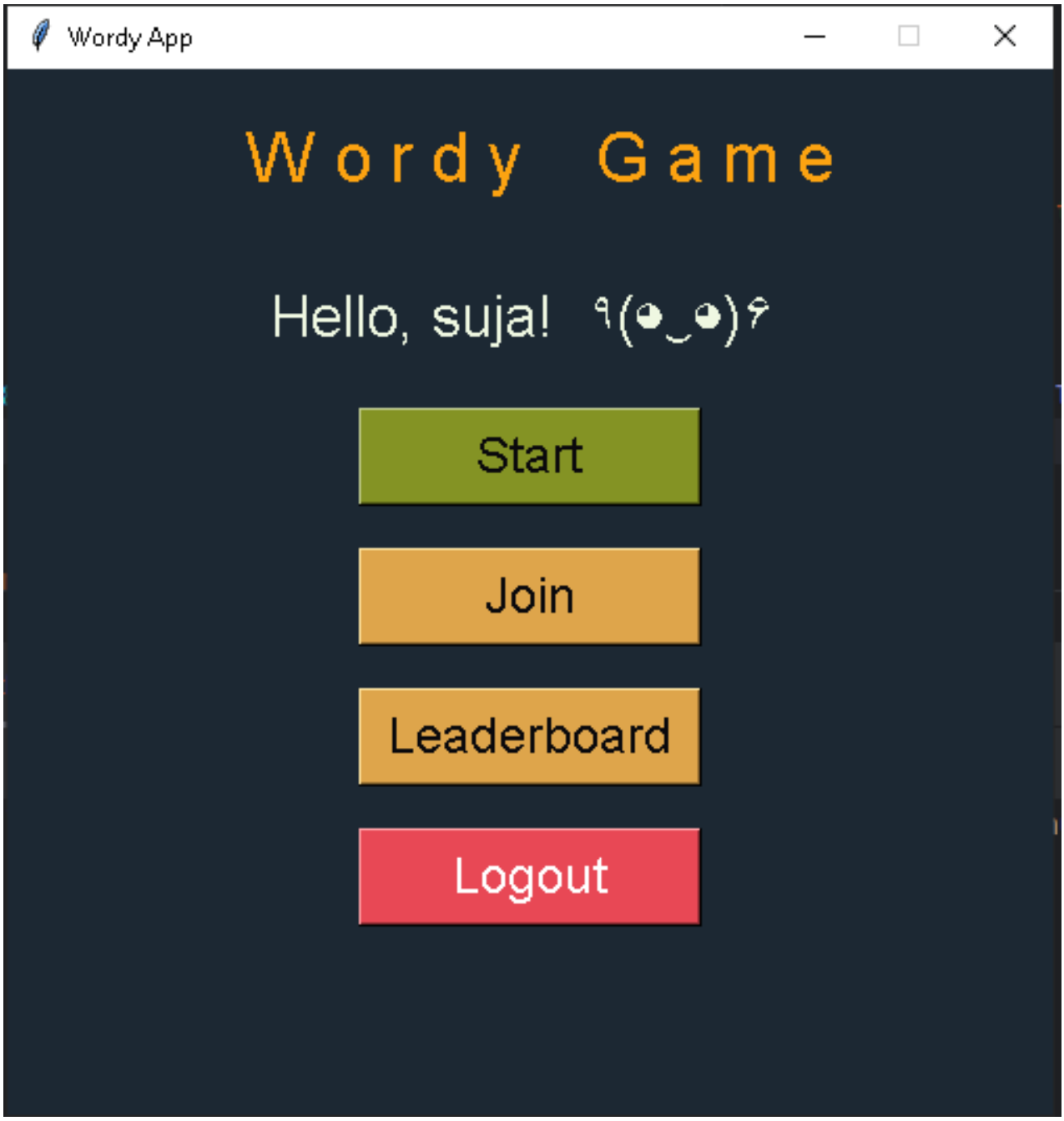



Wordy App
Wordy
Success
Login successful!
OK
snea
***
Login
Register

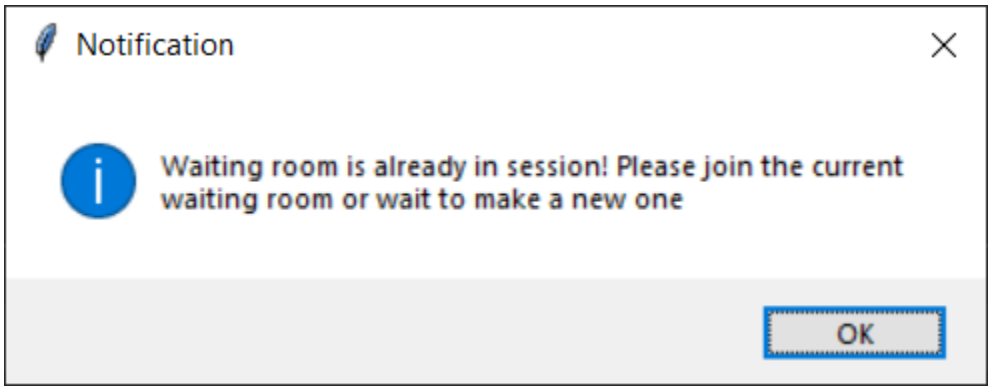
3. Register an account by filling in the username and password fields and pressing the register button. If all the fields are valid, your account should be ready for use.



4. When you have logged in successfully, the home page will appear. The home page shows the following options: Start, Join and Leaderboard.



5. The player can then click on **Start** from the Homepage to start a room. If there is already a room waiting for other players then clicking on Start will display a message to inform you that there is a room available to join.



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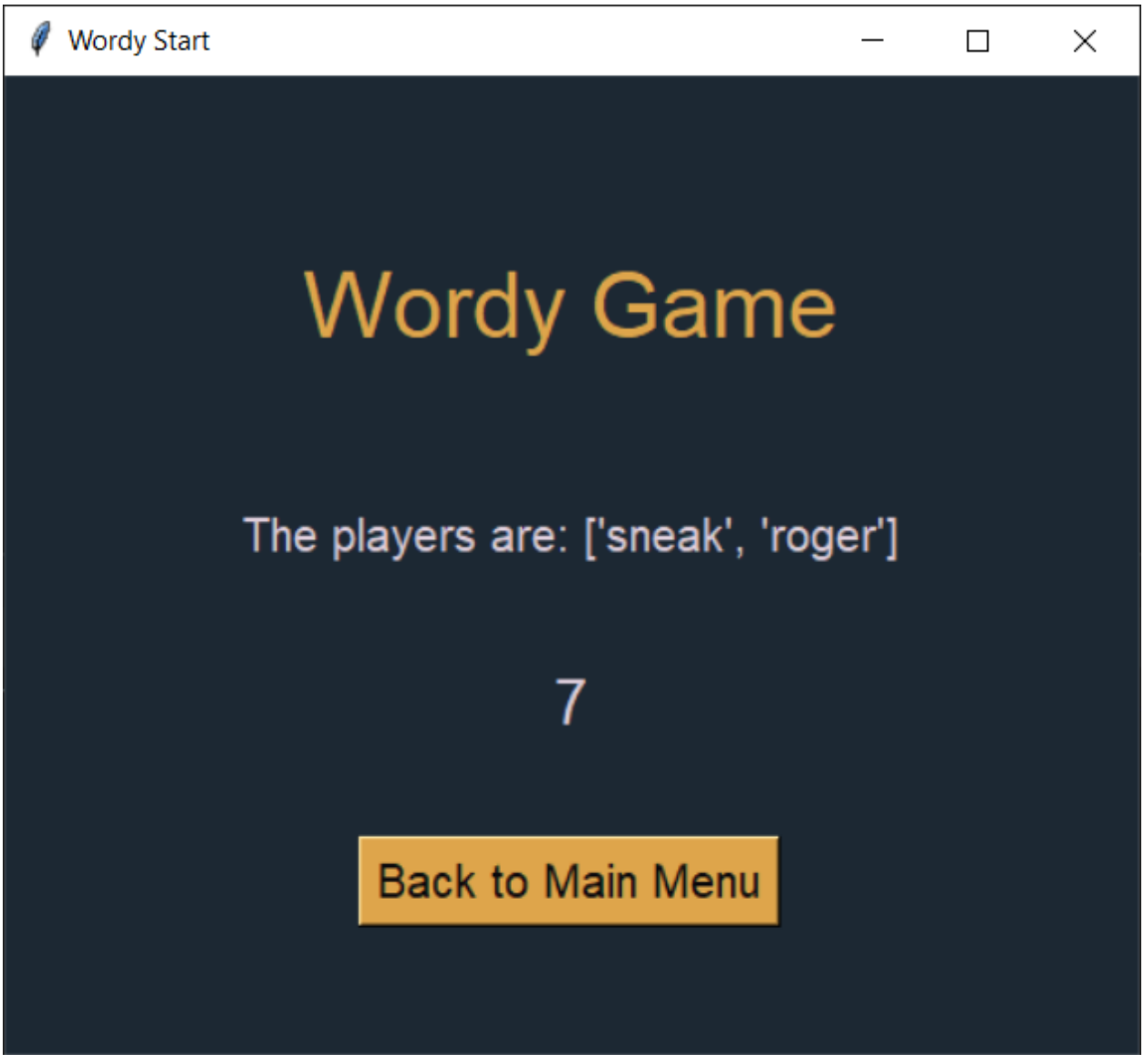

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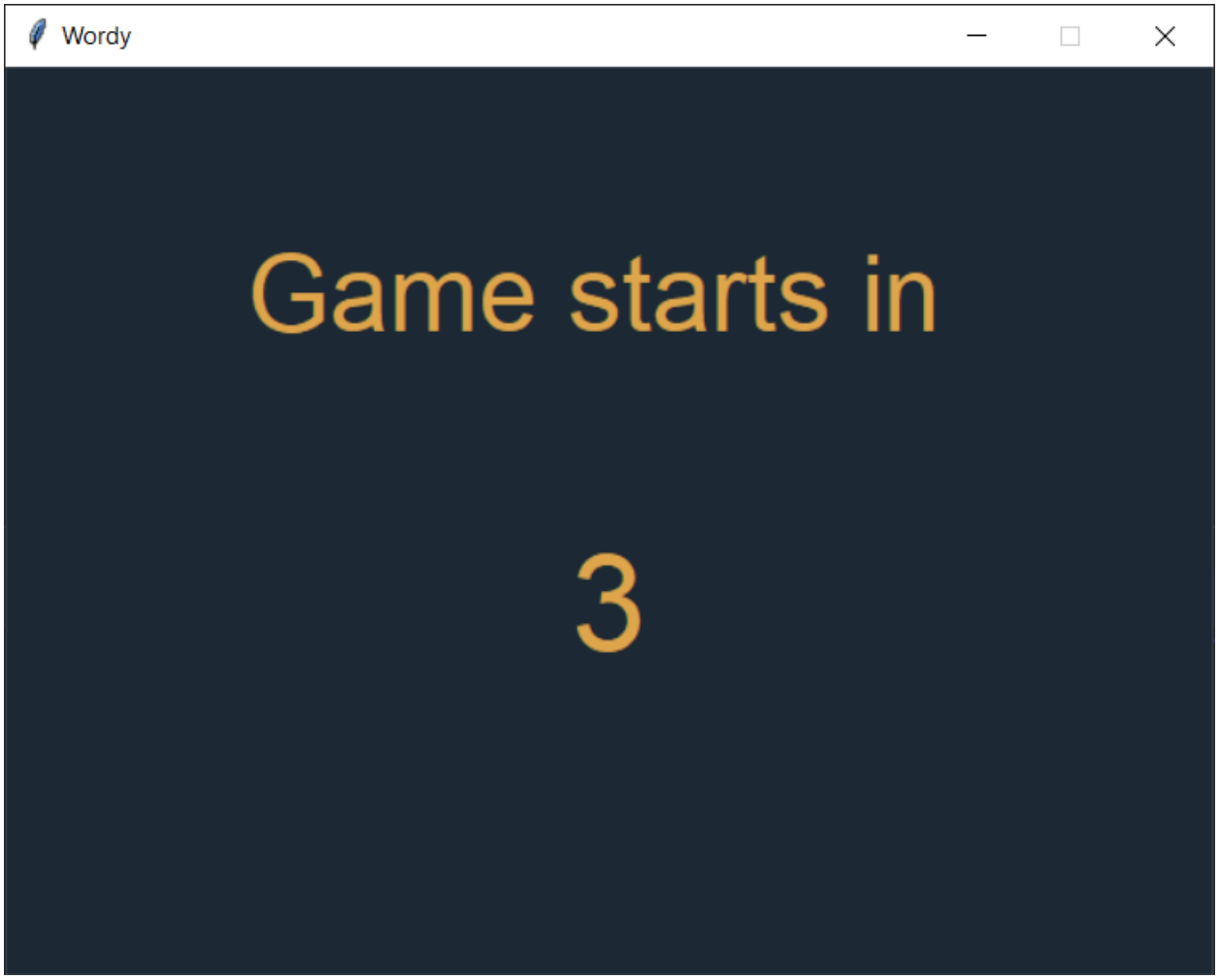
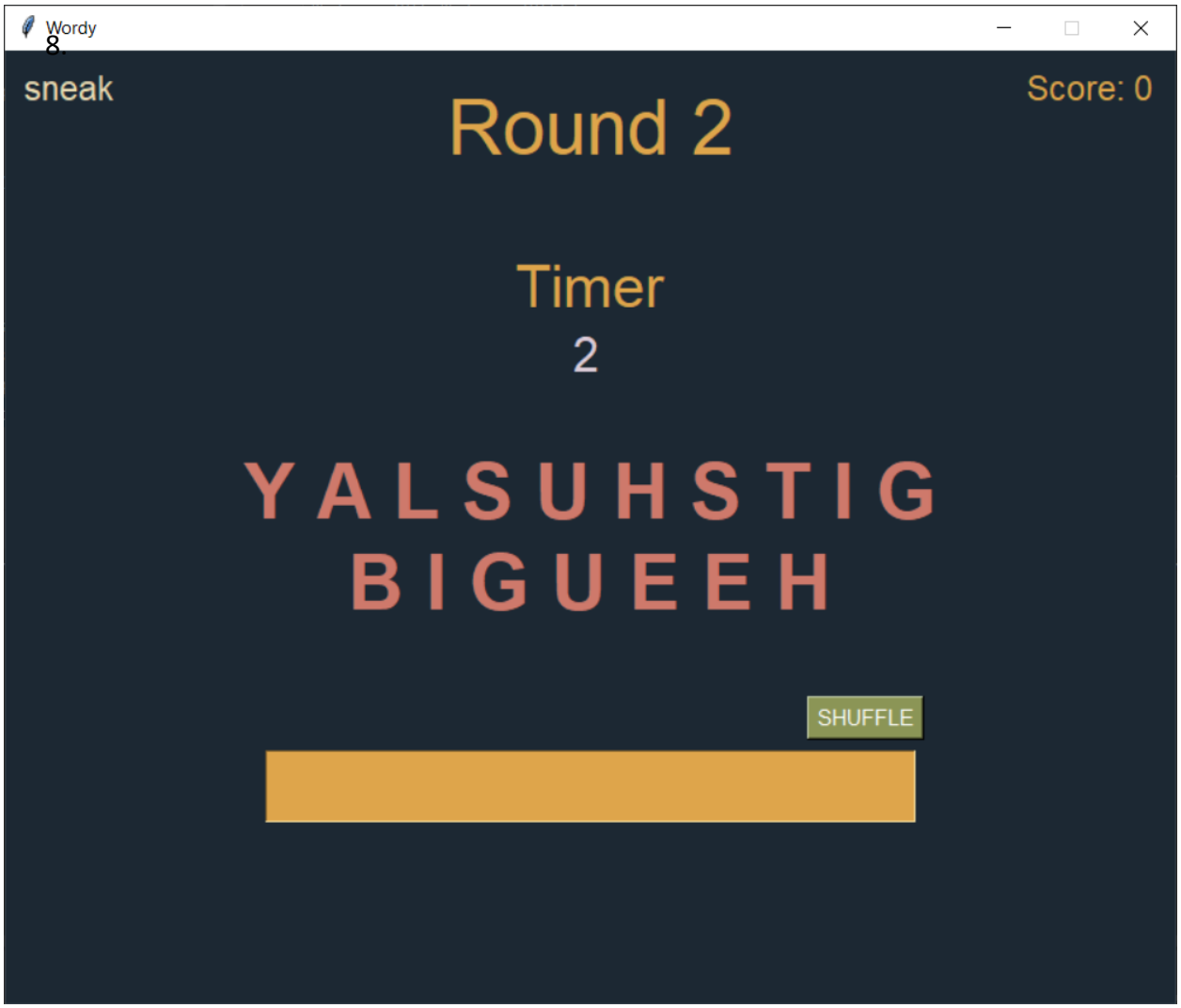


- Main Game GUI



8.

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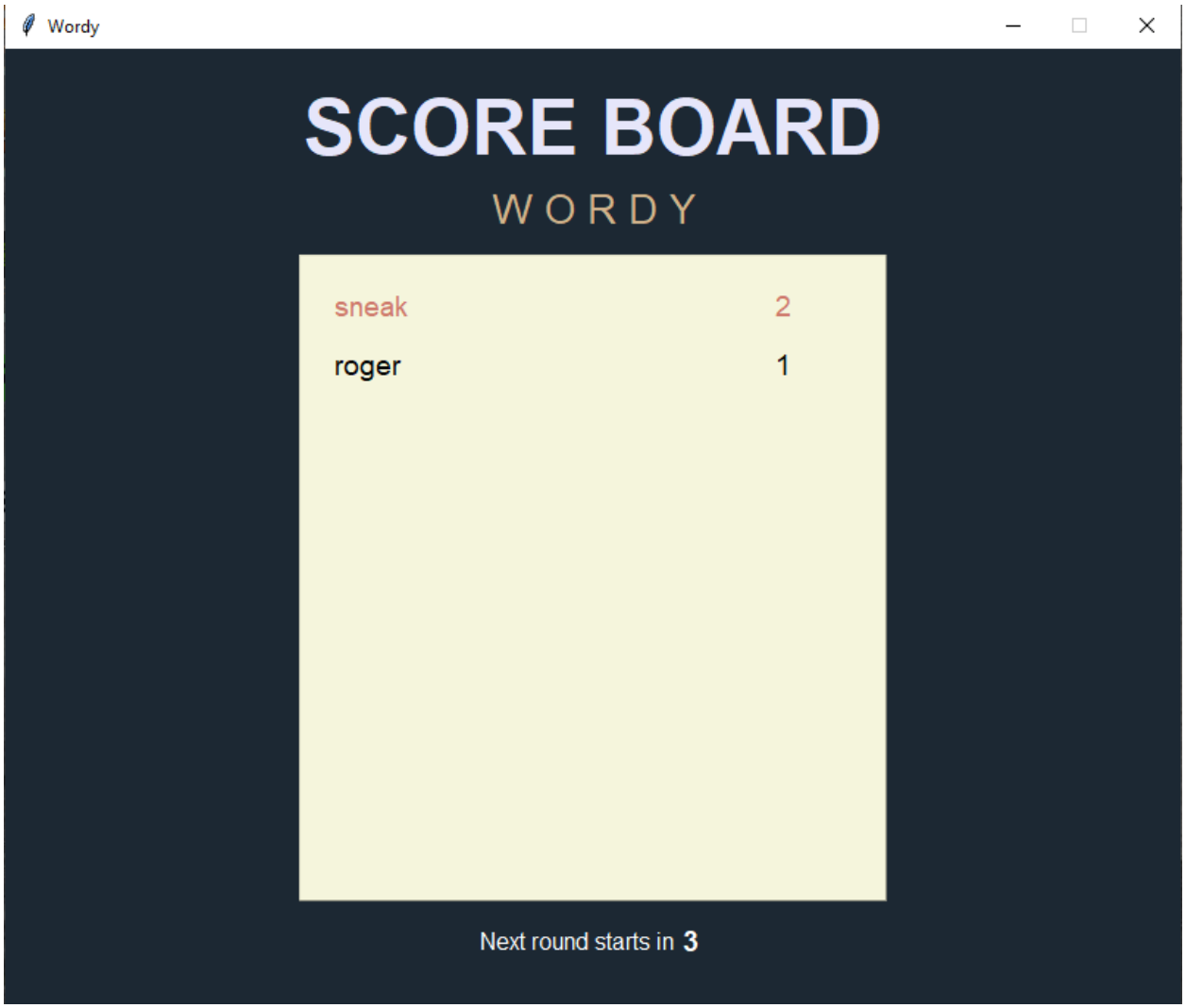
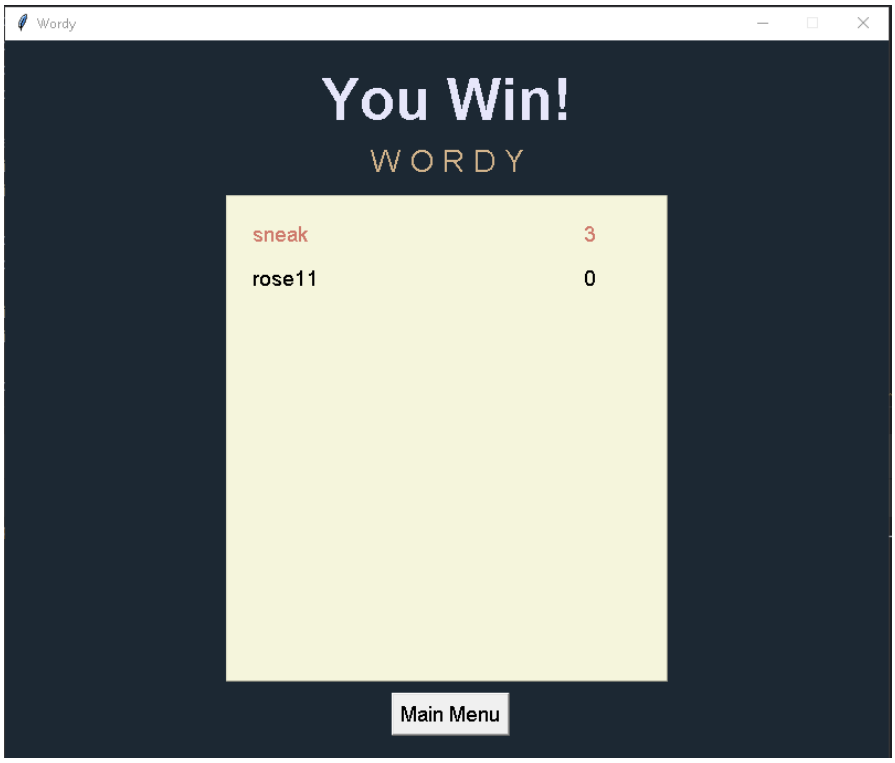
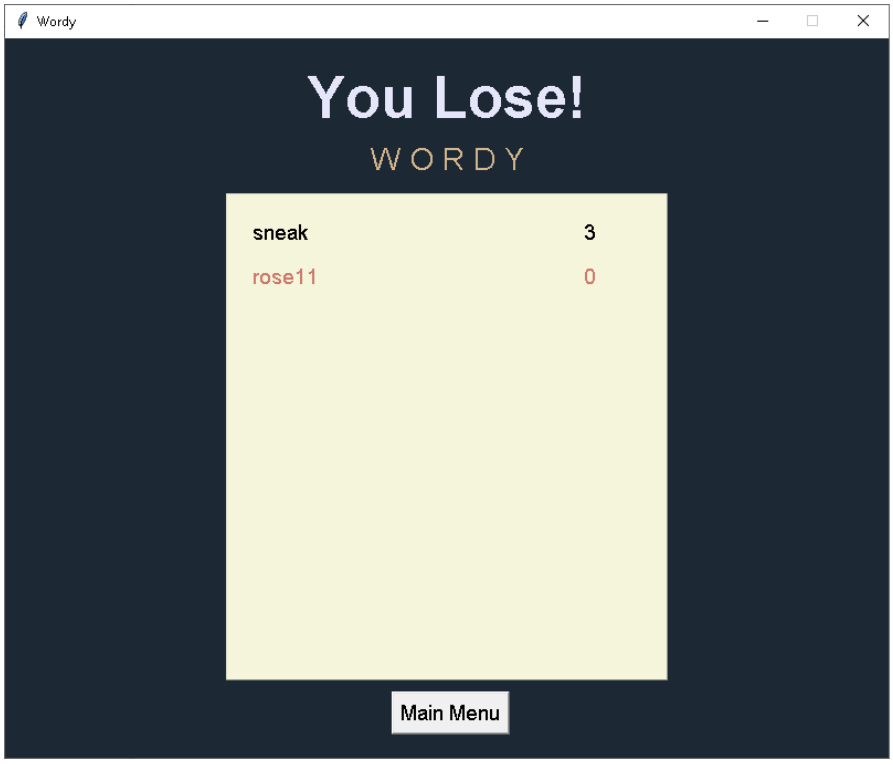
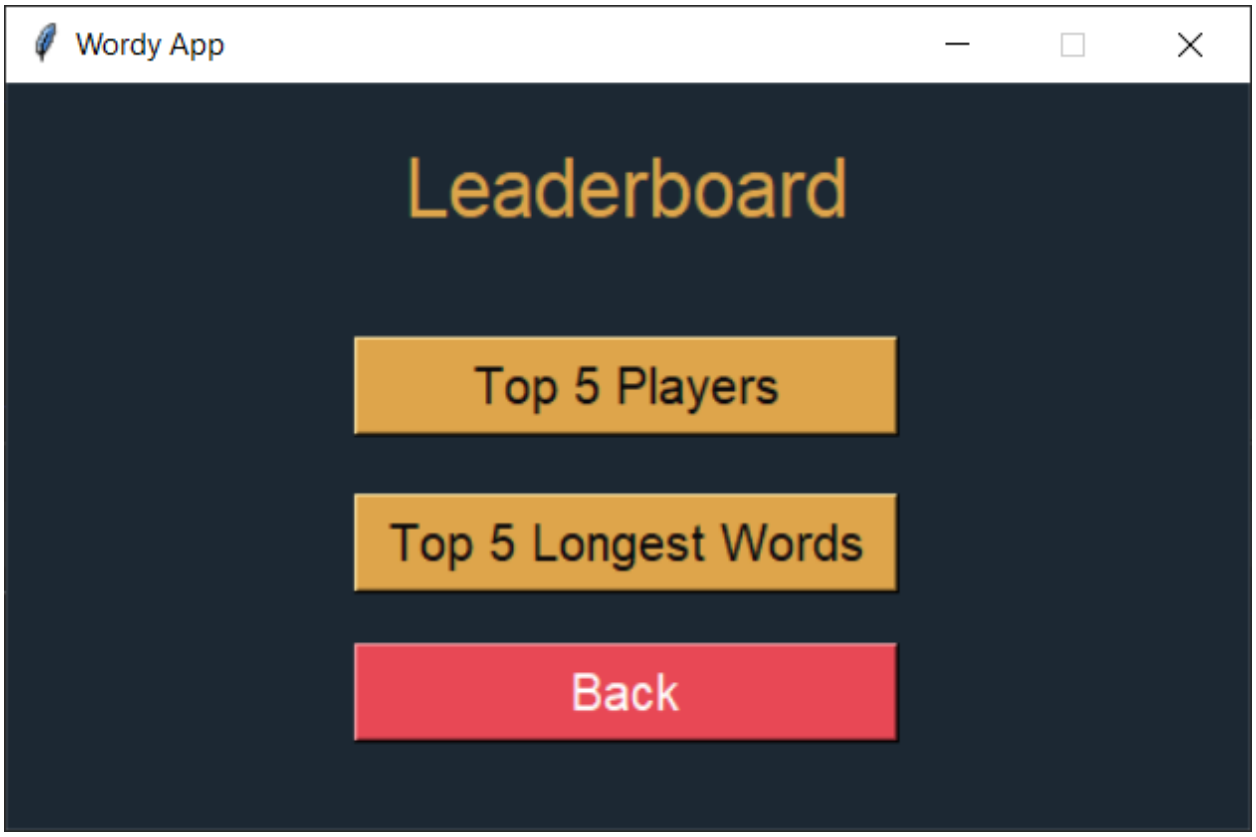


9. The first player to score three points will win the game. The game will then end with the room's leaderboard on display. A button will appear for the user to return to the home screen.

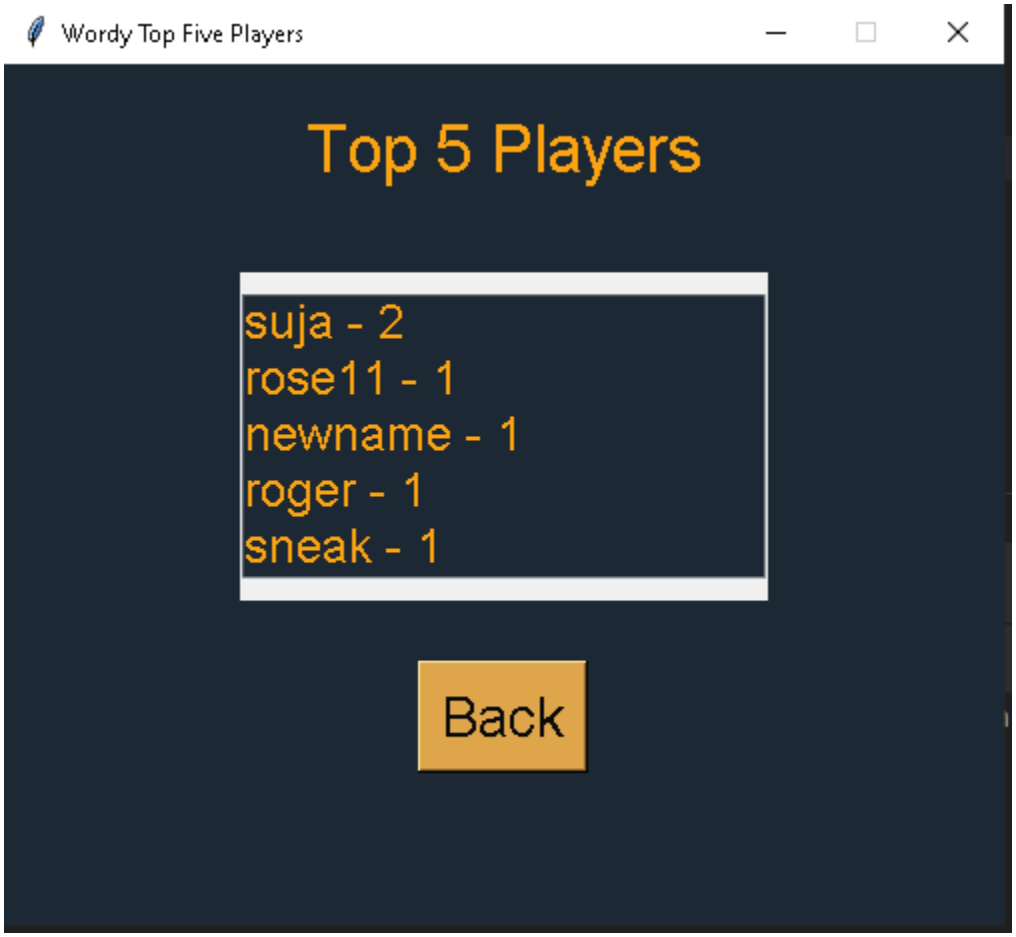




10. To check the leaderboard, you can choose to view the Top 5 Players and Top 5 Longest Words.



- The top 5 players are ranked in descending order based on the number of matches they have won and their accumulated points. The player with the highest number of wins and points is ranked as top 1, while the player with the fifth-highest number of wins and points is ranked as top 5. For example, suja is currently ranked as the top 1 player, while sneak is ranked as the top 5 player.



- The leaderboard for the longest words will display the top five longest words ever formed in all games played, along with the player who formed each word. The words will be arranged in descending order of length, with the longest word at the top.