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CONTRIBUTION TOWARDS THE PROJECT

Name of Student	Student ID	Contribution % towards the Code	Contribution % towards the Report
Adithya Vivek	22200615	12.5	12.5
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USER-MANUAL

Prerequisite:

Prior to running the Bingo program, please make sure you have python installed on your computer. If not, click here and follow the instructions to install it. Once python is installed follow the steps given below to the run the Bingo program:

Step 1: Open command prompt/ Terminal and change to the directory where you have downloaded the files: ***(i)*** *requirements.txt* ***(ii)****PythonAssignment_Group19.py*, using the **"cd"** command. Once you are in the directory, then type the command "***pip install -r requirements.txt" Shown*** in *figure (1)* and press enter.

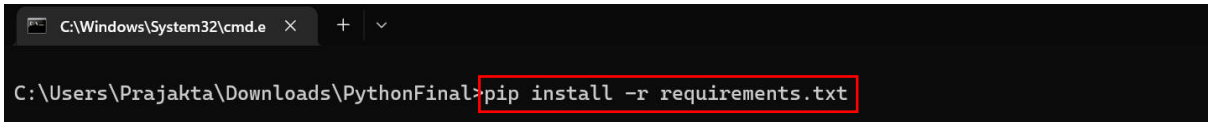


Figure (1)

This will start installing all the dependencies i.e., required libraries that the main program needs to run depicted in *figure (2).*

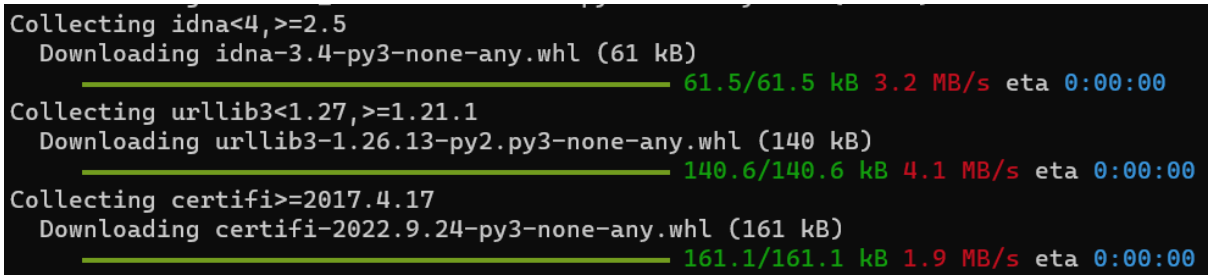


Figure (2)

Upon successful installation, you see a completion message shown in *figure (3)*.

Figure (3)

Step 2: Now we are ready to run the Bingo Program! To do this type the command "***python PythonAssignment_Group19.py***" as shown in *figure (4)* and press enter.

Figure (4)

Step 3: You should see a dialog box pop up as shown in figure (5)! Now left click the **Start** button on the window.

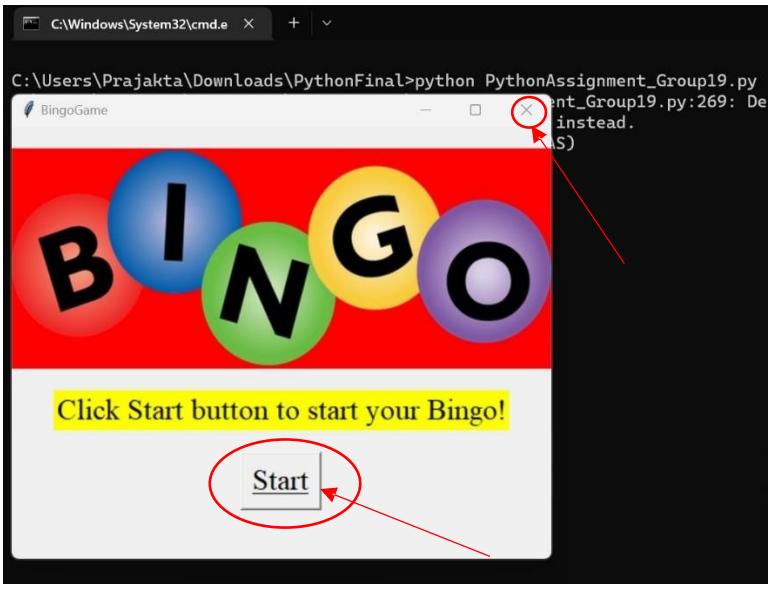


Figure (5)

Step 4: After clicking on the Start button, a new window will pop asking to enter the inputs: ***(i)****Enter total number of games* ***(ii)****Enter total number of players.* Left click on the space provided in front of both the inputs and enter the desired numbers. After entering the numbers left click on the **Next** button as shown in *figure (6)*.

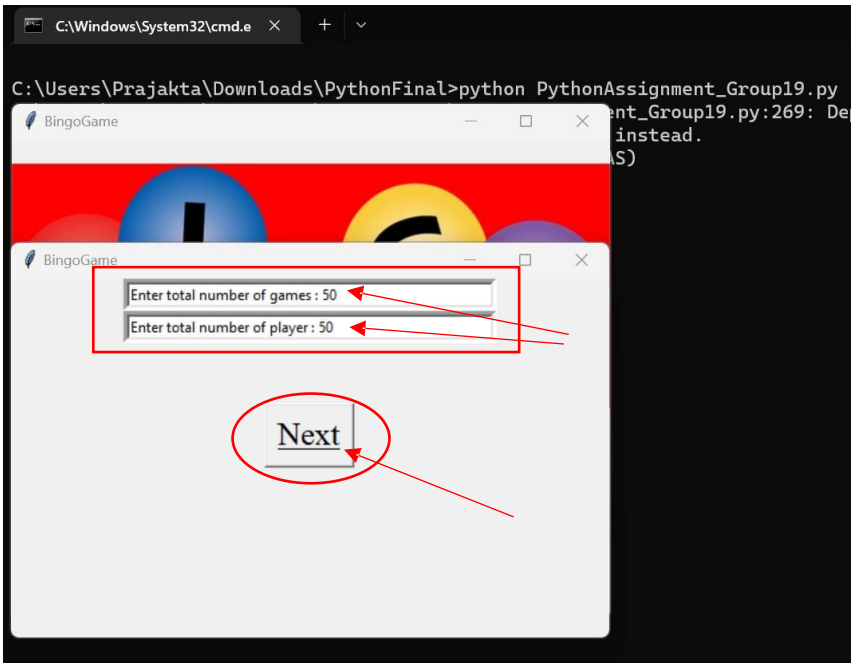


Figure (6)

Step 5: The program now runs **50** bingo game simulations i.e., the number of games entered, for **50** cards i.e., the number of players entered, and gives an output in the form of a plot depicting the simulation results shown in *figure (7)*.

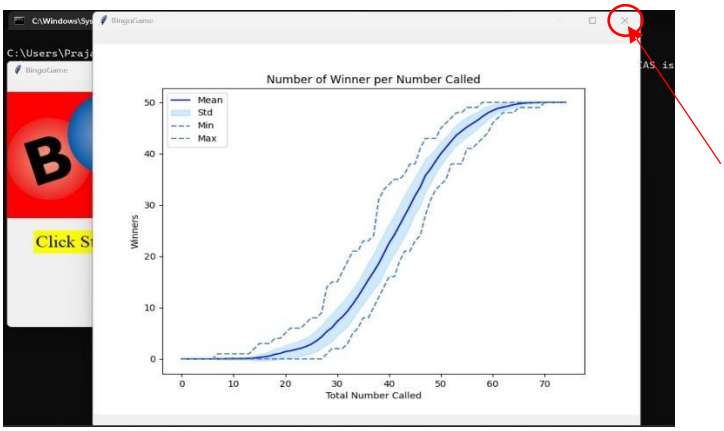


Figure (7)

Step 6: If you wish to carry out further analysis, the program stores all the information by creating a folder namely "**data**" in the same drive where the code resides as shown in the *figure (8)*. This folder contains the Bingo cards created during each simulation in individual "pdf" files. It also contains the table of centrality with statistical values and the output plot in separate pdf files.

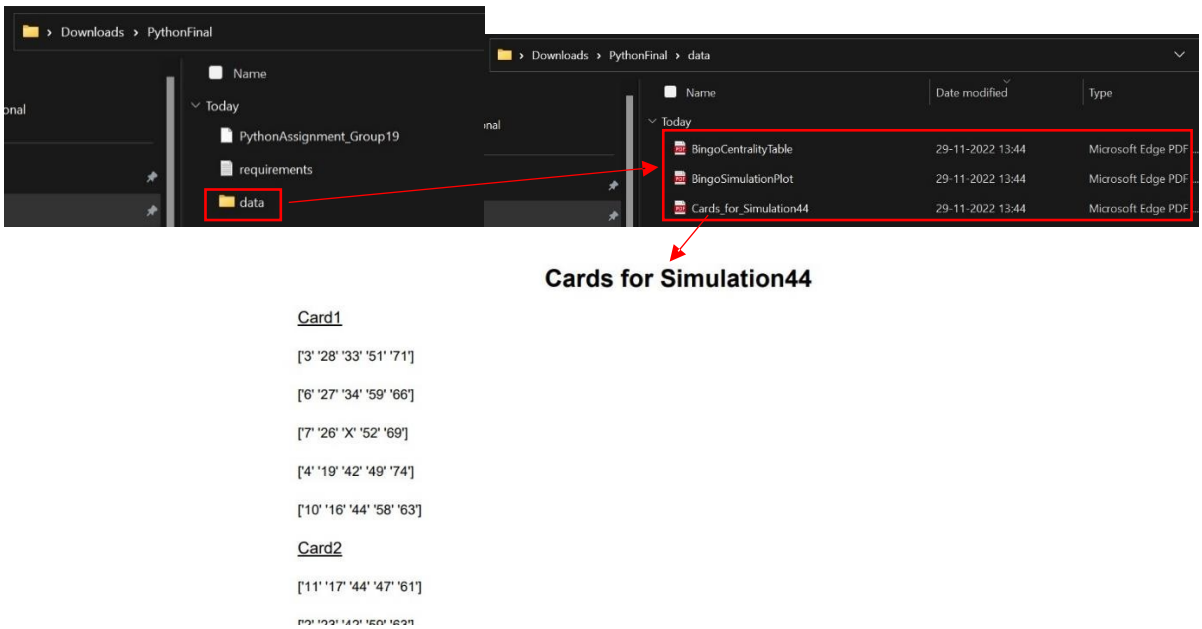
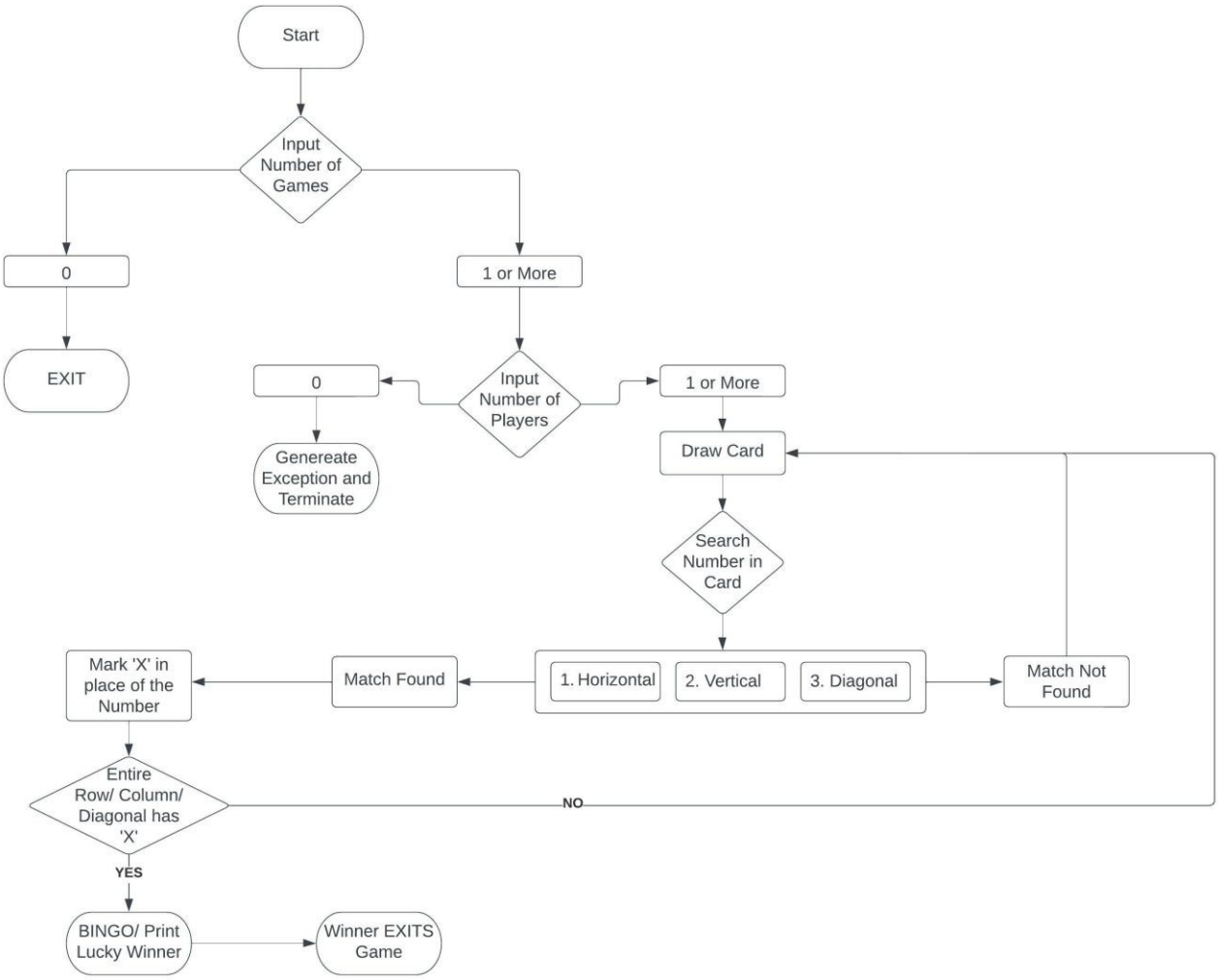


Figure (8)

Step 7: If you wish to run a new simulation with different values, simply close the output window marked in *figure (7)* and repeat from Step3. If you want to completely close the program, then simply left click on the close button highlighted in *figure (5)*. Enjoy!

FLOW CHART



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