SSEP 2024: Intro to Programming with Python

Summer 2024

Assignment 05: Magic 8 Ball

*This is a **pair programming assignment find another person to work with on the assignment.***

Assignment Goals:

- Implement loop programming structures

Notes

It is your responsibility to write a program that is well structured (i.e. modular), and easy to read. Your file should start with a header that has your name(s), the date, and a brief description of what your program does. Variable names should be descriptive. Comments should be used appropriately to document your code.

Quick Programming Tips:

- ***Not sure what to do?*** Talk through the assignment instructions with your partner and write out in English what specific tasks your program needs to do. Then, pseudocode.
- ***Stuck on how to program your solution?*** Try out 2 different ideas then ask for help if you are still stuck!
- ***Have a seemingly invisible bug?*** Use print statements throughout your code. Before running the code, think about what you expect to print if the code is working. Then see if what you expected is what prints.

Program Specification (AKA Spec)

In this assignment, you will write a python program that simulates a Magic 8 Ball.

Your program should:

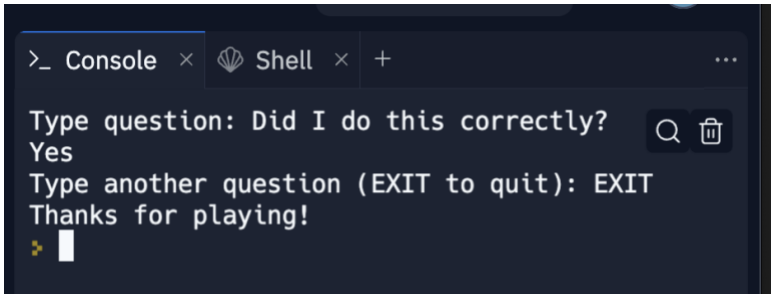
- Gather a question from the user with the prompt: “Type a question: ”

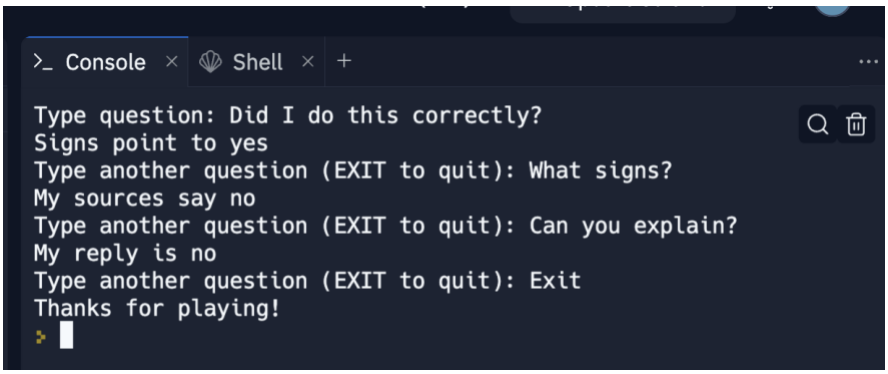
- After the user inputs their question, print a randomly selected response from the options in the table below.
- Determine if the user wants to ask another question with the prompt: “Type another question (EXIT to quit): ”
- If the user types ***any*** variation of exit, at ***any*** time, the program should quit with the message: “Thanks for playing!”
- Otherwise, keep playing

Answers:

Affirmative Answers	Non – Committal Answers	Negative Answers
It is certain	Reply hazy, try again	Don’t count on it
It is decidedly so	Ask again later	My reply is no
Without a doubt	Better not tell you now	My sources say no
Yes definitely	Cannot predict now	Outlook not so good
You may rely on it	Concentrate and ask again	Very doubtful
As I see it, yes		
Most likely		
Outlook good		
Yes		
Signs point to yes		

Your program should run like these examples:





Submission

Be prepared to demonstrate and discuss your code with the class. After giving every one time to work we will come together and discuss:

1. Solutions you came up with
2. Roadblocks you hit along the way
3. What you would do differently if you were to do the assignment again

Curious to know how your code would be graded in a college class? Here's an example rubric:

	Missing / Not Complete (0)	Approaching (2)	Meets (4)	Exceeds (5)
Readability	Assignment is unreadable or not submitted.	Assignment includes formatting, but significant improvements could be made. For example, headers, more documentation (comments), descriptive variable names.	Assignment includes formatting, but minor improvements could be made. For example, headers, more documentation (comments), descriptive variable names.	Assignment is well formatted and easy to read. Headers, documentation (comments), and descriptive variable names are all included.
Computational Problem Solving	No code is included in the assignment, or the code included is unreadable.	Problem solving approach could use significant improvements. Specifically, better decomposition of the problem, and/or increased modularity.	Problem solving approach is solid but minor improvements could be made with respect to decomposition of the problem, and/or increased modularity.	Problem solving approach is solid. Problem is decomposed into manageable pieces and code is modular.
Implementation	Nothing has been implemented, or most of assignment has not been done.	Code does not run consistently or efficiently. Some outputs match expected outputs. All parts of the assignment are completed except for a few small parts.	Code mostly runs consistently and efficiently. Most outputs match expected outputs, and all parts of the assignment are completed.	Code runs consistently and efficiently. Outputs match expected outputs, and all parts of the assignment are completed.