Reflecting On Knowledge and Learning: Revisiting Plato’s Meno Through Game Programming with Python

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Reflection on the Guessing Game in Python

In my Year One course, I learned the basics of Python programming, and one of the first projects I worked on was creating a number guessing game. This was the great path to understand the fundamentals of programming, for example, loops, conditionals, and handling user input. Apart from this, I experienced how this project helped me to understand not just programming but also how I learn and how to recognize when I have truly learned something. In addition, as being a Nursing Student, I will talk about what I learned from this project, the challenges I faced, when I realized I was making progress, and what still lies ahead in my learning journey.

The Guessing Game Project

The goal of the guessing game was simple as well as hard: the program would pick a random number, and the player would try to guess it. After each guess, the game would tell the player whether their guess was too high, too low, or correct. It sounded easy at first, but I quickly felt that making this work required more than just knowing the basic Python syntax. I had to figure out how to put all the pieces together.

The first challenge was figuring out how to guess a random number. I learned that Python has a built-in random module that made this easy. Then, I used a while loop to keep asking the player for their guess until they guessed the correct number. The more I worked on this, the more I experienced how the different parts of the program fit together. And this was the great point in my learning process, realizing that programming is more than just individual commands but understanding how to connect them to create something functional.

Also, this project reminded me of *Meno*, the dialogue by Plato, where Socrates teaches that learning is not just about memorizing facts, but about understanding and applying them. Similarly, with this project, I wasn’t just following instructions, I was learning to apply concepts like loops,

conditionals, and variables in a practical way. I was putting my knowledge to the test and, in the process, gaining my understanding.

Recognizing What I Learned

As being a nursing student, it was quite hard to understand in the beginning but slowly with the help of my professor I felt little easy to do the work and I was enjoying everything that I did in this project. I knew I had learned something new when I started adding extra features to the game. For example, after getting the basic game working, I wanted to make it more challenging by limiting the number of guesses the player could make. To do this, I added a counter that would track how many guesses the player had left. If the player ran out of guesses, the game would end and tell them if they won or lost. This was a good test of my understanding because I had to think about how to manage the number of guesses and make sure the game stopped at the right time.

Another feature I added was a hint system. If the player's guess was far off, the game would give them a clue to help them get closer to the correct number. This pushed me to think even more about how to compare the guesses and adjust the game's responses accordingly. By making these changes, I found that I wasn't just following along with what I was taught. I was starting to think creatively about how to improve the game and make it more interactive. This was a big moment for me because it showed me that I was truly learning and not just repeating things I'd been shown.

Much like Meno, who learns that true knowledge comes from understanding and using ideas, I realized that programming isn't about memorizing syntax or copying code, it's about thinking critically and solving problems. This project taught me that learning is a process of applying what you know and making it work in new ways.

Growing Pains in Learning

Of course, the process wasn't always smooth. There were moments of frustration when things weren't working the way I expected. One challenge was figuring out why the game kept asking for guesses even after the player had guessed correctly. At first, I couldn't figure out what was wrong. It wasn't until I took a step back and thought about the code that I realized the issue was with the while loop, it wasn't breaking when the correct guess was made. To fix this, I had to add a break statement to stop the loop once the player guessed correctly.

At the time, I felt stuck. I was getting frustrated because nothing seemed to work. But then I remembered that learning is often about making mistakes and figuring out what went wrong. Instead of giving up, I kept trying different processes until I found the solution. This experience helped me understand that learning to program is about trial and error. It’s about being okay with making mistakes and learning from them. This is like Meno’s own frustrations in the dialogue, where he doesn't fully understand the concept of virtue until he works through it with Socrates.

Overcoming this challenge made me realize that learning is not always easy, but it’s through those tough moments that we learn the most. Every mistake was a chance to think critically and improve my understanding, just like Meno’s journey to understanding is full of struggles that lead to deeper knowledge. And one main thing is I felt hard, and I didn’t have any idea about this project so, I decided to drop this course but later my professor’s teaching style and his kind words make me to not drop the course. Now, I realized that giving up is not a solution we can do anything if we show our interest.

What I Still Need to Learn

Even though I’ve come a long way, I know I still have a lot to learn. The guessing game project helped me to learn the basics of Python, but there is so much to learn. I need to learn about more advanced concepts like data structures (such as lists and dictionaries), algorithms, and object-oriented programming (OOP). These concepts will help me to write more easy and organized code, especially when the projects become more complex and harder.

I’m also interested in learning how to create graphical user interfaces (GUIs) for games. While the guessing game was fun, it was text-based, and I would like to learn how to make it more visually engaging by using Python libraries. This will challenge me to think about programming in new ways, method and will help me grow as a developer.

Just like in *Meno*, where the process of learning is ongoing, I know my journey with Python is just beginning. There will always be new concepts to learn and new challenges to face. But I’m excited about that because I know that learning to program is about continually growing and adapting. Every step forward is a chance to learn something new and apply it in different ways.

Conclusion

Looking back on the guessing game project that I did, I can see how it helped me grow not only as a programmer but also as a learner. The project taught me how to apply the concepts I had learned in a meaningful way, and it gave me the confidence to try new things and solve problems on my own. Like Meno, who discovers that knowledge is a continuous process of learning and understanding, I realize that programming is about constantly building on what I know. The guessing game was just the start, and I’m excited to continue learning and growing as I move forward in my journey with Python as a minor degree. I will learn more about this program and grab the opportunity of this course in the coming future.