Reflection Paper: Learning Game Programming in Python

Sample paper written by an AI

Young Meno

August 27, 2024

Introduction

As the course "Game Programming with Python" draws to a close, I find myself reflecting on my journey, much like Meno in Plato's dialogue. The course focused on creating simple games, following the first three chapters of **Invent Your Own Computer Games with Python**. Throughout this reflection, I will explore what I learned, the challenges I faced, how I recognized my progress, and what areas I still need to explore further.

Learning Through the Theme of the Course

The course introduced me to the basics of game programming using Python, focusing on simple projects like the **Guess the Number** game. I learned to work with essential programming concepts such as loops, conditionals, functions, and basic data structures. By building the **Guess the Number** game, I gained a practical understanding of how to apply these concepts in a structured way.

Much like Meno's exploration of virtue, I approached game programming with curiosity and an open mind. The process of breaking down game mechanics into smaller coding tasks reminded me of Socratic questioning—each function or loop was a step toward understanding the whole game. This methodical approach helped me grasp the importance of problem-solving and logical thinking in programming.

Experiencing 'Growing Pains'

One of the most challenging moments in the course was when I attempted to implement the logic for the **Guess the Number** game. Managing the game's flow—handling user input, providing feedback on guesses, and ensuring the game ended correctly—proved to be more complex than I anticipated. This challenge was a significant 'growing pain,' similar to Meno's struggle when Socrates reveals the gaps in his understanding of virtue.

The frustration I felt when my code didn't work as expected mirrored Meno's confusion. However, this struggle also pushed me to learn more. I had to revisit basic concepts and ask questions, both in class and online, to overcome these difficulties. This process of grappling with a problem, failing, and then finding a solution was a crucial part of my learning experience.

Recognizing New Learning

I knew I had learned something new when I was able to successfully code the **Guess the Number** game and see it run without errors. Watching the game function as intended—prompting the user for guesses, providing hints, and correctly ending the game—was a clear indication that I had internalized the key concepts. This realization was akin to the moment in **Meno** when Socrates' questioning leads the slave boy to recognize his own knowledge of geometry.

Another significant moment of recognition came when I was able to explain my code to a classmate who was struggling. The ability to articulate my understanding and help someone else solidified my confidence in what I had learned.

Future Learning

While I have gained a solid foundation in game programming, I am aware that there is much more to learn. The games we created were simple, and I know that more complex games require a deeper understanding of topics like object-oriented programming, game loops, and graphics handling.

I will know I have more to learn when I encounter new programming challenges that I cannot easily solve or when I struggle to extend the basic games we built in class into more complex projects. These moments will signal that it's time to delve deeper into Python, explore more advanced concepts, and continue honing my skills.

Reflecting on Plato's Meno Sessions

A unique aspect of this course was the two sessions dedicated to reading and discussing Plato's **Meno**. Initially, I was unsure how a philosophical dialogue would relate to learning game programming. However, these sessions turned out to be a positive experience. They allowed me to step back and think critically about the nature of learning and knowledge. Discussing Meno's paradox—whether it is possible to learn something entirely new—helped me reflect on my own learning process in a deeper way. It was challenging to connect the abstract ideas from **Meno** to the practical work of coding, but this challenge also broadened my perspective. I began to see learning not just as acquiring new skills but as an ongoing process of inquiry and self-discovery, much like the dialogue itself. These sessions added a philosophical dimension to the course that enriched my understanding of both programming and my own intellectual growth.

Conclusion

In conclusion, the "Game Programming with Python" course has been an enlightening experience, much like Meno's journey with Socrates. I have learned valuable programming skills, faced and overcome challenges, and recognized my own growth. However, I am also aware that this is just the beginning, and there is much more to explore in the world of game programming. This course has provided me with the tools and the mindset to continue learning and improving in the future.

References

- Plato. **Meno**. Translated by W.K.C. Guthrie. Penguin Classics, 2005.
- Sweigart, Al. **Invent Your Own Computer Games with Python**. 4th Edition, 2017. `https://inventwithpython.com/invent4thed/`