1. **What is one program you wrote that you were particularly proud of during this course? Why were you proud? Explain.**

One program that I'm particularly proud of from this course is my personal project where I worked on a solar energy calculation tool. I found this project especially fulfilling because it allowed me to delve into the fascinating world of solar energy and explore the intricate calculations involved in designing solar energy systems.

I was proud of this project for several reasons:

1. Real-world application: The project involved creating a tool that could potentially be used in real-world scenarios, such as by individuals or businesses interested in installing solar energy systems. Knowing that the program I developed could have practical applications in promoting sustainable energy usage was highly rewarding.
2. Complex calculations: Solar energy calculations involve various complex factors, including energy consumption, panel orientation, irradiation levels, and equipment specifications. Developing algorithms to accurately compute these values required a deep understanding of both the theoretical and practical aspects of solar energy systems.
3. Problem-solving: Throughout the project, I encountered numerous challenges, such as optimizing the efficiency of calculations, handling different input scenarios, and ensuring the accuracy of results. Overcoming these challenges through iterative problem-solving and debugging techniques gave me a sense of accomplishment.
4. Interdisciplinary learning: Working on this project exposed me to interdisciplinary learning, combining aspects of physics, engineering, mathematics, and programming. Integrating knowledge from these diverse fields to create a cohesive and functional software tool was intellectually stimulating.

Overall, my personal project on solar energy calculation was a source of pride because it allowed me to apply my programming skills to a meaningful and intellectually stimulating domain, while also contributing to the broader goal of promoting sustainable energy solutions.

1. **How might you use the skills you learned in this course in the future? This might include skills such as programming, problem-solving, debugging, etc.**

The skills I've learned in this course, including programming, problem-solving, and debugging, will be incredibly useful in the future. Understanding how functions work and being able to link them together allows for efficient code development and collaboration. Effective debugging techniques help identify and fix errors quickly, ensuring code reliability. These skills will be valuable in various projects, from software development to data analysis and beyond, enabling me to contribute effectively and solve complex problems efficiently.

1. **Describe an experience from this class that has given you confidence that you can learn new programming skills in the future.**

One experience from this class that has given me confidence in learning new programming skills in the future was working on my personal project. Unlike the other programs we developed in class, which didn't align with my interests and felt boring and complicated, my personal project was something I was passionate about. Developing my own program allowed me to apply programming concepts in a way that was meaningful to me. It challenged me to think critically, problem-solve independently, and dive deeper into programming logic and functions. As a result, I gained a better understanding of how to approach programming tasks and felt more confident in my ability to learn new skills in the future.