**Reflections on Technical Challenges**

During the development of the project. I faced multiple challenges that required my problem-solving skills and tested my time management skills also adaptation. This reflection report will highlight the problems I was faced with and how I came to solve them at the end.

1. **Challenge: Debugging Complex Code**

One of the significant challenges I encountered was complex coding errors and bugs. An example of this is when I tried to enter a command/ a function did not return with the output that was desired causing a significant pause to my progress I realised the issue was from a logical error which happened because I underestimated the basics and proceeded to not follow logical procedures first like checking yfinance is installed before running it.

**Approach to Resolution:**

To address this, I used print statements and a debugger to trace the flow of data step by step. By narrowing down where the data inconsistencies occurred, I was able to locate the faulty logic and correct the mistake. Although time-consuming, this method helped me understand the importance of debugging in small, manageable sections.

**Lesson learned:**

From now on I will change my approach and do my coding in small and manageable sections and fix them one so in the long term it does not cause a massive issue which would take a big chunk of my time

1. **Challenge: Time Constraints**

Balancing multiple assignments caused time constraints and management issues I underestimate some parts of the assignment but when working on them I realise its going to take more time the expected.

**Approach to Resolution:**

I implemented a basic time management strategy by creating a prioritized task list

And starting my work early during the day really because if I needed extra time I wouldn’t have to worry unlike previously where I start late and setting small goals stopped me from procrastination and was more willing to complete them early.

**Lesson Learned:**

This experience taught me the importance of effective time management, especially when juggling multiple responsibilities. I now understand the value of setting realistic goals and focusing on key deliverables first to meet deadlines without sacrificing quality

1. **Challenge: Learning New Technologies**

One of the major hurdles was learning new technologies, particularly the integration of Flask with MySQL databases. This was necessary to handle user authorisation,but I struggled to connect them at first and retrieve the database.

**Approach to Resolution:**

To resolve this issue, I referred to the official documentation for both Flask and MySQL. Additionally, I watched tutorials and engaged in online forums to better understand how to implement these technologies together. After gaining a clearer understanding, I successfully integrated the two systems, allowing for secure user login and data handling.

**Lesson learned:**

This challenge made me realise that reaching out for help is good rather than trying to figure out by myself for hours with not identifying why it's not working in the first place

Leveraging tutorials from YouTube or professors will really help in using my time more effectively and be less stressed.

**Conclusion:**

Throughout the project, I encountered several technical challenges related to debugging, time management, and learning modern technologies. By applying logical problem-solving strategies and using available resources, I was able to overcome these challenges. Moving forward, I will continue to work on the things I learned this year and try to refine them and prefect even more