# Reflection on Problem Solution

## 1. Was the Problem Suitably Challenging?

## The problem of automating tracking for cloud resource usage was suitably challenging for my skill level. The solution contained a number of layers in complexity: understanding and working with APIs of clouds, configuration of authentication, and threshold logic management that would trigger alerts. Most challenging was how to efficiently handle API responses and having alerting work seamlessly whenever some threshold was exceeded. Of course, all this needed extensive testing to be done at the edge cases-sudden spikes in resource usage, network issues that may affect API response times, and so on.

## 2. How Did You Test the Program?

## In testing the program, I designed test cases which would simulate conditions under which such resource usage scenarios would arise. I set low threshold values for temporary periods in order to trigger alerts and checked whether their transmission was correct. This was another aspect of testing the threshold logic, and indeed, it worked just right. Secondly, I ensured that the program could handle fluctuating usage data without any kind of errors. I also conducted tests for stress, so that the program would sustain many requests continuously without any issues arising due to performance. In this regard, I used typical and extreme scenarios, so I did a bit more with increased confidence to undertake a real-world application.

## 3. What Resources Did You Use?

## The main sources that I depended on for the successful completion of this project are as follows:

## I looked into the boto3 library documentation, which had clear explanations of how one could access and manage AWS resources to carry out the task of gathering resource usage data. It included what needed to be done in relation to the called aim, thus helping carry out the said duty.

## Python tutorials on API requests: Tutorials about the interaction of API using the requests library were looked into since they provided guidelines on how to set up API calls for resource monitoring.

## Cloud Computing Forums: Different online forums and discussions were carried out on various platforms, such as Stack Overflow, to understand the prevalent problems with cloud APIs and their authentication.

## These helped in the solution of some problems related to either coding or best practice implementation.