

Name: **Muhammad Zawahir**

Roll No.: **PIAIC227599**

Batch: **57**

Course Name: **Certified Cloud Applied Generative AI Engineer**

1. Programming Languages Overview:

- **Research and briefly describe what a programming language is.**
- Programming languages are used to give information to the computer on how to perform specific tasks. The computer's processor only interprets binary language and coding in binary can be a complex task, so the programming languages are really close to our simple English and they convert the set of instructions to binary and those sets of instructions are then sent to the CPU.
- **List down three programming languages and provide a one-sentence description of each, focusing on what they are commonly used for.**
- **Python:** Python is a widely used programming language which is mainly used for data analysis, data science and machine learning.
- **JavaScript:** JavaScript is used for developing webpages, it is the basic tool for web development and is supported by all browsers.
- **TypeScript:** Typescript is a superset of Javascript. It is basically Javascript with different syntax. It offers all the features of Javascript with some additional perks.

2. Exploring Node.js:

- **Explain what Node.js is in simple terms.**
- Node.js is a platform that allows developers to run JavaScript code outside of a web browser.
- **Mention one benefit of using Node.js for web development.**
- One benefit of using Node.js for web development is its ability to multitask, making it well-suited for building applications.

3. Why Use Visual Studio Code?

- **Describe what Visual Studio Code (VS Code) is.**
- Visual Studio Code is a free source-code editor developed by Microsoft.
- **List one feature of VS Code that makes it helpful for coding.**
- VS Code offers features such as debug console.