



**Assignment Code: DA-AG-003**

# Practical Python – Error Handling, Logging, and Data Manipulation| Assignment

**Instructions:** Carefully read each question. Use Google Docs, Microsoft Word, or a similar tool to create a document where you type out each question along with its answer. Save the document as a PDF, and then upload it to the LMS. Please do not zip or archive the files before uploading them. Each question carries 20 marks.

**Total Marks:** 200

**Question 1 :** What is the difference between multithreading and multiprocessing?

**Answer:**

**Question 2:** What are the challenges associated with memory management in Python?

**Answer:**



**Question 3:** Write a Python program that logs an error message to a log file when a division by zero exception occurs.

**Answer:**

**Question 4:** Write a Python program that reads from one file and writes its content to another file.

**Answer:**



**Question 5:** Write a program that handles both `IndexError` and `KeyError` using a try-except block.

**Answer:**

**Question 6:** What are the differences between NumPy arrays and Python lists?

**Answer:**

**Question 7:** Explain the difference between `apply()` and `map()` in Pandas.

**Answer:**



**Question 8:** Create a histogram using Seaborn to visualize a distribution.

**Answer:**

**Question 9:** Use Pandas to load a CSV file and display its first 5 rows.

**Answer:**

**Question 10:** Calculate the correlation matrix using Seaborn and visualize it with a heatmap.

**Answer:**

