Healthcare Data Analysis Using Python

1️⃣ Variable Assignment (Storing Patient Data)

📌 Activity: Create and store patient details such as name, age, and BMI using Python variables.

2️⃣ Arithmetic Operations (Calculating BMI Category)

📌 Activity: Write a program to determine the BMI category of a patient based on their BMI value.

3️⃣ NumPy Basics (Analyzing Patient Vital Signs)

📌 Activity: Store a week's heart rate readings in a NumPy array and calculate the average, highest, and lowest heart rate.

4️⃣ Pandas Basics (Creating a Patient Record DataFrame)

📌 Activity: Create a Pandas DataFrame to store patient details, including name, age, and cholesterol levels.

5️⃣ Data Manipulation with Pandas (Filtering High-Risk Patients)

📌 Activity: Filter patients who have cholesterol levels above a certain threshold.

6️⃣ Sorting Patients by Health Risk

📌 Activity: Sort patients based on their BMI from highest to lowest.

7️⃣ Adding a New Column (Risk Level Calculation)

📌 Activity: Add a column to classify patients as "Low", "Medium", or "High" risk based on BMI and cholesterol levels.

8️⃣ Saving Processed Data

📌 Activity: Export the cleaned patient data as a CSV file for further medical analysis.