## Project: Fitness Tracker Data Analysis

### 1. ****Project Setup****

* Import necessary libraries (pandas, matplotlib, seaborn, etc.)
* Load the dataset and inspect basic info (shape, columns, missing values)
* Convert data types as needed (e.g., dates)

### 2. ****Data Exploration & Summary****

* Generate descriptive statistics (mean, min, max, std)
* Visualize distributions of key variables (steps, calories, active minutes)
* Identify any missing or outlier data points

**3. Activity Patterns Analysis**

* Analyze daily steps and active minutes trends
* Compare activity levels across users
* Explore correlations between steps, active minutes, and calories burned

**4. Time Series Analysis**

* Convert Date column to datetime if not done
* Aggregate data by day/week/month to see overall trends
* Visualize activity over time (line charts)

**5. User Segmentation (Optional)**

* Group users by activity levels (e.g., sedentary, lightly active, very active)
* Analyze differences in calories burned and distances covered between groups

**6. Key Insights & Recommendations**

* Summarize main findings about user activity and health metrics
* Suggest possible improvements or target goals for users

**7. Project Presentation**

* Prepare visualizations for presentation (charts, tables)
* Write a concise summary/report with insights and conclusions