**Storyline Task: Analyzing Obesity Dataset**

Objective:

In this task, your goal is to analyze the factors associated with obesity using the dataset provided. You will load, inspect, clean the data if necessary, visualize the distributions and relationships between variables, and finally apply simple and multiple linear regression to build models that help explain obesity levels.

**Part 1: Data Loading and Inspection**

**Task:**

Load the Obesity Dataset from Kaggle into a DataFrame using pandas.

* Inspect the structure of the data:
* How many rows and columns are in the dataset?
* What are the data types of the columns?
* Are there any missing values? If so, how many and in which columns?

**Part 2: Data Cleaning (if necessary)**

**Task:**

Handle missing values (if any were found in Part 1):

* If there are missing values, decide whether to remove them or fill them with some statistical value (e.g., mean, median).
* Check for duplicate rows and remove them if necessary.
* Ensure all numeric columns are in the correct data type for further analysis.

**Part 3: Data Visualization**

**Task:**

* Visualize the distribution of BMI (Body Mass Index) in the dataset using a histogram.
* Create box plots for variables like Height, Weight, and Age to explore their distributions and potential outliers.
* Use scatterplots to visualize the relationships between BMI and other variables such as Weight, Age, and Calorie Intake.

**Part 4: Correlation Analysis**

**Task:**

* Calculate the correlation matrix for the numeric variables in the dataset.
* Plot a heatmap of the correlations to visually identify the strongest relationships between variables.

**Part 5: Simple Linear Regression**

**Task:**

* Perform a simple linear regression to predict BMI using Weight as the predictor.
* Interpret the regression results: What is the relationship between Weight and BMI? How much of the variance in BMI is explained by Weight?

**Part 6: Multiple Linear Regression**

**Task:**

* Perform a multiple linear regression to predict BMI using Weight, Age, and Calorie Intake.
* Interpret the regression results: Which predictors are statistically significant? How much of the variance in BMI is explained by these predictors?

**Part 7: Conclusion**

**Task:**

Summarize the findings:

* Which factors have the strongest relationships with obesity (BMI)?
* How well do the simple and multiple linear regression models explain the variance in BMI?
* What practical recommendations can you make based on the analysis?