**INTERPRETATION**

**2311089**

1. **Numerical Columns**:

* If skewness is low (< 1): Filled with the mean.
* If skewness is high (≥ 1): Filled with the median.

1. **Categorical Columns**: Missing values were replaced with the mode.

**3. ANOVA:**

1. **Status** and **Country** are significant predictors of life expectancy.

**Correlation:**

* **Positive Correlations**:
  + Schooling (0.75)
  + Income composition of resources (0.72)
  + BMI (0.57)
* **Negative Correlations**:
  + Adult Mortality (-0.70)
  + HIV/AIDS (-0.56)

**4. Regression Models:**

**Simple Linear Regression:**

* Strongest predictor: **Schooling** (correlation: 0.75)
* Equation:  
  Life Expectancy = 44.22 + (2.08 × Schooling)
* **Model Performance**:
  + MSE: 39.37
  + R²: 0.55 (explains 55% of the variance in life expectancy).

**3. Multiple Linear Regression:**

1. **Features Used**:
   * Numerical: Schooling, Income composition of resources, BMI, Adult Mortality, HIV/AIDS, GDP.
   * Categorical: Dummy variables for Country and Status.
2. Equation (simplified):  
   Life Expectancy = 66.94 + (0.60 × Schooling) + (2.72 × Income composition of resources) + (-0.44 × HIV/AIDS) + other factors.
3. **Model Performance**:
   * MSE: 4.74
   * R²: 0.95 (explains 95% of the variance in life expectancy).