**Interpretations for the Analysis of Life expectancy**

**Simple linear regression:**

* In this analysis the relationship between the independent variable **‘Alcohol’** and the dependent variable **‘Life expectancy’**.
* 80% of the data is used for training and 20% of data is used for testing using **train – test split.**
* When there is no consumption of alcohol, then the expected life would be **65 years**. This is calculated using the intercept value.
* The r2\_ score is 0.18 which means thatonly **18%** of the variation in life expectancy is attributed to alcohol consumption and the remaining 82% is attributed to other variables.

**Multiple linear regression:**

* In this analysis the relationship between the independent variables **‘alcohol consumption, BMI, Population, GDP, Some diseases’** and the dependent variable **‘Life expectancy’**.
* The Country and status variables are object type. Hence it is converted into int type using **‘Label encoder’**.
* 80% of the data is used for training and 20% of data is used for testing using **train – test split.**
* When there is no relation on any of the independent variables, then the life expectancy would be **281 years**. This is calculated using the intercept value.
* The r2\_ score is 0.8166 which means that **82%** of the variation in Life expectancy is attributed to alcohol consumption, BMI, Population, GDP, some diseases and only the remaining 18% is attributed to other factors not included in the model.
* The mean squared error is **13 years** which is the prediction error in the model.