# **Assignment-based Subjective Questions:**

1. **From your analysis of the categorical variables from the dataset, what could you infer about their effect on the dependent variable?**

Ans.:

# General Subjective Question:

1. **Explain the linear regression algorithm in detail.**

Ans.: Linear Regression is a type of supervised machine algorithm. Linear regression model works when the dependent variable is linearly correlated to one or more of the independent variables. Linear regression model can be simple(target variable depends on one independent variable) or multiple(target variable depends on more than one independent variable). The main objective of the model is to fit a straight line that is best fit for the data. However, certain assumptions are made when working with linear regression model. They are:

* The dependent/target variable is linearly correlated with the independent variable/s
* The independent variables are not correlated with each other, i.e. no multicollinearity
* The variance of the errors is constant, i.e. homoscedasticity across all independent variables

1. **Explain the Anscombe’s quartet in detail.**

Ans.: