1.Ask an important question you want answered?

i. What is the relationship between the Cost\_of\_Living\_Index (independent variable) and the Happiness\_Score (dependent variable) in regions?

ii. How does the availability of green space (Green\_Space\_Area) correlate with air quality (Air\_Quality\_Index) in the studied area?

2.Answer why this question(s) is/are important to you?

Cost of Living and Happiness Score Relationship: Knowing the human relationship kind out of the Cost\_of\_Living\_Index and the Happiness\_Score in regions with various economic. It serves for measuring the availability of common amenities (such as rent, doors, water, etc.) that influence the living conditions and mood of the members of society. This knowledge shall be used for resolve the problem of social inequality and further improve life standards of all community members irrespective of economic status.

Green Space and Air Quality Correlation: Answering the query on whether Green\_Space\_Area and Air\_Quality\_Index are connected is necessary for environmental. Green platforms are among the directions in which the breathing becomes pure again as they suck out pollutants physically and improve air quality. It has great significance for in making decisions on the preservation and expansion of green areas to support the healthier living conditions for negative reasons pollution can affect the health of a person.

3.Find and collect data (need one dependent variable and more than 3 independent variables)?

Dependent variable: Happiness\_Score

Independent variables: Decibel\_Level, Traffic\_Density, Green\_Space\_Area, Air\_Quality\_Index, Cost\_of\_Living\_Index, Healthcare\_Index

The Happiness Score is likely to be influenced by factors such as noise level (Decibel\_Level), traffic density (Traffic\_Density), availability of green spaces (Green\_Space\_Area), air quality (Air\_Quality\_Index), cost of living (Cost\_of\_Living\_Index), and healthcare quality (Healthcare\_Index). Therefore, the Happiness Score is the dependent variable, while the rest are independent variables.

4.Describe your data ?

Decibel\_Level (Integer): It could be, in fact, that the referred factor is the indicator of noise level of some specific territory. Decibel level assignment is the most widespread world-wide; this normally means the louder atmosphere.

Traffic\_Density (Character): This variable apparently is about the traffic on the block in a given area

Green\_Space\_Area (integer): The alternating green value evidently contains information on the degree of green space or vegetation cover in the said area. The concept of green area could be park, garden, or any natural area availability.

Air\_Quality\_Index (Integer): Likely, the dispersion of different types of gases is monitored through the analysis of atmospheric conditions in a selected area. Air quality index (AQI) is a commonly used standardize parameter which conveys the severity of air pollution and the consequent health issues.

Happiness\_Score (Num): That variation just could be an index of the subjectively perceiving emotional state or happiness of a particular area.

Cost\_of\_Living\_Index (Integer): This variable is most likely to be interpreted as the expense area of a particular locality. It generally higher level considers the issues of a place to live, food, utilities, car and trips, emergency care.

Healthcare\_Index (Integer): The inconstant factor could be both the quality of healthcare or the ease of access in the specified settings. The main components of a healthcare index may include the number of healthcare facilities operating, healthcare professionals available, medical technology in use and the overall quality of patient outcomes.

In summary, the Correlation coefficient of 0.4595364 indicates a moderate positive correlation between Cost\_of\_Living\_Index and Happiness\_Score, meaning they tend to move together in the same direction to a moderate degree.

A correlation coefficient of -0.4092952 indicates a moderate negative correlation between Green\_Space\_Area and Air\_Quality\_Index.