1. **Find all records where the weather was exactly clear.**

Clear\_Weather\_records = data[data['Weather'] == 'Clear']

Clear\_Weather\_records

1. **Find the number of times the wind speed was exactly 4 km/hr.**

Weather\_data[Weather\_data['Wind Speed\_km/h']==4]

1. **Check if there are any NULL values present in the dataset**.

null\_values = data.isnull().sum()

null\_values

1. **Rename the column "Weather" to "Weather\_Condition."**

Weather\_data.rename(columns={'Weather': 'Weather Condition'}, inplace=True)

Weather\_data.rename

1. **What is the mean visibility of the dataset?**

mean\_Visibility\_km = data['Visibility\_km'].mean()

mean\_Visibility\_km

1. **Find the number of records where the wind speed is greater than 24 km/hr and visibility is equal to 25 km.**

Weather\_data[(Weather\_data['Wind Speed\_km/h']>24)&(Weather\_data['Visibility\_km']==25)]

1. **What is the mean value of each column for each weather condition?**

numeric\_Weather\_data = Weather\_data.select\_dtypes(include='number')

Weather\_data['Weather\_Condition'] = Weather\_data['Weather\_Condition'].astype(str)

numeric\_Weather\_data.join(Weather\_data['Weather\_Condition']).groupby('Weather\_Condition').mean()

1. **Find all instances where the weather is clear and the relative humidity is greater than 50, or visibility is above 40.**

Weather\_data[(Weather\_data['Weather\_Condition']=='Clear')&(Weather\_data['Rel Hum\_%']>50)&(Weather\_data['Visibility\_km']>40)]

Weather\_data

1. **Find the number of weather conditions that include snow.**

Weather\_data[Weather\_data['Weather\_Condition']=='Snow']