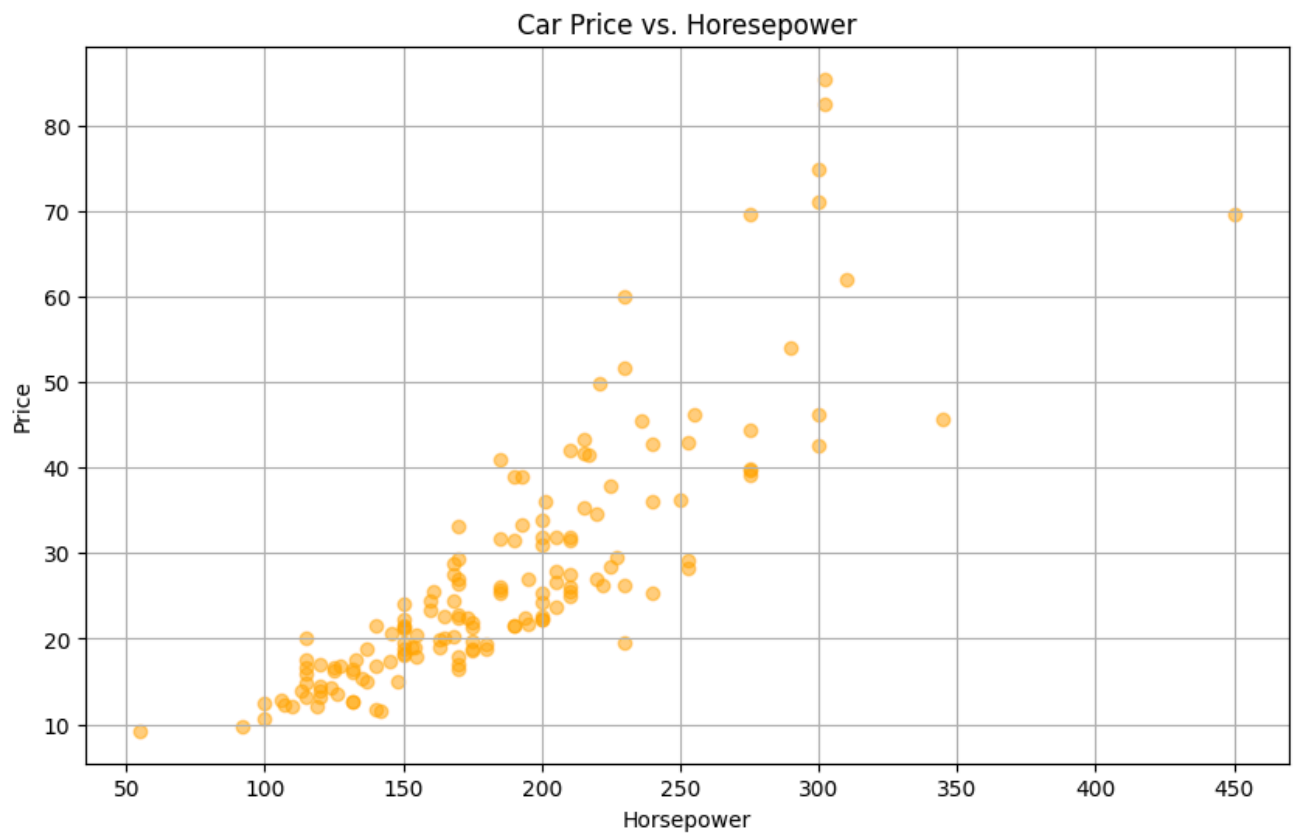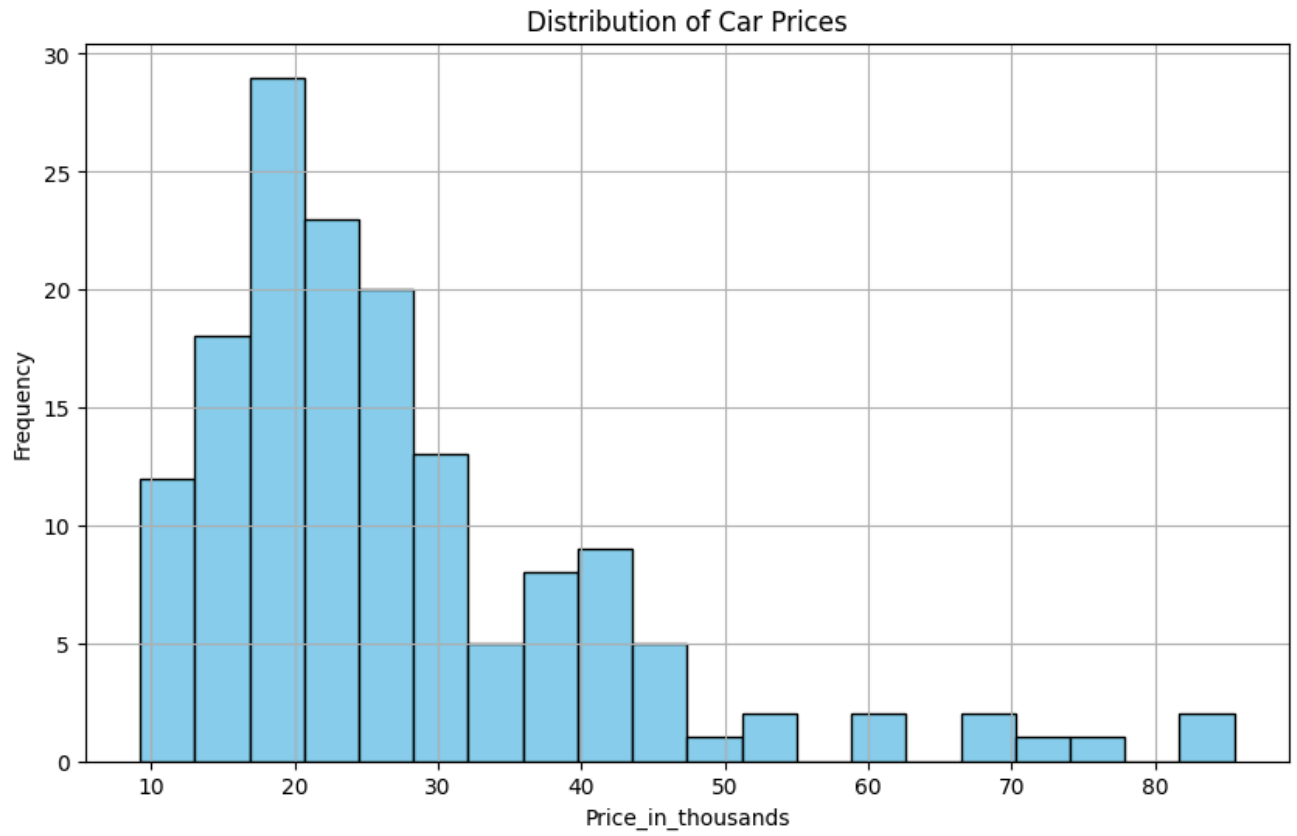Program 9 : write an intermediate programming exercise with python code that demonstrates fundamentals of data visualization using the Matplotlib library. Create histogram and scatterplot. use Car.csv dataset from kaggle.

```python
import pandas as pd
import matplotlib.pyplot as plt
# Step 1: Load the dataset
data = pd.read_csv('Car.csv')
# Step 2: Clean the data
data.dropna(inplace=True)  # Remove rows with missing values
data = data[data['Price_in_thousands'] < 50000]  # Remove outliers
# Step 3: Visualize the distribution of car prices using a histogram
plt.figure(figsize=(10, 6))
plt.hist(data['Price_in_thousands'], bins=20, color='skyblue', edgecolor='black')
plt.title('Distribution of Car Prices')
plt.xlabel('Price_in_thousands')
plt.ylabel('Frequency')
plt.grid(True)
plt.show()
# Step 4: Explore the relationship between car price and horsepower using a scatter plot
plt.figure(figsize=(10, 6))
plt.scatter(data['Horsepower'], data['Price_in_thousands'], color='orange', alpha=0.5)
plt.title('Car Price vs. Horesepower')
plt.xlabel('Horsepower')
plt.ylabel('Price')
plt.grid(True)
plt.show()
```

Distribution of Car Prices

Car Price vs. Horesepower

Conclusion: This intermediate programming exercise utilizes the Matplotlib library to visualize data from the Cars.csv dataset. Firstly, the dataset is loaded and cleaned by removing missing values and outliers. Next, a histogram is created to display the distribution of car prices, revealing the frequency of prices within different ranges. Subsequently, a scatter plot is generated to explore the relationship between car prices and horsepower, providing insights into how horsepower influences car prices. Through these visualizations, we gain a better understanding of the dataset's characteristics and potential correlations between variables,