Lab 2: Scatter plot Histogram for auto mpg and iris dataset

Draw scatter plot for

1: mpg vs cylnders (Scatter plot)

2: histogram for "mpg"

In [1]:
```
data_url = "https://archive.ics.uci.edu/ml/machine-learning-databases/auto-
mpg/auto-mpg.data"
column_names = ["mpg", "cylinders", "displacement", "horsepower", "weight",
"acceleration", "model year", "origin", "car name"]
```

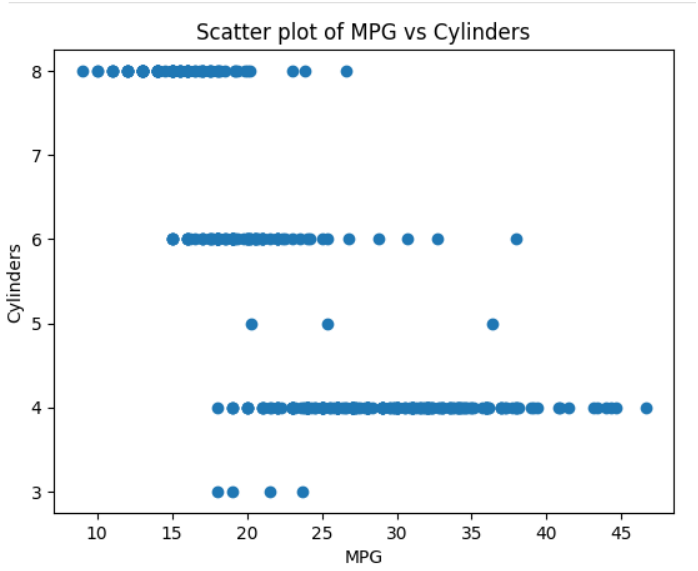
In [2]:
```
importfrom matplotlib  pyplot as plt
import pandas as pd
```

In [3]:
```
df = pd.read_csv(data_url, names=column_names, delim_whitespace=True,
na_values="?")
df.head(10)
```

	mpg	cylinders	displacement	horsepower	weight	acceleration	model year	origin	car name
0	18.0	8	307.0	130.0	3504.0	12.0	70	1	chevrolet chevelle malibu
1	15.0	8	350.0	165.0	3693.0	11.5	70	1	buick skylark 320
2	18.0	8	318.0	150.0	3436.0	11.0	70	1	plymouth satellite
3	16.0	8	304.0	150.0	3433.0	12.0	70	1	amc rebel sst
4	17.0	8	302.0	140.0	3449.0	10.5	70	1	ford torino
5	15.0	8	429.0	198.0	4341.0	10.0	70	1	ford galaxie 500
6	14.0	8	454.0	220.0	4354.0	9.0	70	1	chevrolet impala
7	14.0	8	440.0	215.0	4312.0	8.5	70	1	plymouth fury iii
8	14.0	8	455.0	225.0	4425.0	10.0	70	1	pontiac catalina
9	15.0	8	390.0	190.0	3850.0	8.5	70	1	amc ambassador dpl

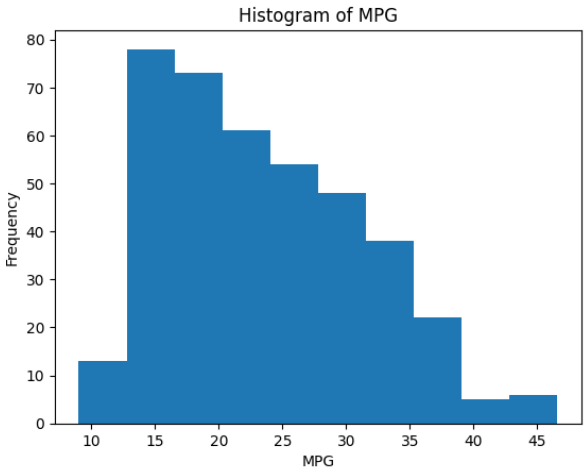
In [4]:
```
plt.scatter(df["mpg"], df["cylinders"])
plt.xlabel("MPG")
plt.ylabel("Cylinders")
plt.title("Scatter plot of MPG vs Cylinders")
```

```
plt.show()
```



In [5]:

```
plt.hist(df["mpg"])
plt.xlabel("MPG")
plt.ylabel("Frequency")
plt.title("Histogram of MPG")
plt.show()
```



Irise data set plot scatter plot between petal width vs sepal width

In [6]:

```
data_url_iris = "https://archive.ics.uci.edu/ml/machine-learning-
databases/iris/iris.data"
```

In [7]:

```
column_names_iris = ["sepal_length", "sepal_width", "petal_length",
"petal_width", "class"]
```

In [8]:
```
df_iris = pd.read_csv(data_url_iris, names = column_names_iris,delimiter=","
,na_values="?")
df_iris.head(10)
```

	sepal_length	sepal_width	petal_length	petal_width	class
0	5.1	3.5	1.4	0.2	Iris-setosa
1	4.9	3.0	1.4	0.2	Iris-setosa
2	4.7	3.2	1.3	0.2	Iris-setosa
3	4.6	3.1	1.5	0.2	Iris-setosa
4	5.0	3.6	1.4	0.2	Iris-setosa
5	5.4	3.9	1.7	0.4	Iris-setosa
6	4.6	3.4	1.4	0.3	Iris-setosa
7	5.0	3.4	1.5	0.2	Iris-setosa
8	4.4	2.9	1.4	0.2	Iris-setosa
9	4.9	3.1	1.5	0.1	Iris-setosa

In [9]:
```
plt.scatter(df_iris["petal_width"], df_iris["sepal_width"])
plt.xlabel("petal width")
plt.ylabel("sepal width")
plt.title("Scatter plot of petal width vs sepal width")
plt.show()
```