In [61]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn import linear_model
```

In [62]:
```
df = pd.read_csv("C:\\Users\\Jai Mataji\\Desktop\\Sait\\415 Statical Analysis of Da
```

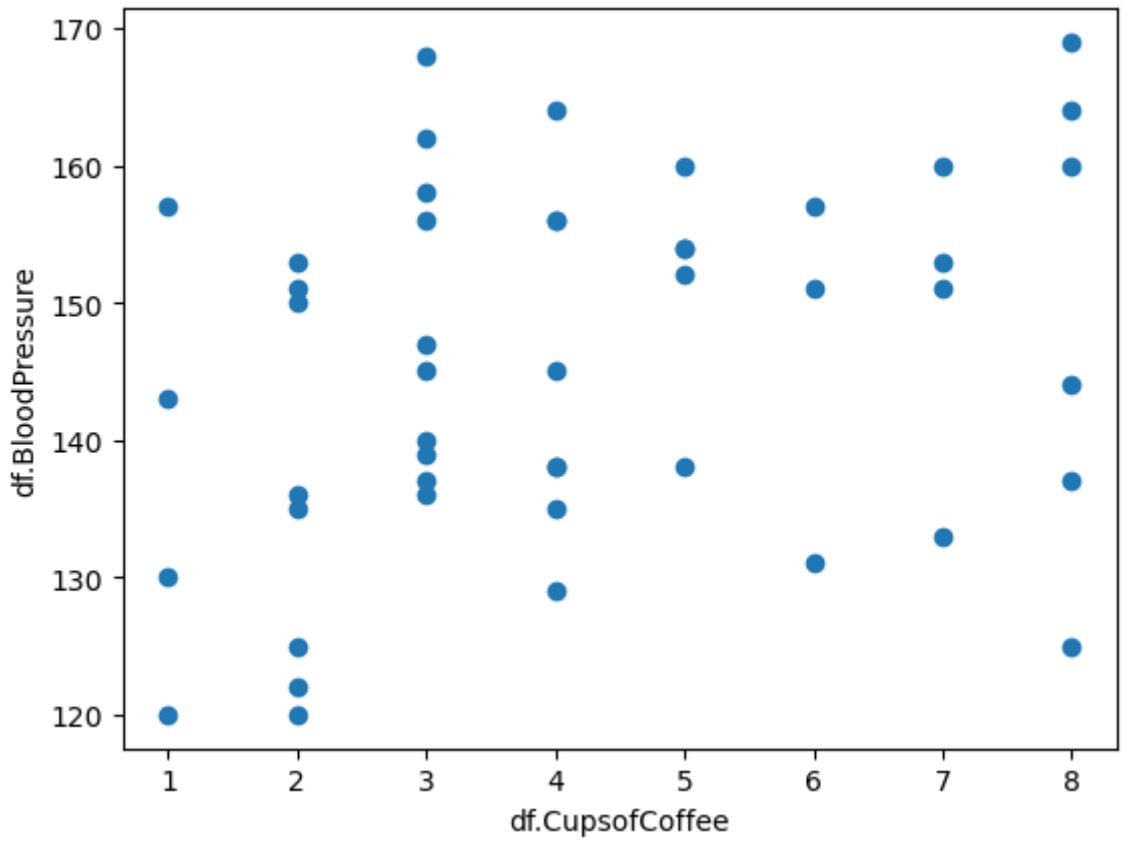
In [63]:
```
df.head(5)
```

Out[63]:

	CupsofCoffee	BloodPressure
0	3	145
1	4	138
2	5	154
3	8	164
4	5	154

In [24]:
```
%matplotlib inline
plt.xlabel('df.CupsofCoffee')
plt.ylabel('df.BloodPressure')
plt.scatter(df.CupsofCoffee, df.BloodPressure)
```

Out[24]:
```
<matplotlib.collections.PathCollection at 0x18d22dcee30>
```



In [33]:
```
reg = linear_model.LinearRegression()

reg.fit(df[['CupsofCoffee']],df.BloodPressure)
```

Out[33]:
```
▾ LinearRegression
LinearRegression()
```

In [60]:
```
reg.predict(df[['CupsofCoffee']])
```

Out[60]:
```
array([143.43661581, 145.1742025 , 146.91178918, 152.12454924,
       146.91178918, 141.69902913, 143.43661581, 146.91178918,
       141.69902913, 143.43661581, 150.38696255, 139.96144244,
       141.69902913, 148.64937587, 145.1742025 , 145.1742025 ,
       146.91178918, 143.43661581, 139.96144244, 141.69902913,
       141.69902913, 143.43661581, 150.38696255, 141.69902913,
       143.43661581, 143.43661581, 141.69902913, 152.12454924,
       139.96144244, 145.1742025 , 152.12454924, 143.43661581,
       148.64937587, 143.43661581, 145.1742025 , 146.91178918,
       141.69902913, 145.1742025 , 143.43661581, 139.96144244,
       150.38696255, 145.1742025 , 152.12454924, 148.64937587,
       152.12454924, 152.12454924, 150.38696255, 145.1742025 ])
```

In [44]:
```
reg.coef_
```

Out[44]:
```
array([1.73758669])
```

In [45]:
```
reg.intercept_
```

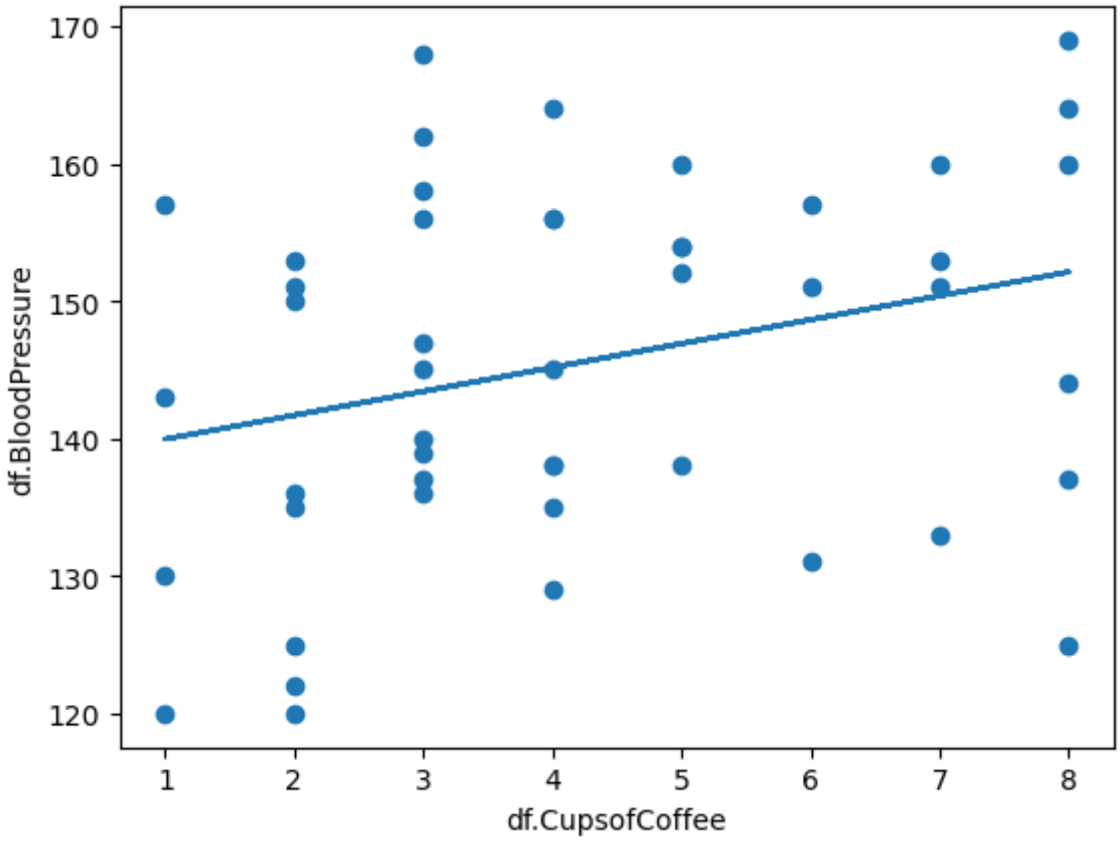
Out[45]:
```
138.2238557558946
```

In [46]:
```
Y=m*X+b
1.73758669*9+138.2238557558946
```

Out[46]:
```
153.8621359658946
```

In [58]:
```
%matplotlib inline
plt.xlabel('df.CupsofCoffee')
plt.ylabel('df.BloodPressure')
plt.scatter(df.CupsofCoffee, df.BloodPressure)
plt.plot(df.CupsofCoffee,reg.predict(df[['CupsofCoffee']]))
```

Out[58]:
```
[<matplotlib.lines.Line2D at 0x18d27e88580>]
```


170
160
150
140
130
120
df.BloodPressure
1
2
3
4
5
6
7
8
df.CupsofCoffee

In [ ]: