```python
In [1]: import pandas as pd
        a=pd.read_csv("C:/Users/admin/Desktop/dataset/ins.csv")
```

```python
In [2]: a.head()
```
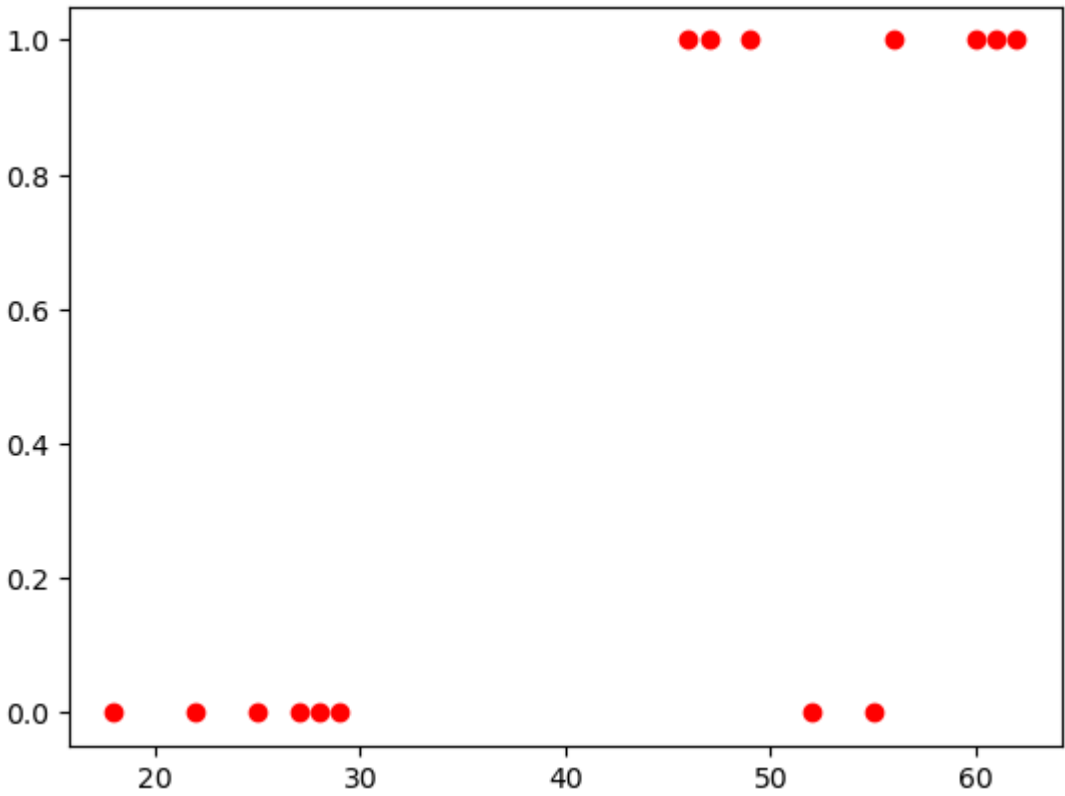
Out[2]:

	Age	Have_Insurance
0	22	0
1	25	0
2	47	1
3	52	0
4	46	1

```python
In [3]: a.isna().sum()
```

```
Out[3]: Age               0
        Have_Insurance    0
        dtype: int64
```

```python
In [4]: import pandas as pd
        from matplotlib import pyplot as plt
        a=pd.read_csv("C:/Users/admin/Desktop/dataset/ins.csv")
        a.head()
        plt.scatter(a.Age,a.Have_Insurance,color="red")
```

```
Out[4]: <matplotlib.collections.PathCollection at 0x1ece5d27550>
```



```python
In [5]: from sklearn.model_selection import train_test_split
        xtrain,xtest,ytrain,ytest=train_test_split(a[["Age"]],a.Have_Insurance,test_size=0.2)
```

```python
In [6]: from sklearn.linear_model import LogisticRegression
        lr=LogisticRegression()
        model=lr.fit(xtrain,ytrain)
```

```python
In [7]: model
```

```
Out[7]:  ▼ LogisticRegression
        LogisticRegression()
```

```python
In [8]: model.intercept_
```

```
Out[8]: array([-6.01037223])
```

```python
In [9]: model.coef_
```

```
Out[9]: array([[0.13282468]])
```

```python
In [13]: import math
         def sigmoid(x):
             return 1/(1 + math.exp(-x))
         def prediction_function(Age):
             z=0.042 * Age - 1.53
             y=sigmoid(z)
             return y
```

```python
In [22]: age=int(input("enter age:"))
         take=prediction_function(age)
         if (take >= 0.7):
             print("Person will buy Insurance..")
         else :
```

```
        print("Don't take insurance")
```

Person will buy Insurance..