In [23]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

In [24]:
```
df = pd.read_csv('C:/Users/prash/OneDrive/Desktop/Machine+Learning+A-Z+(Codes+and+Datasets)/Machine Learning A-Z (Co
x = df.iloc[:,:-1].values
y = df.iloc[:,1].values
```

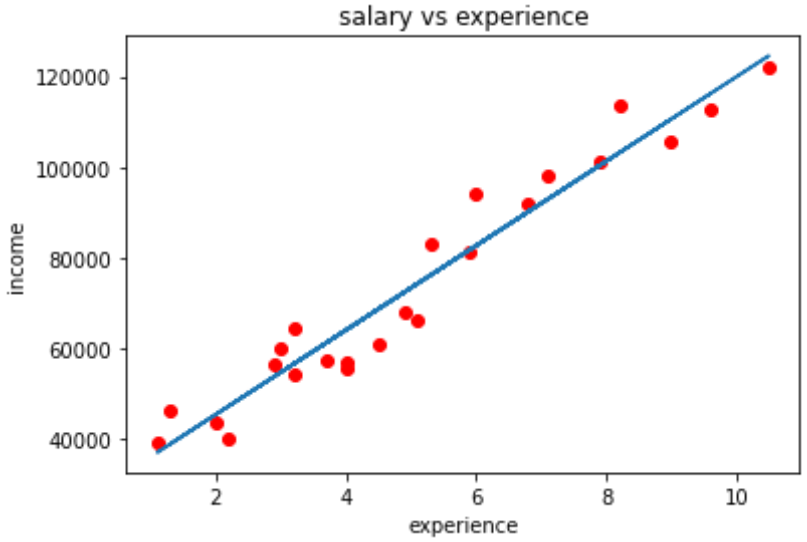
In [25]:
```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size = 0.2,random_state = 0)
```

In [26]:
```
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()    #this code will build the linear regression model
regressor.fit(x_train,y_train)    #this fit method ie used to train the model with the training  data
```

Out[26]:
```
LinearRegression()
```

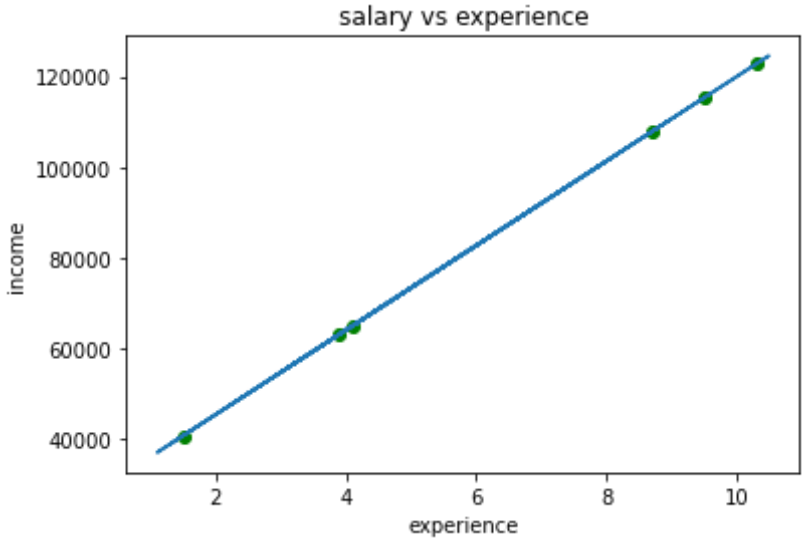
In [27]:
```
y_test = regressor.predict(x_test)
```

In [28]:
```
plt.scatter(x_train,y_train,color='red')
plt.plot(x_train,regressor.predict(x_train))
plt.title('salary vs experience')
plt.xlabel('experience')
plt.ylabel('income')
plt.show()
```



In [29]:

```
plt.scatter(x_test,y_test,color='green')
plt.plot(x_train,regressor.predict(x_train))
plt.title('salary vs experience')
plt.xlabel('experience')
plt.ylabel('income')
plt.show()
```



In [30]:
```
y_test
```

Out[30]:
```
array([ 40748.96184072, 122699.62295594,  64961.65717022,  63099.14214487,
       115249.56285456, 107799.50275317])
```

In [31]:
```
x_test
```

Out[31]:
```
array([[ 1.5],
       [10.3],
       [ 4.1],
       [ 3.9],
       [ 9.5],
       [ 8.7]])
```

In [32]:
```
print(regressor.predict([[12]])) #prdeict method always expect a 2D array thats why we put two square bracket.
```

```
[138531.00067138]
```

In [33]:
```
print(regressor.intercept_)
```

```
26780.099150628186
```

In [34]:
```
print(regressor.coef_)
```

```
[9312.57512673]
```

In [ ]:
```

```