

Importing Libraries

In [1]:

```
import pandas as pd
import numpy as np
```

Load Dataset from Device

In [2]:

```
from google.colab import files
uploaded = files.upload()
```

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Saving data.csv to data.csv

Load Dataset

In [8]:

```
dataset = pd.read_csv('data.csv')
```

In [9]:

```
print(dataset.shape)
print(dataset.head(5))
```

(94, 2)

	x	y
0	168.181818	160.840244
1	187.878788	159.413657
2	207.575758	157.136809
3	227.272727	159.357847
4	246.969697	157.542862

Segregate Dataset into Input - X & Output - Y

In [10]:

```
X = dataset.iloc[:, :-1].values
X
```

Out[10]:

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[1724.24242424] ,
[1743.93939394] ,
[1763.63636364] ,
[1783.33333333] ,
[1803.03030303] ,
[1822.72727273] ,
[1842.42424242] ,
[1862.12121212] ,
[1881.81818182] ,
[1901.51515152] ,

```
[1921.21212121],  
[1940.90909091],  
[1960.60606061],  
[1980.3030303 ],  
[2000.         ]])
```

In [11]:

```
Y = dataset.iloc[:, -1].values  
Y
```

Out[11]:

```
array([160.84024381, 159.41365734, 157.1368088 , 159.35784736,  
       157.54286158, 157.73520716, 159.34756091, 155.23404557,  
       155.80774009, 158.3299704 , 157.62585291, 160.47697951,  
       158.22940639, 157.41781684, 163.37069148, 160.18481104,  
       160.96838974, 158.18080666, 160.13850728, 161.6460876 ,  
       159.31922497, 162.56957785, 160.81387414, 161.62873371,  
       161.20567768, 166.31061698, 162.77603585, 160.88457814,  
       164.84205952, 160.95225209, 164.00863628, 159.86853854,  
       161.32847639, 164.57554065, 165.85572104, 164.91849414,  
       164.54143071, 164.36748958, 162.20962269, 163.92394795,  
       164.63932852, 167.87182021, 166.64178203, 162.62543484,  
       166.99665279, 165.77528998, 165.38858024, 168.16274652,  
       169.19836268, 169.19589357, 165.85186798, 167.10884798,  
       168.58676929, 170.07230238, 167.35983334, 168.14383356,  
       166.49945126, 166.51667766, 170.73111225, 172.01551036,  
       169.35597976, 171.70403549, 170.61721144, 168.80066958,  
       171.01067   , 173.56092162, 170.6101661 , 174.00807519,  
       165.83626737, 172.91653228, 171.64379111, 171.06865197,  
       172.04715792, 168.08546823, 171.81823198, 173.1687706 ,  
       175.60730324, 171.81194441, 171.42846734, 172.23891016,  
       175.27019817, 174.29386586, 172.77381293, 175.0568379 ,  
       174.42142783, 176.36153241, 173.21710593, 174.16285752,  
       174.23093521, 172.28509132, 176.00133146, 176.12817115,  
       175.81325722, 175.53082573])
```

Splitting Dataset into Testing our Model

In [13]:

```
from sklearn.model_selection import train_test_split  
x_train, x_test, y_train, y_test = train_test_split(X, Y, test_size = 0.20, random_state  
= 0)
```

Training Dataset using Support Vector Regression

In [15]:

```
from sklearn.svm import SVR  
model = SVR()  
model.fit(x_train, y_train)
```

Out[15]:

```
SVR(C=1.0, cache_size=200, coef0=0.0, degree=3, epsilon=0.1, gamma='scale',  
    kernel='rbf', max_iter=-1, shrinking=True, tol=0.001, verbose=False)
```

Prediction for all Test data

In [20]:

```
ypred = model.predict(x_test)  
  
from sklearn.metrics import r2_score, mean_squared_error  
mse = mean_squared_error(y_test, ypred)  
rmse = np.sqrt(mse)  
print("Root Mean Square Error : ", rmse)  
r2score = r2_score(y_test, ypred)
```

```
print("R2Score", r2score*100)
```

Root Mean Square Error : 2.35947188444521
R2Score 86.64242653738361