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```
55.0
                                                                               51.0
                                                                                       40.0
                                                                                               88.0
                                                                                                               34.0
                                                                                                                      0.99
                                                                                                                               12.0
                                                                                                                                       42.0
                                                      Assignments Final Term Total Performance Score
                                                                                     33.0
                                                                      56.0
                                                                              47.0
                                                                                              86.0
                                                                                                               56.0
                                                                                                                      64.0
                                                                                                                               22.0
                                                                                                                                       45.0
                                                                                                                                               68.0
                                                                                             20
                                                                                                              32
                                                                      40
                                                                                     0
                                                                                                                      42
                                                                                                                                     35
                                                                                                                              17
                                                                                     4.0
                                                                                                                             2.0
                                                                                              6.0
                                                                                                               10.0
                                                                                                                      9.0
                                                                     15
23
29
30
                                                      Student Name Age Gender Mid term marks
                                                                                                              130
                        In [46]: |data= pd.read_csv("studentRecord.csv")
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
                                                                                                                                                                                     In [49]: Y = data['Performance Score']
                                                                                                      : - 0 0 0 -
                                                                     19
                                                                              9
                                                                                              19
                                                                                                               19
                                                                                                                      19
                                                                                                                                      18
                                                                                                                                                           69 rows × 8 columns
                                                                                                                                                                        In [48]: X = data['Total']
                                                                        Maryam
                                                                              Talha
                                                                                                               kasahan
                                                                                                                                       Saira
                                                                                                                                               M Hadi
                                                                                               Wahab
                                                                                                                      Sara
                                                                                                                               Taira
                                                                                      Saad
                                      In [47]: | data
                                                                            2 6 4
                                                               0
                                                                                                              64
65
                                                                                                                              99
In [45]:
                                                 Out[47]:
```

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Assignment1 - Jupyter Notebook

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```
for i in range(size):
    num += (X[i] - mean_x) * (Y[i] - mean_y)
    dem += (X[i] - mean_x) ** 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                       In [58]: c = mean_y - (m * mean_x)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      In [60]: max_x = np.max(X) + 100 min_x = np.min(X) - 100
In [50]: mean_x = np.mean(X)
mean_x
                                                                                     In [51]: mean_y = np.mean(Y)
mean_y
                                                                                                                                    52.462318840579705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -3.522404250003774
                                                                                                                                                                                                                                                                                                                                                                                                               Out[57]: 1.041646459013148
                                               53.74637681159421
                                                                                                                                                                            In [52]: size = len(X)
                                                                                                                                                                                                                                                                                                                                      m = num / dem
                                                                                                                                                                                                                     num = 0
dem = 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  In [59]: c
                                                                                                                                   Out[51]:
                                                Out[50]:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Out[59]:
                                                                                                                                                                                                                        In [56]:
                                                                                                                                                                                                                                                                                                                                                                                 In [57]:
```

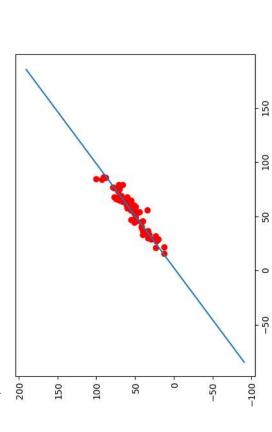
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In [61]:
$$x = np.linspace(min_x, max_x, 1000)$$

 $y = m^*x + c$

Out[62]: cmatplotlib.collections.PathCollection at 0x26c1ce3e8b0>



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