```
In [1]: import numpy as np
        import pandas as pd
        import matplotlib.pyplot as pt
In [2]: df=pd.read csv("dataset.csv")
In [3]: df.head
Out[3]: <bound method NDFrame.head of
                                                      State
                                                                  Crop CostCultivation CostCultivation2 Production \
                                                                    9800.25
                                                 9794.05
              Uttar Pradesh
                                  ARHAR
                                                                                 1941.55
                                                                   10594.15
        1
                  Karnataka
                                  ARHAR
                                                10593.15
                                                                                 2172.46
                                                13468.82
        2
                   Gujarat
                                 ARHAR
                                                                   13469.82
                                                                                 1898.30
        3
            Andhra Pradesh
                                 ARHAR
                                                17051.66
                                                                   17052.66
                                                                                 3670.54
                                 ARHAR
        4
               Maharashtra
                                                17130.55
                                                                   17131.55
                                                                                 2775.80
               Maharashtra
                                COTTON
                                                23711.44
                                                                   23712.44
                                                                                 2539.47
                                                29047.10
                                                                   29048.10
        6
                     Puniab
                                COTTON
                                                                                 2003.76
            Andhra Pradesh
        7
                                COTTON
                                                29140.77
                                                                   29141.77
                                                                                 2509.99
        8
                                COTTON
                                                29616.09
                                                                   29617.09
                                                                                 2179.26
                    Gujarat
        9
                    Haryana
                                COTTON
                                                29918.97
                                                                   29919.97
                                                                                 2127.35
        10
                                  GRAM
                                                                    8553.69
                  Rajasthan
                                                 8552.69
                                                                                 1691.66
                                   GRAM
        11
            Madhya Pradesh
                                                 9803.89
                                                                    9804.89
                                                                                 1551.94
             Uttar Pradesh
                                   GRAM
                                                12833.04
                                                                   12834.04
        12
                                                                                 1882.68
                                   GRAM
        13
                Maharashtra
                                                12985.95
                                                                   12986.95
                                                                                 2277.68
            Andhra Pradesh
                                  GRAM
                                                                   14422.98
        14
                                                14421.98
                                                                                 1559.04
                             GROUNDNUT
                                                13647.10
                                                                   13648.10
                                                                                 3484.01
        15
                  Karnataka
                             GROUNDNUT
                                                                                 2554.91
            Andhra Pradesh
                                                21229.01
                                                                   21230.01
        16
        17
                 Tamil Nadu
                             GROUNDNUT
                                                22507.86
                                                                   22508.86
                                                                                 2358.00
                             GROUNDNUT
                   Gujarat
                                                22951.28
                                                                   22952.28
                                                                                 1918.92
        18
                             GROUNDNUT
                                                26078.66
                                                                   26079.66
                                                                                 3207.35
        19
                Maharashtra
                                                                   13514.92
                                                                                  404.43
        20
                      Bihar
                                 MAT7F
                                                13513.92
        21
                                 MAIZE
                                                13792.85
                                                                   13793.85
                                                                                  581.69
                  Karnataka
                                                                   14422.46
                                                                                  658.77
        22
                  Raiasthan
                                 MAT7F
                                                14421.46
        23
             Uttar Pradesh
                                 MAIZE
                                                15635.43
                                                                   15636.43
                                                                                 1387.36
            Andhra Pradesh
                                                25687.09
                                                                                  840.58
        24
                                 MAT7F
                                                                   25688.09
        25
                     0rissa
                                 MOONG
                                                 5483.54
                                                                    5484.54
                                                                                 2614.14
                                 MOONG
                                                 6204.23
                                                                    6205.23
                                                                                 2068.67
        26
                  Raiasthan
        27
                                 MOONG
                                                 6440.64
                                                                    6441.64
                                                                                 5777.48
                  Karnataka
                                 MOONG
                                                 6684.18
            Andhra Pradesh
                                                                    6685.18
        28
                                                                                 2228.97
        29
               Maharashtra
                                 MOONG
                                                10780.76
                                                                   10781.76
                                                                                 2261.24
        30
              Uttar Pradesh
                                 PADDY
                                                17022.00
                                                                   17023.00
                                                                                  732.62
        31
                     0rissa
                                 PADDY
                                                17478.05
                                                                   17479.05
                                                                                  715.04
                                  PADDY
        32
                West Bengal
                                                24731.06
                                                                   24732.06
                                                                                  731.25
        33
                     Puniab
                                 PADDY
                                                25154.75
                                                                   25155.75
                                                                                  669.86
                                                                                  789.90
        34
            Andhra Pradesh
                                 PADDY
                                                29664.84
                                                                   29665.84
        35
            Madhya Pradesh
                               MUSTARD
                                                 8686.43
                                                                    8687.43
                                                                                 1279.60
        36
                               MUSTARD
                                                11385.70
                                                                   11386.70
                                                                                 1341.29
                  Raiasthan
        37
              Uttar Pradesh
                               MUSTARD
                                                12774.41
                                                                   12775.41
                                                                                 1595.56
        38
                    Gujarat
                               MUSTARD
                                                13740.64
                                                                   13741.64
                                                                                 1610.40
        39
                    Haryana
                               MUSTARD
                                                14715.27
                                                                   14716.27
                                                                                 1251.12
        40
              Uttar Pradesh
                             SUGARCANE
                                                24538.32
                                                                   24539.32
                                                                                   93.64
        41
                  Karnataka
                             SUGARCANE
                                                55655.44
                                                                   55656.44
                                                                                   86.53
        42
            Andhra Pradesh
                             SUGARCANE
                                                                   56622.16
                                                                                  119.72
                                                56621.16
        43
                Maharashtra
                             SUGARCANE
                                                57673.60
                                                                   57674.60
                                                                                  107.56
        44
                 Tamil Nadu
                             SUGARCANE
                                                66335.06
                                                                   66336.06
                                                                                  85.79
        45
            Madhya Pradesh
                                 WHEAT
                                                12464.40
                                                                   12465.40
                                                                                  810.25
        46
                     Punjab
                                  WHEAT
                                                17945.58
                                                                   17946.58
                                                                                  804.80
              Uttar Pradesh
        47
                                  WHEAT
                                                18979.38
                                                                   18980.38
                                                                                  769.84
        48
                  Rajasthan
                                 WHEAT
                                                19119.08
                                                                   19120.08
                                                                                  683.58
               Yield
                      Temperature RainFall Annual
                                                          Price
        0
               9.83
                            28.96
                                             3373.2
                                                       19589.10
        1
                7.47
                            29.22
                                             3520.7
                                                       21187.30
        2
               9.59
                            28.47
                                             2957.4
                                                       26938.64
        3
                6.42
                            28.49
                                             3079.6
                                                       34104.32
        4
               8.72
                            28.30
                                             2566.7
                                                       34262.10
        5
               12.69
                            28.73
                                             2534.4
                                                       47423.88
              24.39
        6
                            28.65
                                             3347.9
                                                       58095.20
        7
               17.83
                            28.83
                                             3576.4
                                                       58282.54
        8
               19.05
                            28.38
                                             2899.4
                                                       59233.18
        9
               19.90
                            28.53
                                             2687.2
                                                       59838.94
        10
               6.83
                            28.62
                                             2960.5
                                                       17106.38
        11
               10.29
                            28.95
                                             2365.8
                                                       19608.78
                                             2957.8
        12
               10.93
                            28.67
                                                       25667.08
        13
               8.05
                            28.66
                                             2741.3
                                                       25972.90
        14
                                             2937.5
               16.69
                            28.94
                                                       28844.96
        15
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                            28.82
                                             2612.4
                                                       27295.20
        16
               11.97
                            28.11
                                             3275.0
                                                       42459.02
        17
               11.98
                            28.66
                                             2352.1
                                                       45016.72
        18
               13.45
                            28.66
                                             2943.2
                                                       45903.56
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52158.32

27028.84

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22
               23.56
                             28.74
                                              2442.9
                                                        28843.92
        23
               13.70
                             28.80
                                              2480.5
                                                        31271.86
        24
               42.68
                             28.67
                                              3282.2
                                                        51375.18
        25
                             28.70
                                              2442.9
               3.01
                                                        10968.08
        26
                4.05
                             28.59
                                              2998.3
                                                        12409.46
        27
                1.32
                             28.98
                                              2926.6
                                                        12882.28
        28
                5.90
                             28.76
                                              3075.1
                                                        13369.36
        29
                6.70
                             28.65
                                              2357.7
                                                        21562.52
        30
               36.61
                             29.15
                                              3007.5
                                                        34045.00
        31
               32.42
                             29.09
                                              2987.5
                                                        34957.10
        32
               39.04
                             28.49
                                              3722.8
                                                        49463.12
        33
               67.41
                             29.03
                                              3154.0
                                                        50310.50
        34
               56.00
                             28.76
                                              2987.5
                                                        59330.68
        35
               12.94
                             28.71
                                              3591.1
                                                        17373.86
        36
               13.54
                             28.70
                                              3264.4
                                                        22772.40
        37
               13.57
                             28.70
                                              2782.5
                                                        25549.82
        38
               11.61
                             28.85
                                              3007.5
                                                        27482.28
        39
               19.94
                             28.88
                                              2898.2
                                                        29431.54
        40
              448.89
                             29.46
                                              2782.5
                                                        49077.64
        41
              986.21
                             28.98
                                              2791.6 111311.88
        42
              757.92
                             28.80
                                              3007.5 113243.32
        43
              744.01
                             28.89
                                              3489.6
                                                      115348.20
        44
             1015.45
                             28.97
                                              2422.2
                                                      132671.12
        45
               23.59
                             29.37
                                              3275.1
                                                        24929.80
                                                        35892.16
        46
                                              3079.9
               39.83
                             28.84
        47
               34.99
                             28.73
                                              2721.9
                                                        37959.76
        48
                                              3449.0
               37.19
                             28.89
                                                        38239.16
In [4]: df.describe()
Out[4]:
               CostCultivation CostCultivation2
                                               Production
                                                                Yield Temperature RainFall Annual
                                                                                                          Price
                    49.000000
                                    49.000000
                                                49.000000
                                                            49.000000
                                                                         49.000000
                                                                                        49.000000
                                                                                                       49.000000
        count
                 20363.537347
                                 20364.643469
                                              1620.537755
                                                            98.086735
                                                                         28.780612
                                                                                       2951.740816
                                                                                                   40728.074694
         mean
           std
                 13561.435306
                                 13561.350894 1104.990472
                                                           245.293123
                                                                          0.246555
                                                                                       373.964966
                                                                                                   27122.870613
                                  5484.540000
                                                                         28.110000
                                                             1 320000
                                                                                      2352 100000
                                                                                                   10968 080000
          min
                  5483.540000
                                                85.790000
          25%
                 12774.410000
                                 12775.410000
                                               732.620000
                                                              9.590000
                                                                         28.660000
                                                                                       2687.200000
                                                                                                   25549.820000
          50%
                 17022.000000
                                 17023.000000
                                              1595.560000
                                                             13.700000
                                                                         28.760000
                                                                                       2957.800000
                                                                                                   34045.000000
          75%
                 24731.060000
                                 24732.060000
                                              2228.970000
                                                             36.610000
                                                                         28.890000
                                                                                       3264.400000
                                                                                                   49463.120000
                 66335 060000
                                 66336 060000 5777 480000 1015 450000
                                                                                       3722 800000
                                                                                                  132671 120000
                                                                         29 460000
          max
In [5]: df.shape
Out[5]: (49, 9)
In [6]: df.nunique()
Out[6]: State
                              13
                              10
        Crop
        CostCultivation
                              49
        CostCultivation2
                              49
        Production
                              49
        Yield
                              49
        Temperature
                              35
        RainFall Annual
                              43
        Price
                              49
        dtype: int64
In [7]: df.duplicated().sum()
Out[7]: 0
In [8]: df['avg CostCultivation CostCultivation2']=df[['CostCultivation' , 'CostCultivation2']].mean(axis=1)
In [9]: df.head
Out[9]: <bound method NDFrame.head of
                                                                   Crop CostCultivation CostCultivation2 Production
                                                       State
                                                  9794.05
             Uttar Pradesh
        0
                               ARHAR
                                                                     9800.25
                                                                                  1941.55
        1
                  Karnataka
                                  ARHAR
                                                 10593.15
                                                                     10594.15
                                                                                  2172.46
                                  ARHAR
                                                                                  1898.30
        2
                    Gujarat
                                                 13468.82
                                                                    13469.82
        3
            Andhra Pradesh
                                  ARHAR
                                                 17051.66
                                                                     17052.66
                                                                                  3670.54
        4
                Maharashtra
                                  ARHAR
                                                 17130.55
                                                                     17131.55
                                                                                  2775.80
        5
                Maharashtra
                                 COTTON
                                                 23711.44
                                                                     23712.44
                                                                                  2539.47
```

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7

8

Punjab

Gujarat

Andhra Pradesh

COTTON

COTTON

COTTON

29047.10

29140.77

29616.09

29048.10

29141.77

29617.09

2003.76

2509.99

2179.26

31.10

28.80

2357.7

27586.70

9	Haryana	C01	ГТОМ	29918	. 97		29919.97	2127.35
10	Rajasthar	,		8552.69			8553.69	1691.66
11	Madhya Pradesh			9803.89			9804.89	1551.94
12	Uttar Pradesh			12833.04			12834.04	1882.68
13	Maharashtra			12985			12986.95	2277.68
14	Andhra Pradesh	Pradesh GRAM		14421	.98		14422.98	1559.04
15	Karnataka	aka GROUNDNUT		13647	.10		13648.10	3484.01
16	Andhra Pradesh	GROUNE	DNUT	21229	.01		21230.01	2554.91
17	Tamil Nadu	GROUND	DNUT	22507	.86		22508.86	2358.00
18	Gujarat	GROUNE	DNUT	22951	.28		22952.28	1918.92
19	Maharashtra	GROUND	DNUT	26078	.66		26079.66	3207.35
20	Bihar	MAIZE		13513	.92		13514.92	404.43
21	Karnataka	MAIZE		13792	.85		13793.85	581.69
22	Rajasthar	MAIZE		14421.46			14422.46	658.77
23	Uttar Pradesh	MAIZE		15635.43			15636.43	1387.36
24	Andhra Pradesh			25687.09			25688.09	840.58
25	0rissa			5483.54			5484.54	2614.14
26	Rajasthar	MC	OONG	6204	.23		6205.23	2068.67
27	Karnataka	MC	OONG	6440	.64		6441.64	5777.48
28	Andhra Pradesh	MC	OONG	6684	. 18		6685.18	2228.97
29	Maharashtra	MC	OONG	10780	.76		10781.76	2261.24
30	Uttar Pradesh	P.F	ADDY	17022	.00		17023.00	732.62
31	0rissa		ADDY	17478			17479.05	715.04
32	West Bengal	. P <i>F</i>	ADDY	24731	.06		24732.06	731.25
33	Punjab		ADDY	25154			25155.75	669.86
34		ndhra Pradesh PADDY		29664.84			29665.84	789.90
35	Madhya Pradesh			8686			8687.43	1279.60
36	Rajasthan MUSTARD		11385.70			11386.70	1341.29	
37	Uttar Pradesh MUSTARD		12774.41			12775.41	1595.56	
38	Gujarat MUSTARD			13740.64			13741.64	1610.40
39	,		ΓARD	14715			14716.27	1251.12
40	Uttar Pradesh			24538.32			24539.32	93.64
41	Karnataka SUGARCANE		55655.44			55656.44	86.53	
42		hra Pradesh SUGARCANE		56621.16			56622.16	119.72
43	Maharashtra SUGARCANE Tamil Nadu SUGARCANE		57673.60			57674.60	107.56	
44						66336.06	85.79	
45 46	Madhya Pradesh Punjab		HEAT	12464.40 17945.58			12465.40	810.25
40	Uttar Pradesh		WHEAT WHEAT		18979.38		17946.58 18980.38	804.80 769.84
48			HEAT				19120.08	683.58
40	Najastilai	VVI	ILAI	19119	.00		19120.00	003.30
	Yield Tempe	rature	RainFall	Annual	Price	\		
0	9.83	28.96		3373.2	19589.10	•		
1	7.47	29.22		3520.7	21187.30			
2	9.59	28.47		2957.4	26938.64			
3	6.42	28.49		3079.6	34104.32			
4	8.72	28.30		2566.7	34262.10			
5	12.69	28.73		2534.4	47423.88			
6	24.39	28.65		3347.9	58095.20			
7	17.83	28.83		3576.4	58282.54			
8	19.05	28.38		2899.4	59233.18			
9	19.90			2687.2	59838.94			
10	6.83			2960.5	17106.38			
11	10.29			2365.8	19608.78			
12	10.93			2957.8	25667.08			
13	8.05 28.66		2741.3	25972.90				
14	16.69 28.94		2937.5	28844.96				
15	4.71 28.82		2612.4	27295.20				
16	11.97 28.11		3275.0	42459.02				
17	11.98	28.66		2352.1	45016.72			

2943.2

2606.4

3554.2

2357.7

2442.9

2480.5

3282.2

2442.9

2998.3

2926.6

3075.1

2357.7

3007.5

2987.5

3722.8

3154.0

2987.5

3591.1

3264.4

2782.5

3007.5

2898.2

2782.5

45903.56

52158.32

27028.84

27586.70

28843.92

31271.86

51375.18

10968.08

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34957.10

49463.12

50310.50

59330.68

17373.86

22772.40

25549.82

27482.28

29431.54

49077.64

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31.10

23.56

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42.68

3.01

4.05

1.32

5.90

6.70

36.61

32.42

39.04

67.41

56.00

12.94

13.54

13.57

11.61

19.94

448.89

28.66

28.76

28.86

28.80

28.74

28.80

28.67

28.70

28.59

28.98

28.76

28.65

29.15

29.09

28.49

29.03

28.76

28.71

28.70

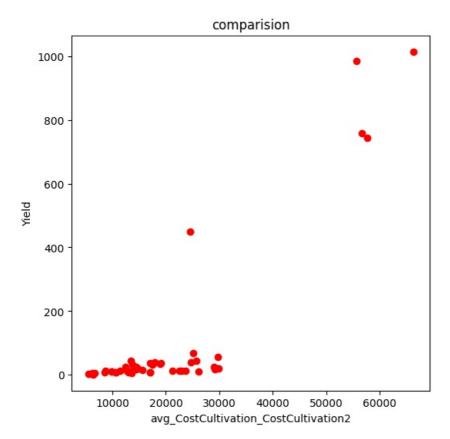
28.70

28.85

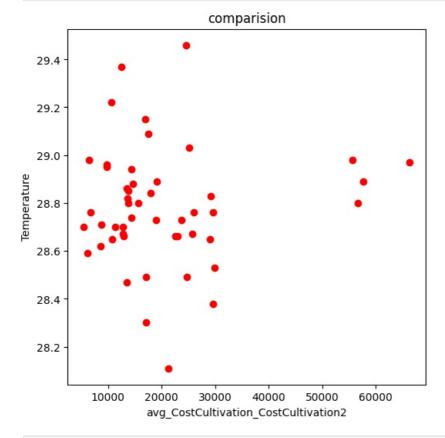
28.88

29.46

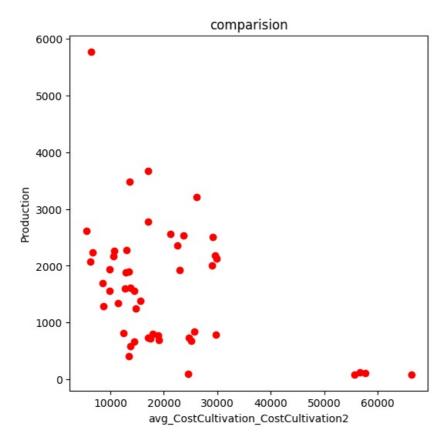
```
41
              986.21
                             28.98
                                              2791.6 111311.88
                                             3007.5 113243.32
              757.92
                             28.80
         42
         43
              744.01
                             28.89
                                              3489.6 115348.20
         44 1015.45
                             28.97
                                             2422.2 132671.12
                             29.37
                                             3275.1
         45
               23.59
                                                       24929.80
         46
               39.83
                             28.84
                                              3079.9
                                                       35892.16
         47
               34.99
                             28.73
                                              2721.9
                                                       37959.76
         48
               37.19
                             28.89
                                              3449.0
                                                       38239.16
             avg\_CostCultivation\_CostCultivation2
         0
                                            9797.15
         1
                                           10593.65
         2
                                           13469.32
         3
                                           17052.16
         4
                                           17131.05
         5
                                          23711.94
         6
                                           29047.60
         7
                                           29141.27
         8
                                           29616.59
                                           29919.47
         9
                                           8553.19
         10
                                           9804.39
         11
         12
                                           12833.54
         13
                                           12986.45
         14
                                           14422.48
                                           13647.60
         15
         16
                                           21229.51
         17
                                          22508.36
         18
                                           22951.78
         19
                                           26079.16
         20
                                           13514.42
         21
                                          13793.35
         22
                                           14421.96
         23
                                           15635.93
         24
                                           25687.59
         25
                                           5484.04
         26
                                            6204.73
         27
                                            6441.14
         28
                                           6684.68
         29
                                           10781.26
         30
                                           17022.50
         31
                                           17478.55
         32
                                           24731.56
         33
                                           25155.25
         34
                                           29665.34
         35
                                           8686.93
         36
                                           11386.20
         37
                                          12774.91
         38
                                           13741.14
         39
                                           14715.77
         40
                                           24538.82
         41
                                           55655.94
         42
                                           56621.66
         43
                                           57674.10
         44
                                           66335.56
         45
                                           12464.90
         46
                                           17946.08
         47
                                           18979.88
         48
                                           19119.58 >
In [10]: pt.figure(figsize=(6,6))
         pt.scatter(df['avg CostCultivation CostCultivation2'],df['Yield'],color='red',alpha=1)
         pt.title('comparision')
         pt.xlabel('avg CostCultivation CostCultivation2')
         pt.ylabel('Yield')
         pt.show()
```



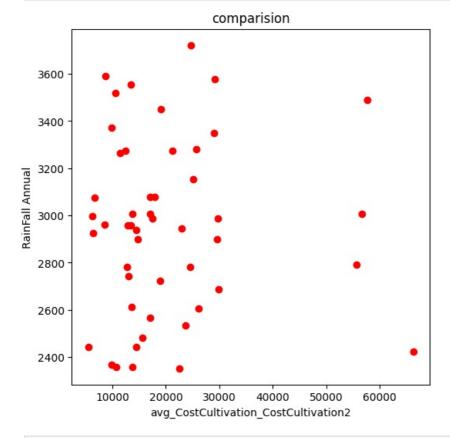
```
In [11]: pt.figure(figsize=(6,6))
    pt.scatter(df['avg_CostCultivation_CostCultivation2'],df['Temperature'],color='red',alpha=1)
    pt.title('comparision')
    pt.xlabel('avg_CostCultivation_CostCultivation2')
    pt.ylabel('Temperature')
    pt.show()
```



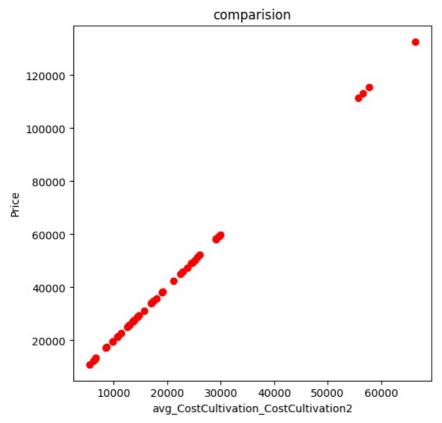
```
In [12]: pt.figure(figsize=(6,6))
    pt.scatter(df['avg_CostCultivation_CostCultivation2'],df['Production'],color='red',alpha=1)
    pt.title('comparision')
    pt.xlabel('avg_CostCultivation_CostCultivation2')
    pt.ylabel('Production')
    pt.show()
```



```
In [13]:
    pt.figure(figsize=(6,6))
    pt.scatter(df['avg_CostCultivation_CostCultivation2'],df['RainFall Annual'],color='red',alpha=1)
    pt.title('comparision')
    pt.xlabel('avg_CostCultivation_CostCultivation2')
    pt.ylabel('RainFall Annual')
    pt.show()
```



```
In [14]: pt.figure(figsize=(6,6))
    pt.scatter(df['avg_CostCultivation_CostCultivation2'],df['Price'],color='red',alpha=1)
    pt.title('comparision')
    pt.xlabel('avg_CostCultivation_CostCultivation2')
    pt.ylabel('Price')
    pt.show()
```



In [19]: y_pred=model.predict(X_test)

final_comparision

In [20]: final_comparision=pd.DataFrame({'Actual':y_test,'Predict':y_pred})

```
In [15]:
         from sklearn.model_selection import train_test_split
         from sklearn.linear model import LinearRegression
         from sklearn.metrics import mean_squared_error,mean_absolute_error,r2_score
In [16]: newdataset=pd.DataFrame({'avg_CostCultivation_CostCultivation2':df['avg_CostCultivation_CostCultivation2'],'Price
         newdataset.head()
Out[16]:
            avg CostCultivation CostCultivation2
         0
                                     9797.15 19589.10
         1
                                    10593.65 21187.30
         2
                                    13469.32 26938.64
         3
                                    17052.16 34104.32
         4
                                    17131.05 34262.10
In [17]: X = newdataset[['avg_CostCultivation_CostCultivation2']]
         y = newdataset['Price']
         X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
In [18]: model = LinearRegression()
         model.fit(X train, y train)
Out[18]: v LinearRegression
         LinearRegression()
```

```
Out[20]:
                 Actual
                               Predict
               25972 90
                          25972 694788
                          24929.589856
          45
               24929.80
          47
               37959.76
                          37959.611471
              132671.12 132671.419337
          17
               45016.72
                          45016.604842
          27
               12882.28
                          12882.012886
          26
               12409.46
                          12409.190650
                          10967.803834
          25
               10968.08
                          34956.937272
          31
               34957 10
          19
               52158.32
                          52158.238612
In [21]: mse=mean_squared_error(y_test,y_pred)
          mae=mean_absolute_error(y_test,y_pred)
          r2=r2_score(y_test,y_pred)
          print(mse)
          print(mae)
          print(r2)
          print(np.sqrt(mse))
        0.04644678622134806
        0.20351242512351747
        0.999999999597644
        0.21551516471317758
In [38]: from sklearn.svm import SVR
In [26]: newdataset=pd.DataFrame({'avg_CostCultivation_CostCultivation2':df['avg_CostCultivation_CostCultivation2'],'Printer
          newdataset.head()
Out[26]:
             avg_CostCultivation_CostCultivation2
                                                    Price
          0
                                        9797.15 19589.10
          1
                                       10593.65 21187.30
          2
                                       13469.32 26938.64
          3
                                       17052.16 34104.32
          4
                                       17131.05 34262.10
In [27]: X = newdataset[['avg_CostCultivation_CostCultivation2']]
          y = newdataset['Price']
          X_{\text{train}}, X_{\text{test}}, y_{\text{train}}, y_{\text{test}} = \text{train\_test\_split}(X, y, \text{test\_size=0.2}, \text{random\_state=42})
In [51]: model=SVR(kernel='linear')
          model.fit(X train,y train)
Out[51]:
                   SVR
          SVR(kernel='linear')
In [52]: y_pred=model.predict(X_test)
In [53]: final comparision=pd.DataFrame({'Actual':y_test,'Predict':y_pred})
          final\_comparision
```

```
Out[53]:
                    Actual
                                  Predict
                  25972 90
                             25970 356283
             45
                  24929.80
                             24927.480905
             47
                  37959.76
                             37954.635024
                 132671.12 132645.599812
                  45016.72
                             45010.075374
             17
             27
                  12882.28
                             12882.555227
             26
                  12409.46
                             12409.837044
                             10968.767432
             25
                  10968.08
                             34952.621619
             31
                  34957 10
             19
                  52158.32
                             52150.137496
   In [54]: mse=mean_squared_error(y_test,y_pred)
             mae=mean_absolute_error(y_test,y_pred)
             r2=r2_score(y_test,y_pred)
             print(mse)
             print(mae)
             print(r2)
             print(np.sqrt(mse))
            82.12448708504203
            5.615318993101392
            0.9999999288577686
            9.062256180722438
   In [57]: from sklearn.tree import DecisionTreeRegressor
   In [59]: newdataset=pd.DataFrame({'avg_CostCultivation_CostCultivation2':df['avg_CostCultivation_CostCultivation2'],'Printer
             newdataset.head()
   Out[59]:
                avg_CostCultivation_CostCultivation2
                                                       Price
             0
                                           9797.15 19589.10
             1
                                          10593.65 21187.30
             2
                                          13469.32 26938.64
             3
                                          17052.16 34104.32
             4
                                          17131.05 34262.10
   In [60]: X = newdataset[['avg_CostCultivation_CostCultivation2']]
             y = newdataset['Price']
             X_{\text{train}}, X_{\text{test}}, y_{\text{train}}, y_{\text{test}} = \text{train\_test\_split}(X, y, \text{test\_size=0.2}, \text{random\_state=42})
   In [62]: model=DecisionTreeRegressor()
             model.fit(X_train,y_train)
   Out[62]:
                  DecisionTreeRegressor
             DecisionTreeRegressor()
   In [63]: mse=mean_squared_error(y_test,y_pred)
             mae=mean_absolute_error(y_test,y_pred)
             r2=r2_score(y_test,y_pred)
             print(mse)
             print(mae)
             print(r2)
             print(np.sqrt(mse))
            82.12448708504203
           5.615318993101392
            0.9999999288577686
           9.062256180722438
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```