

```

In [1]: #Import numpy
import numpy as np

#Seasons
Seasons = ["2015", "2016", "2017", "2018", "2019", "2020", "2021", "2022", "2023", "2024"]
Sdict = {"2015":0, "2016":1, "2017":2, "2018":3, "2019":4, "2020":5, "2021":6, "2022":7

#Players
Players = ["Sachin", "Rahul", "Smith", "Sami", "Pollard", "Morris", "Samson", "Dhoni", "
Pdict = {"Sachin":0, "Rahul":1, "Smith":2, "Sami":3, "Pollard":4, "Morris":5, "Samson"

#Salaries
Sachin_Salary = [15946875, 17718750, 19490625, 21262500, 23034375, 24806250, 25244493,
Rahul_Salary = [12000000, 12744189, 13488377, 14232567, 14976754, 16324500, 18038573, 1
Smith_Salary = [4621800, 5828090, 13041250, 14410581, 15779912, 14500000, 16022500, 175
Sami_Salary = [3713640, 4694041, 13041250, 14410581, 15779912, 17149243, 18518574, 1945
Pollard_Salary = [4493160, 4806720, 6061274, 13758000, 15202590, 16647180, 18091770, 19
Morris_Salary = [3348000, 4235220, 12455000, 14410581, 15779912, 14500000, 16022500, 17
Samson_Salary = [3144240, 3380160, 3615960, 4574189, 13520500, 14940153, 16359805, 1777
Dhoni_Salary = [0, 0, 4171200, 4484040, 4796880, 6053663, 15506632, 16669630, 17832627, 1
Kohli_Salary = [0, 0, 0, 4822800, 5184480, 5546160, 6993708, 16402500, 17632688, 18862875
Sky_Salary = [3031920, 3841443, 13041250, 14410581, 15779912, 14200000, 15691000, 17182

#Matrix
Salary = np.array([Sachin_Salary, Rahul_Salary, Smith_Salary, Sami_Salary, Polla

#Games
Sachin_G = [80, 77, 82, 82, 73, 82, 58, 78, 6, 35]
Rahul_G = [82, 57, 82, 79, 76, 72, 60, 72, 79, 80]
Smith_G = [79, 78, 75, 81, 76, 79, 62, 76, 77, 69]
Sami_G = [80, 65, 77, 66, 69, 77, 55, 67, 77, 40]
Pollard_G = [82, 82, 82, 79, 82, 78, 54, 76, 71, 41]
Morris_G = [70, 69, 67, 77, 70, 77, 57, 74, 79, 44]
Samson_G = [78, 64, 80, 78, 45, 80, 60, 70, 62, 82]
Dhoni_G = [35, 35, 80, 74, 82, 78, 66, 81, 81, 27]
Kohli_G = [40, 40, 40, 81, 78, 81, 39, 0, 10, 51]
Sky_G = [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]

#Matrix
Games = np.array([Sachin_G, Rahul_G, Smith_G, Sami_G, Pollard_G, Morris_G, Samso

#Points
Sachin_PTS = [2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782]
Rahul_PTS = [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154]
Smith_PTS = [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743]
Sami_PTS = [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112, 966]
Pollard_PTS = [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297, 646]
Morris_PTS = [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281, 928]
Samson_PTS = [1258, 1104, 1684, 1781, 841, 1268, 1189, 1186, 1185, 1564]
Dhoni_PTS = [903, 903, 1624, 1871, 2472, 2161, 1850, 2280, 2593, 686]
Kohli_PTS = [597, 597, 597, 1361, 1619, 2026, 852, 0, 159, 904]
Sky_PTS = [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]

#Matrix
Points = np.array([Sachin_PTS, Rahul_PTS, Smith_PTS, Sami_PTS, Pollard_PTS, Morr

```

```

In [2]: Salary

```

```
Out[2]: array([[15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                25244493, 27849149, 30453805, 23500000],
               [12000000, 12744189, 13488377, 14232567, 14976754, 16324500,
                18038573, 19752645, 21466718, 23180790],
               [ 4621800,  5828090, 13041250, 14410581, 15779912, 14500000,
                16022500, 17545000, 19067500, 20644400],
               [ 3713640,  4694041, 13041250, 14410581, 15779912, 17149243,
                18518574, 19450000, 22407474, 22458000],
               [ 4493160,  4806720,  6061274, 13758000, 15202590, 16647180,
                18091770, 19536360, 20513178, 21436271],
               [ 3348000,  4235220, 12455000, 14410581, 15779912, 14500000,
                16022500, 17545000, 19067500, 20644400],
               [ 3144240,  3380160,  3615960,  4574189, 13520500, 14940153,
                16359805, 17779458, 18668431, 20068563],
               [      0,      0,  4171200,  4484040,  4796880,  6053663,
                15506632, 16669630, 17832627, 18995624],
               [      0,      0,      0,  4822800,  5184480,  5546160,
                6993708, 16402500, 17632688, 18862875],
               [ 3031920,  3841443, 13041250, 14410581, 15779912, 14200000,
                15691000, 17182000, 18673000, 15000000]])
```

In [3]: Games

```
Out[3]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
               [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
               [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
               [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
               [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
               [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
               [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
               [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
               [40, 40, 40, 81, 78, 81, 39,  0, 10, 51],
               [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

In [4]: Points

```
Out[4]: array([[2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133,  83, 782],
               [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154],
               [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743],
               [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112, 966],
               [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297, 646],
               [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281, 928],
               [1258, 1104, 1684, 1781,  841, 1268, 1189, 1186, 1185, 1564],
               [ 903,  903, 1624, 1871, 2472, 2161, 1850, 2280, 2593, 686],
               [ 597,  597,  597, 1361, 1619, 2026,  852,  0, 159, 904],
               [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]])
```

In [5]: Games[5]

```
Out[5]: array([70, 69, 67, 77, 70, 77, 57, 74, 79, 44])
```

In [6]: Games[0:5]

```
Out[6]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
               [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
               [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
               [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
               [82, 82, 82, 79, 82, 78, 54, 76, 71, 41]])
```

```
In [7]: Games
```

```
Out[7]: array([[80, 77, 82, 82, 73, 82, 58, 78, 6, 35],
               [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
               [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
               [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
               [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
               [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
               [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
               [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
               [40, 40, 40, 81, 78, 81, 39, 0, 10, 51],
               [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

```
In [8]: Games[0,5]
```

```
Out[8]: 82
```

```
In [9]: Games[0,2]
```

```
Out[9]: 82
```

```
In [10]: Games[-3:-1]
```

```
Out[10]: array([[35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
                [40, 40, 40, 81, 78, 81, 39, 0, 10, 51]])
```

```
In [11]: Points
```

```
Out[11]: array([[2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782],
               [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154],
               [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743],
               [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112, 966],
               [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297, 646],
               [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281, 928],
               [1258, 1104, 1684, 1781, 841, 1268, 1189, 1186, 1185, 1564],
               [903, 903, 1624, 1871, 2472, 2161, 1850, 2280, 2593, 686],
               [597, 597, 597, 1361, 1619, 2026, 852, 0, 159, 904],
               [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]])
```

```
In [12]: Pdict
```

```
Out[12]: {'Sachin': 0,
          'Rahul': 1,
          'Smith': 2,
          'Sami': 3,
          'Pollard': 4,
          'Morris': 5,
          'Samson': 6,
          'Dhoni': 7,
          'Kohli': 8,
          'Sky': 9}
```

```
In [13]: Games
```

```
Out[13]: array([[80, 77, 82, 82, 73, 82, 58, 78, 6, 35],
               [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
               [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
               [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
               [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
               [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
               [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
               [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
               [40, 40, 40, 81, 78, 81, 39, 0, 10, 51],
               [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

```
In [14]: Pdict
```

```
Out[14]: {'Sachin': 0,
          'Rahul': 1,
          'Smith': 2,
          'Sami': 3,
          'Pollard': 4,
          'Morris': 5,
          'Samson': 6,
          'Dhoni': 7,
          'Kohli': 8,
          'Sky': 9}
```

```
In [15]: Pdict['Rahul']
```

```
Out[15]: 1
```

```
In [16]: Games[1]
```

```
Out[16]: array([82, 57, 82, 79, 76, 72, 60, 72, 79, 80])
```

```
In [17]: Games[Pdict['Rahul']]
```

```
Out[17]: array([82, 57, 82, 79, 76, 72, 60, 72, 79, 80])
```

```
In [18]: Points
```

```
Out[18]: array([[2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782],
               [1653, 1426, 1779, 1688, 1619, 1312, 1129, 1170, 1245, 1154],
               [2478, 2132, 2250, 2304, 2258, 2111, 1683, 2036, 2089, 1743],
               [2122, 1881, 1978, 1504, 1943, 1970, 1245, 1920, 2112, 966],
               [1292, 1443, 1695, 1624, 1503, 1784, 1113, 1296, 1297, 646],
               [1572, 1561, 1496, 1746, 1678, 1438, 1025, 1232, 1281, 928],
               [1258, 1104, 1684, 1781, 841, 1268, 1189, 1186, 1185, 1564],
               [ 903, 903, 1624, 1871, 2472, 2161, 1850, 2280, 2593, 686],
               [ 597, 597, 597, 1361, 1619, 2026, 852, 0, 159, 904],
               [2040, 1397, 1254, 2386, 2045, 1941, 1082, 1463, 1028, 1331]])
```

```
In [19]: Salary
```

```
Out[19]: array([[15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                25244493, 27849149, 30453805, 23500000],
               [12000000, 12744189, 13488377, 14232567, 14976754, 16324500,
                18038573, 19752645, 21466718, 23180790],
               [ 4621800,  5828090, 13041250, 14410581, 15779912, 14500000,
                16022500, 17545000, 19067500, 20644400],
               [ 3713640,  4694041, 13041250, 14410581, 15779912, 17149243,
                18518574, 19450000, 22407474, 22458000],
               [ 4493160,  4806720,  6061274, 13758000, 15202590, 16647180,
                18091770, 19536360, 20513178, 21436271],
               [ 3348000,  4235220, 12455000, 14410581, 15779912, 14500000,
                16022500, 17545000, 19067500, 20644400],
               [ 3144240,  3380160,  3615960,  4574189, 13520500, 14940153,
                16359805, 17779458, 18668431, 20068563],
               [      0,      0,  4171200,  4484040,  4796880,  6053663,
                15506632, 16669630, 17832627, 18995624],
               [      0,      0,      0,  4822800,  5184480,  5546160,
                6993708, 16402500, 17632688, 18862875],
               [ 3031920,  3841443, 13041250, 14410581, 15779912, 14200000,
                15691000, 17182000, 18673000, 15000000]])
```

In [20]: Games

```
Out[20]: array([[80, 77, 82, 82, 73, 82, 58, 78,  6, 35],
               [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
               [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
               [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
               [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
               [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
               [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
               [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
               [40, 40, 40, 81, 78, 81, 39,  0, 10, 51],
               [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

In [21]: Salary/Games

C:\Users\Admin\AppData\Local\Temp\ipykernel_9376\3709746658.py:1: RuntimeWarning:
divide by zero encountered in divide
Salary/Games

```
Out[21]: array([[ 199335.9375      ,  230113.63636364,  237690.54878049,
  259298.7804878 ,  315539.38356164,  302515.24390244,
  435249.87931034,  357040.37179487,  5075634.16666667,
  671428.57142857],
 [ 146341.46341463,  223582.26315789,  164492.40243902,
  180159.07594937,  197062.55263158,  226729.16666667,
  300642.88333333,  274342.29166667,  271730.60759494,
  289759.875      ],
 [  58503.79746835,   74719.1025641 ,  173883.33333333,
  177908.40740741,  207630.42105263,  183544.30379747,
  258427.41935484,  230855.26315789,  247629.87012987,
  299194.20289855],
 [  46420.5      ,   72216.01538462,  169366.88311688,
  218342.13636364,  228694.37681159,  222717.44155844,
  336701.34545455,  290298.50746269,  291006.15584416,
  561450.      ],
 [  54794.63414634,   58618.53658537,   73917.97560976,
  174151.89873418,  185397.43902439,  213425.38461538,
  335032.77777778,  257057.36842105,  288918.      ,
  522835.87804878],
 [  47828.57142857,   61380.      ,  185895.52238806,
  187150.4025974 ,  225427.31428571,  188311.68831169,
  281096.49122807,  237094.59459459,  241360.75949367,
  469190.90909091],
 [  40310.76923077,   52815.      ,   45199.5      ,
   58643.44871795,  300455.55555556,  186751.9125      ,
  272663.41666667,  253992.25714286,  301103.72580645,
  244738.57317073],
 [    0.      ,    0.      ,   52140.      ,
   60595.13513514,   58498.53658537,   77611.06410256,
  234948.96969697,  205797.90123457,  220155.88888889,
  703541.62962963],
 [    0.      ,    0.      ,    0.      ,
   59540.74074074,   66467.69230769,   68471.11111111,
  179325.84615385,      inf, 1763268.8      ,
  369860.29411765],
 [  40425.6      ,   75322.41176471,  255710.78431373,
  182412.41772152,  204933.92207792,  186842.10526316,
  320224.48979592,  249014.49275362,  345796.2962963 ,
  241935.48387097]])
```

```
In [22]: np.round(Salary/Games)
```

C:\Users\Admin\AppData\Local\Temp\ipykernel_9376\3232172828.py:1: RuntimeWarning:
divide by zero encountered in divide
np.round(Salary/Games)

```
Out[22]: array([[ 199336.,  230114.,  237691.,  259299.,  315539.,  302515.,
                  435250.,  357040.,  5075634.,  671429.],
                [ 146341.,  223582.,  164492.,  180159.,  197063.,  226729.,
                  300643.,  274342.,  271731.,  289760.],
                [  58504.,   74719.,  173883.,  177908.,  207630.,  183544.,
                  258427.,  230855.,  247630.,  299194.],
                [  46420.,   72216.,  169367.,  218342.,  228694.,  222717.,
                  336701.,  290299.,  291006.,  561450.],
                [  54795.,   58619.,   73918.,  174152.,  185397.,  213425.,
                  335033.,  257057.,  288918.,  522836.],
                [  47829.,   61380.,  185896.,  187150.,  225427.,  188312.,
                  281096.,  237095.,  241361.,  469191.],
                [  40311.,   52815.,   45200.,   58643.,  300456.,  186752.,
                  272663.,  253992.,  301104.,  244739.],
                [    0.,    0.,   52140.,   60595.,   58499.,   77611.,
                  234949.,  205798.,  220156.,  703542.],
                [    0.,    0.,    0.,   59541.,   66468.,   68471.,
                  179326.,   inf,  1763269.,  369860.],
                [  40426.,   75322.,  255711.,  182412.,  204934.,  186842.,
                  320224.,  249014.,  345796.,  241935.]])
```

```
In [23]: import warnings
         warnings.filterwarnings('ignore')
```

```
In [24]: import matplotlib.pyplot as plt
```

```
In [25]: %matplotlib inline
```

```
In [26]: Salary
```

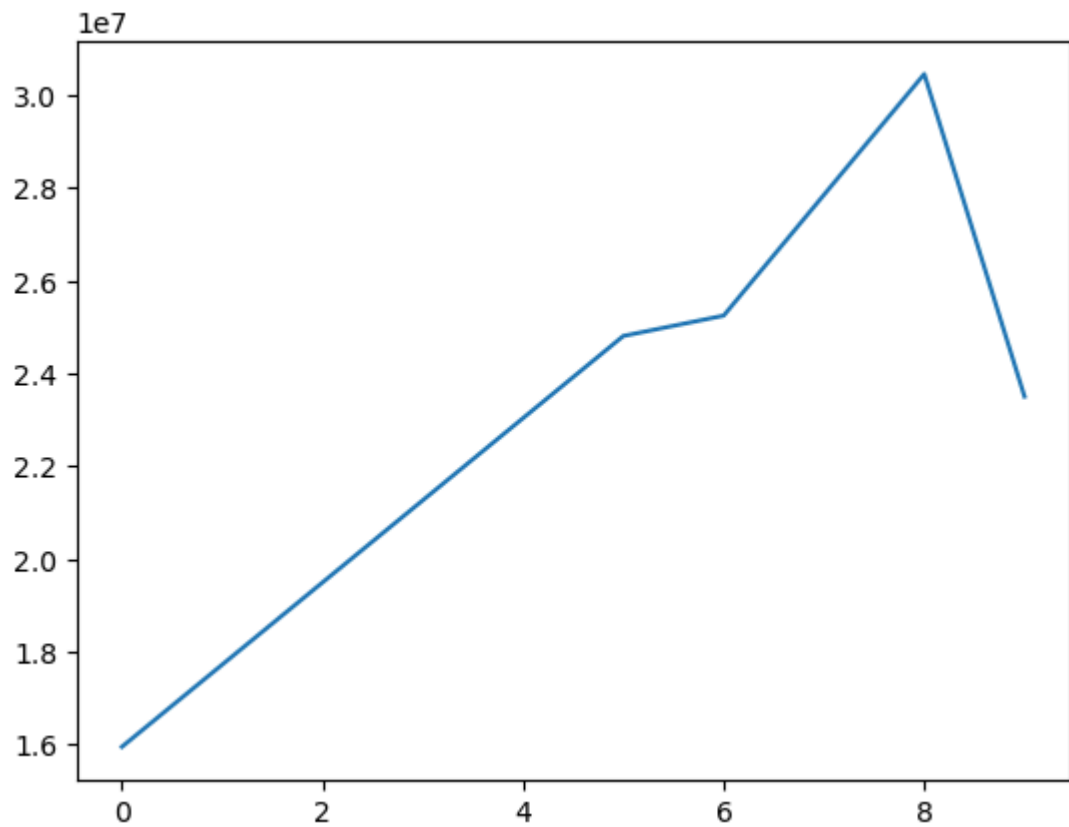
```
Out[26]: array([[15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                  25244493, 27849149, 30453805, 23500000],
                [12000000, 12744189, 13488377, 14232567, 14976754, 16324500,
                  18038573, 19752645, 21466718, 23180790],
                [ 4621800,  5828090, 13041250, 14410581, 15779912, 14500000,
                  16022500, 17545000, 19067500, 20644400],
                [ 3713640,  4694041, 13041250, 14410581, 15779912, 17149243,
                  18518574, 19450000, 22407474, 22458000],
                [ 4493160,  4806720,  6061274, 13758000, 15202590, 16647180,
                  18091770, 19536360, 20513178, 21436271],
                [ 3348000,  4235220, 12455000, 14410581, 15779912, 14500000,
                  16022500, 17545000, 19067500, 20644400],
                [ 3144240,  3380160,  3615960,  4574189, 13520500, 14940153,
                  16359805, 17779458, 18668431, 20068563],
                [    0,    0,  4171200,  4484040,  4796880,  6053663,
                  15506632, 16669630, 17832627, 18995624],
                [    0,    0,    0,  4822800,  5184480,  5546160,
                  6993708, 16402500, 17632688, 18862875],
                [ 3031920,  3841443, 13041250, 14410581, 15779912, 14200000,
                  15691000, 17182000, 18673000, 15000000]])
```

```
In [27]: Salary[0]
```

```
Out[27]: array([15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                  25244493, 27849149, 30453805, 23500000])
```

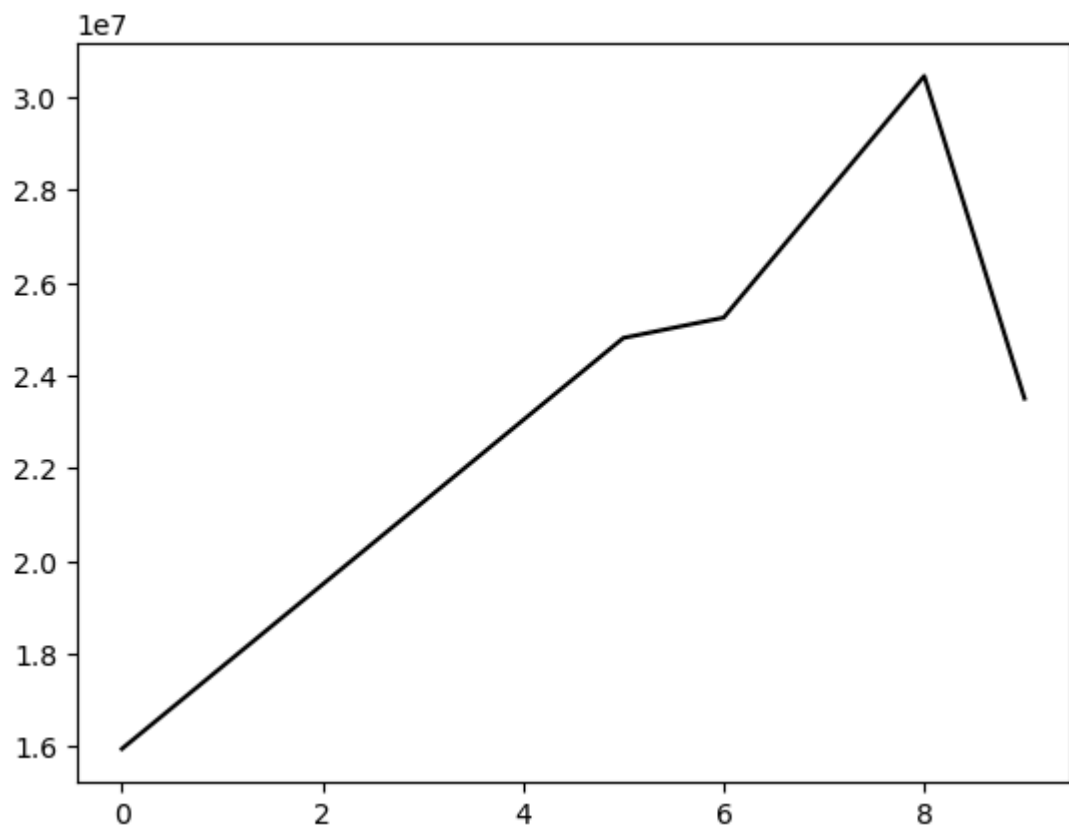
```
In [28]: plt.plot(Salary[0])
```

```
Out[28]: [<matplotlib.lines.Line2D at 0x214aea314c0>]
```



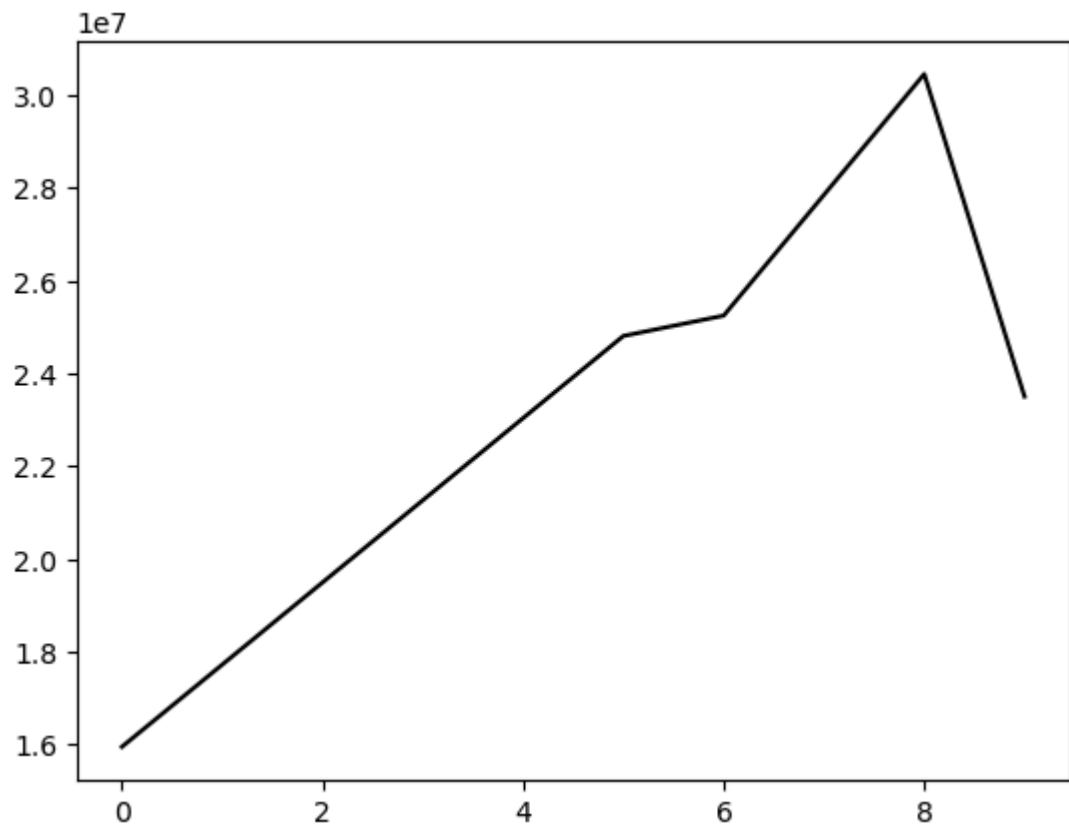
```
In [29]: plt.plot(Salary[0], color='k')
```

```
Out[29]: [<matplotlib.lines.Line2D at 0x214b0295b20>]
```



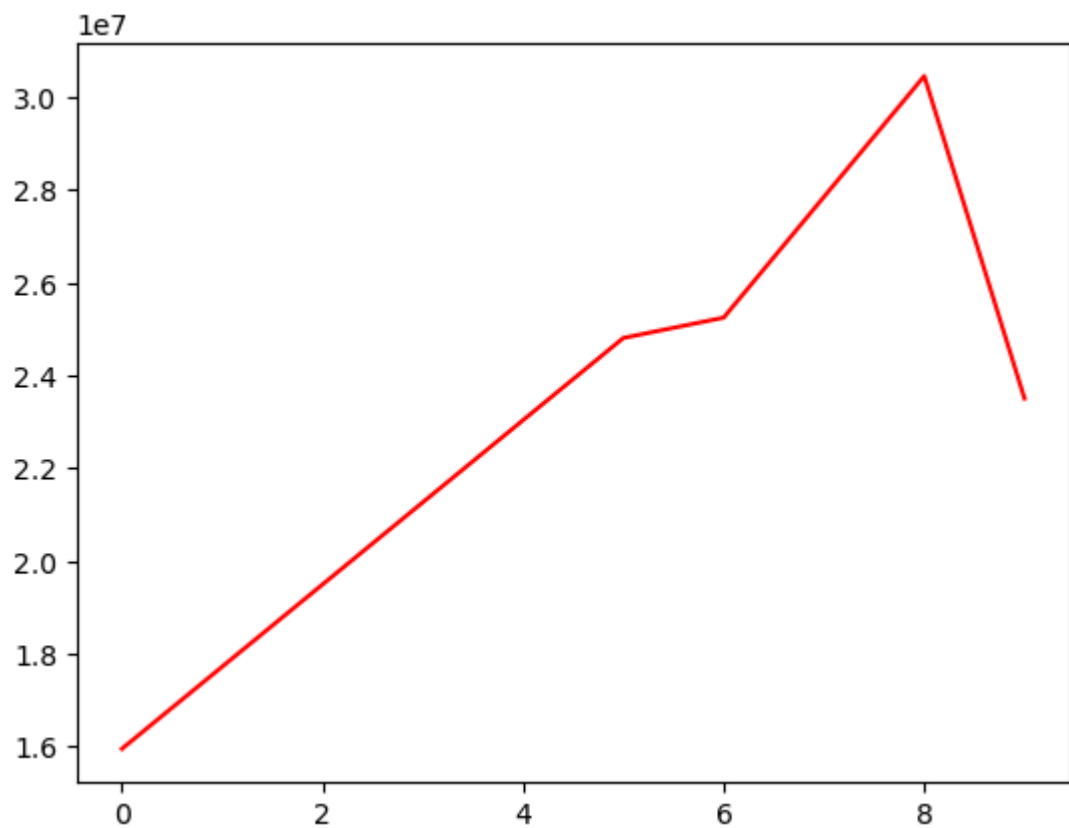
```
In [30]: plt.plot(Salary[0], color='black')
```

```
Out[30]: [<matplotlib.lines.Line2D at 0x214b02fbd40>]
```

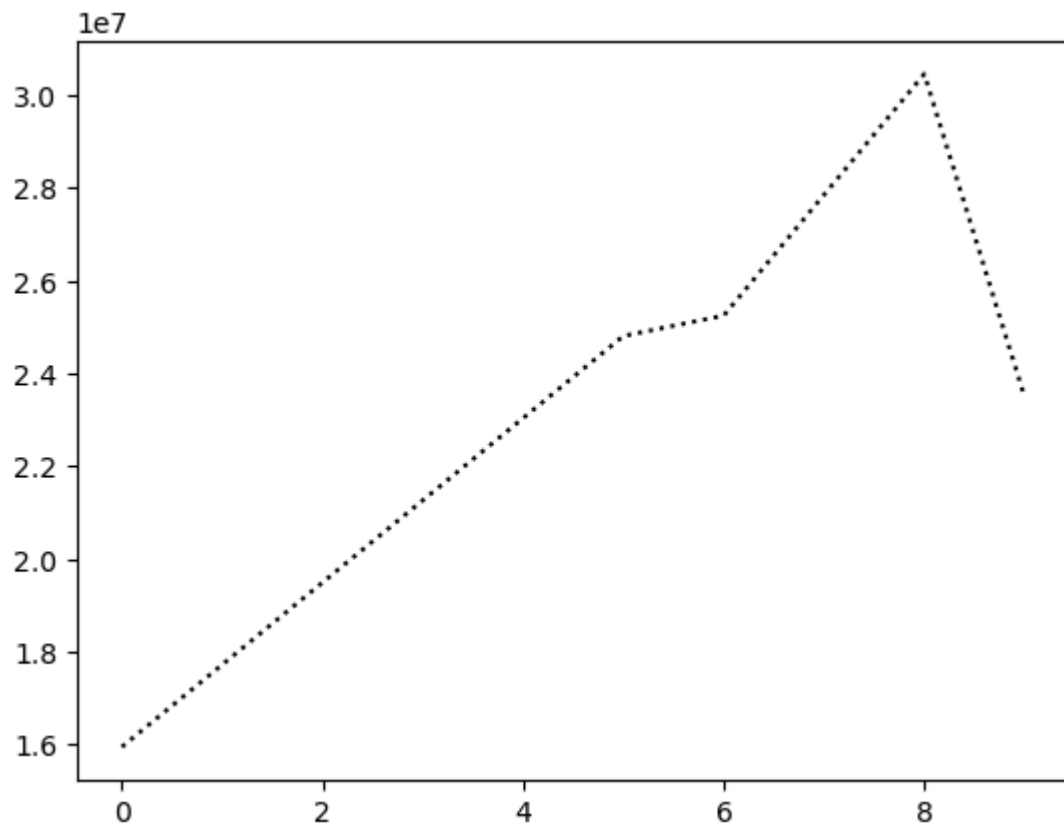
```
In [31]: plt.plot(Salary[0], c = 'r')
```

```
Out[31]: [<matplotlib.lines.Line2D at 0x214aeab8110>]
```



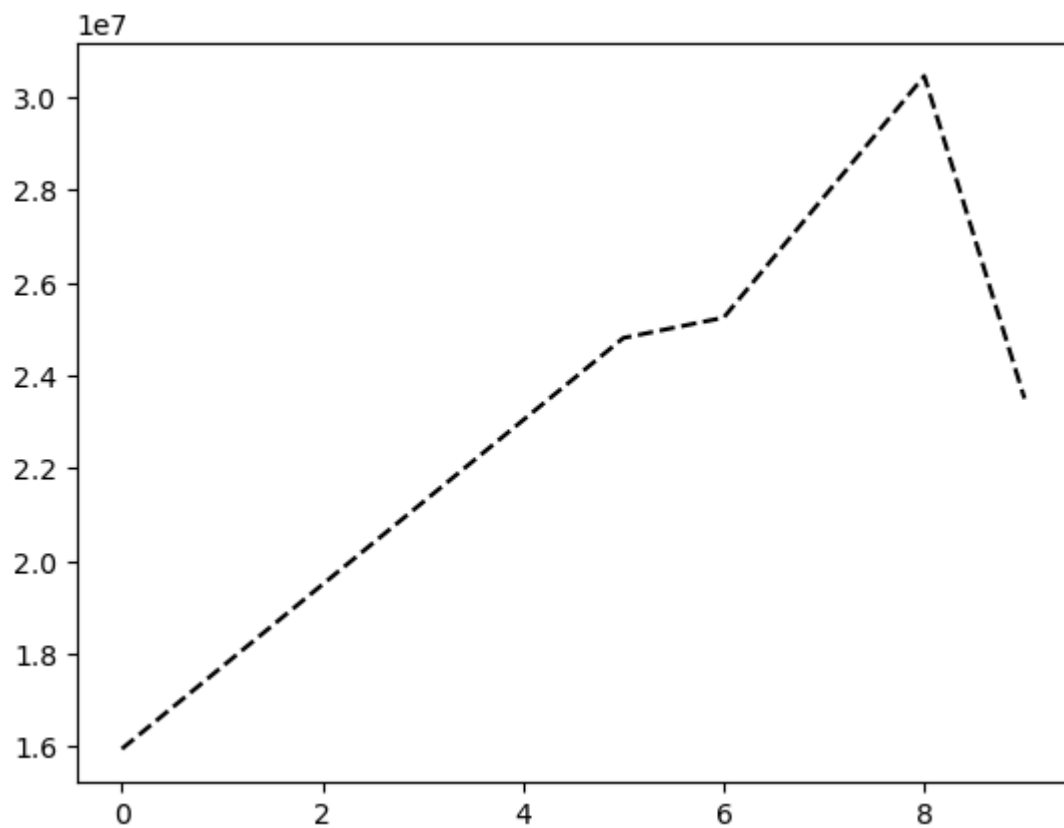
```
In [32]: plt.plot(Salary[0], c = 'k', ls = ':')
```

```
Out[32]: [<matplotlib.lines.Line2D at 0x214aeade060>]
```



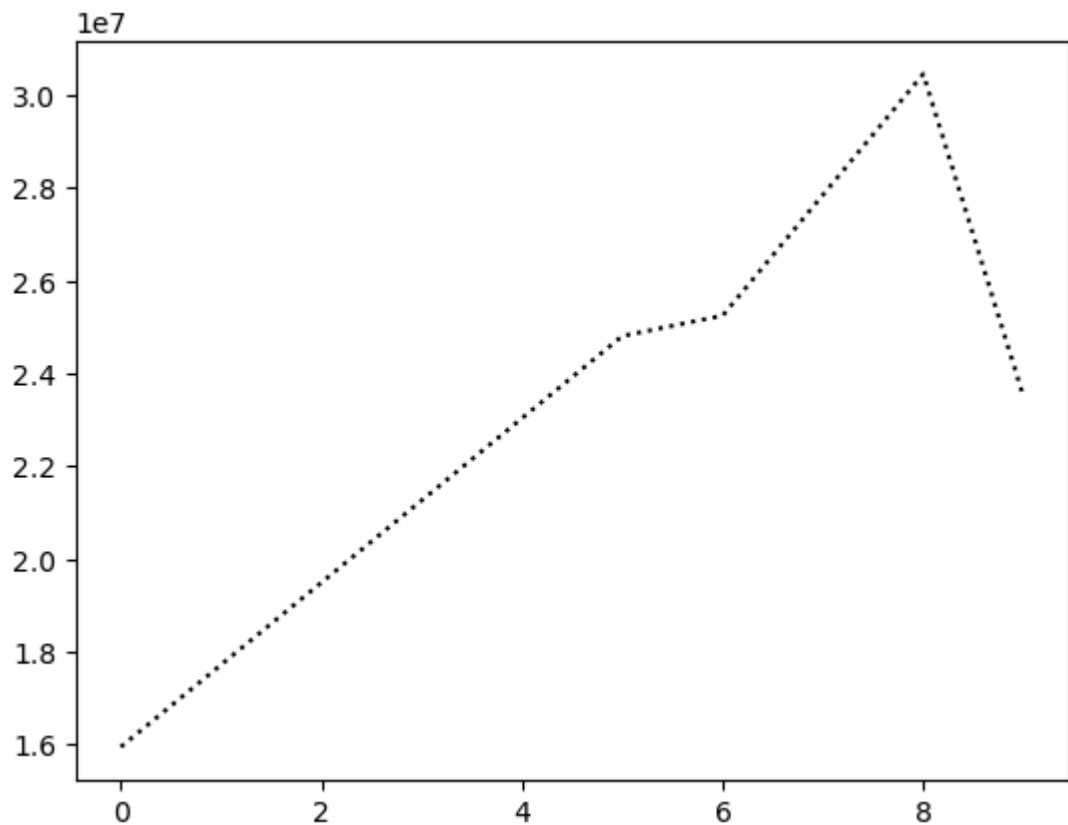
```
In [33]: plt.plot(Salary[0], c = 'k', ls = 'dashed')
```

```
Out[33]: [<matplotlib.lines.Line2D at 0x214aeb2e1b0>]
```



```
In [34]: plt.plot(Salary[0], c = 'k', ls = 'dotted')
```

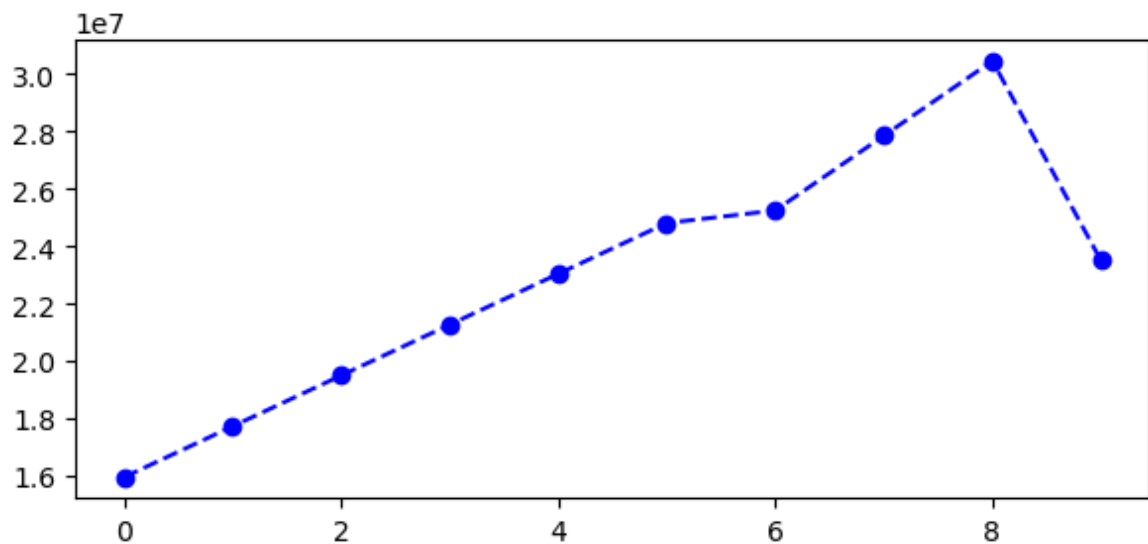
```
Out[34]: [<matplotlib.lines.Line2D at 0x214b03f8110>]
```



```
In [36]: %matplotlib inline
plt.rcParams['figure.figsize'] = 7,3
```

```
In [38]: plt.plot(Salary[0], c = 'Blue',ls = '--', marker = 'o')
```

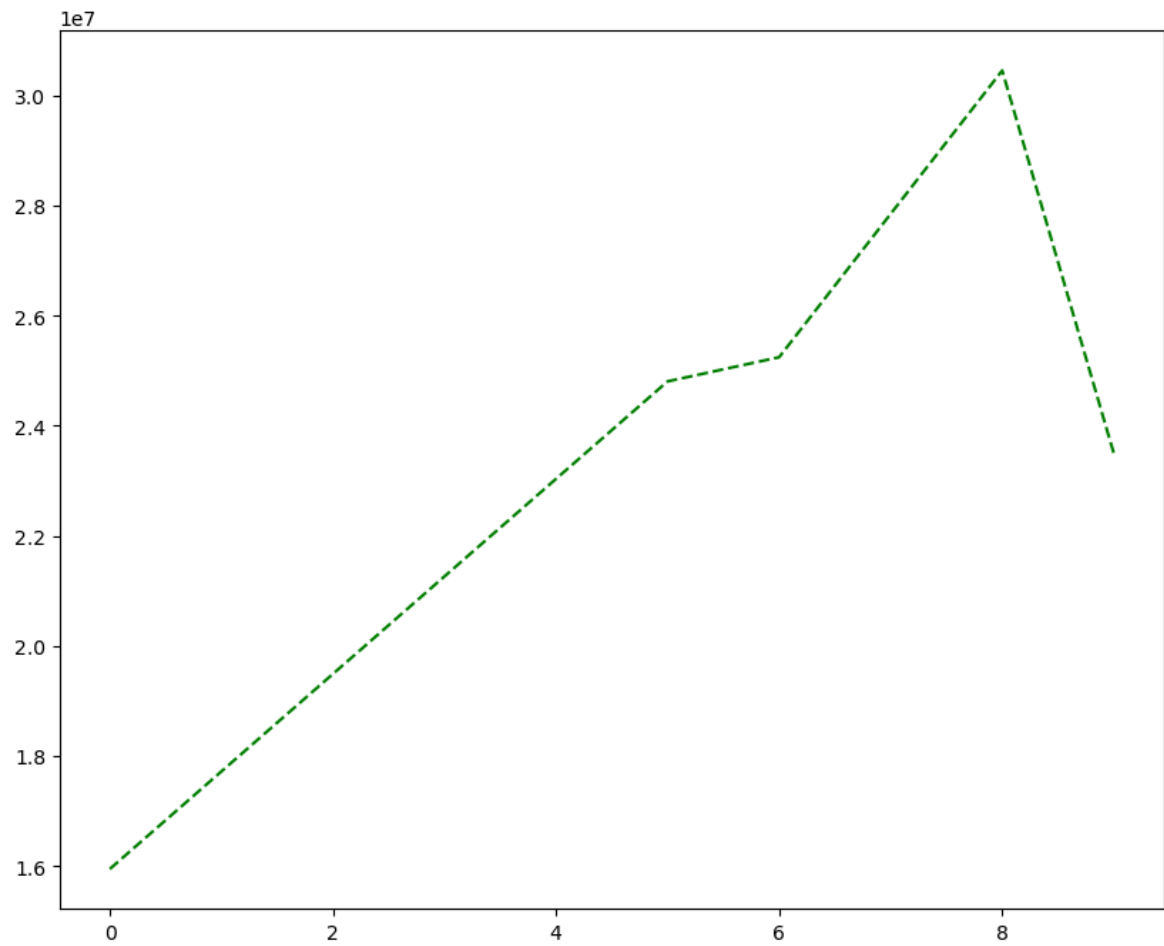
```
Out[38]: [<matplotlib.lines.Line2D at 0x214b16a9be0>]
```



```
In [39]: %matplotlib inline
plt.rcParams['figure.figsize'] = 10,8
```

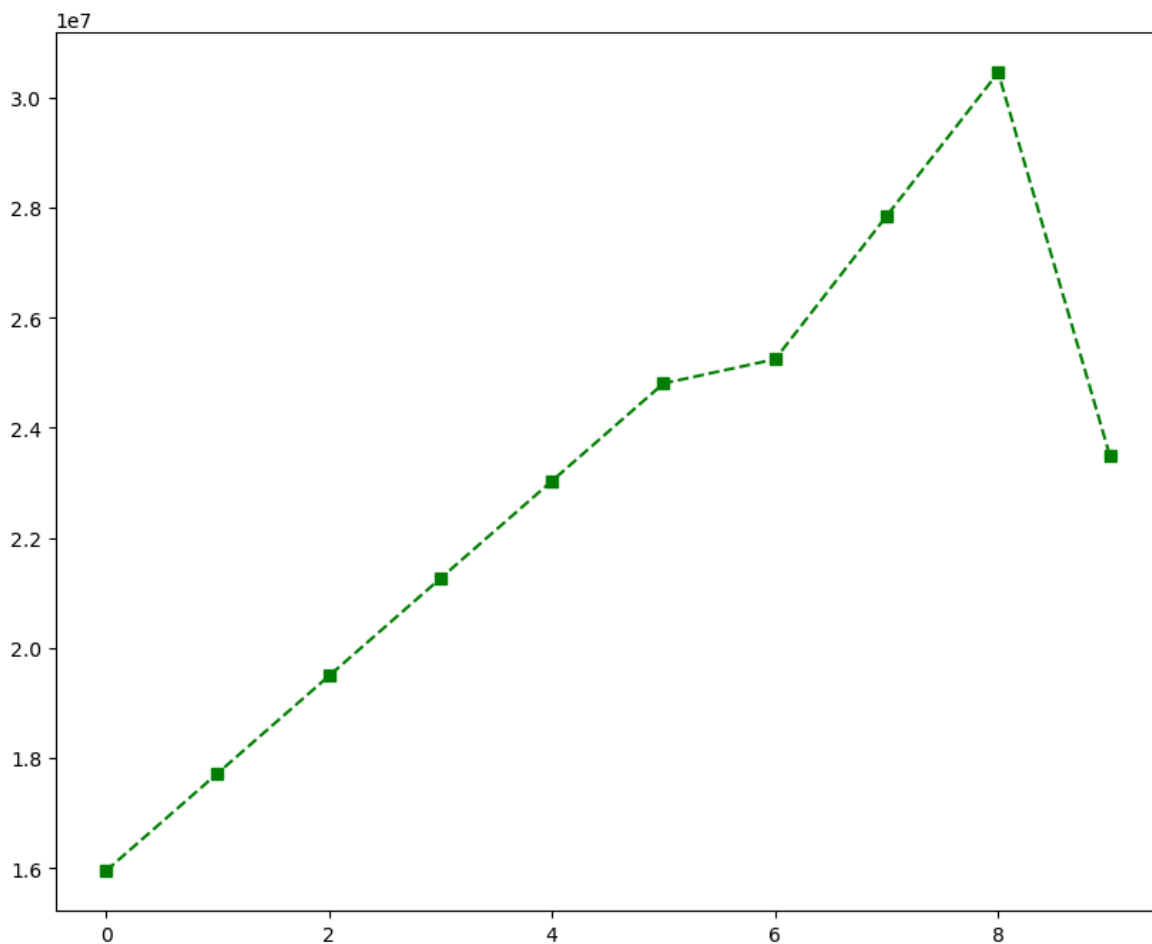
```
In [41]: plt.plot(Salary[0], c='Green', ls = 'dashed')
```

```
Out[41]: [<matplotlib.lines.Line2D at 0x214b6515130>]
```



```
In [42]: plt.plot(Salary[0], c='Green', ls = '--', marker = 's')
```

```
Out[42]: [<matplotlib.lines.Line2D at 0x214b6b08f20>]
```



```
In [48]: list(range(0,10))
```

```
Out[48]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

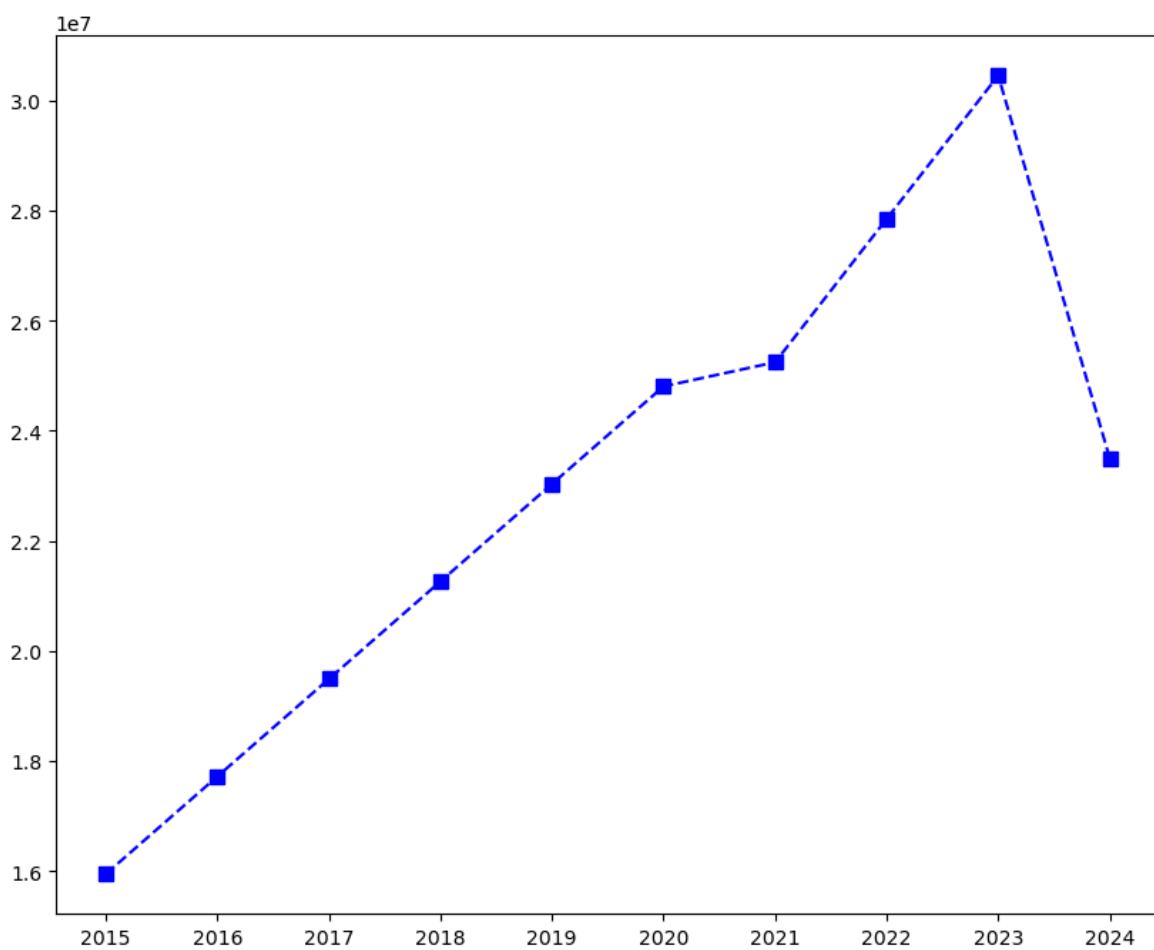
```
In [49]: Sdict
```

```
Out[49]: {'2015': 0,  
          '2016': 1,  
          '2017': 2,  
          '2018': 3,  
          '2019': 4,  
          '2020': 5,  
          '2021': 6,  
          '2022': 7,  
          '2023': 8,  
          '2024': 9}
```

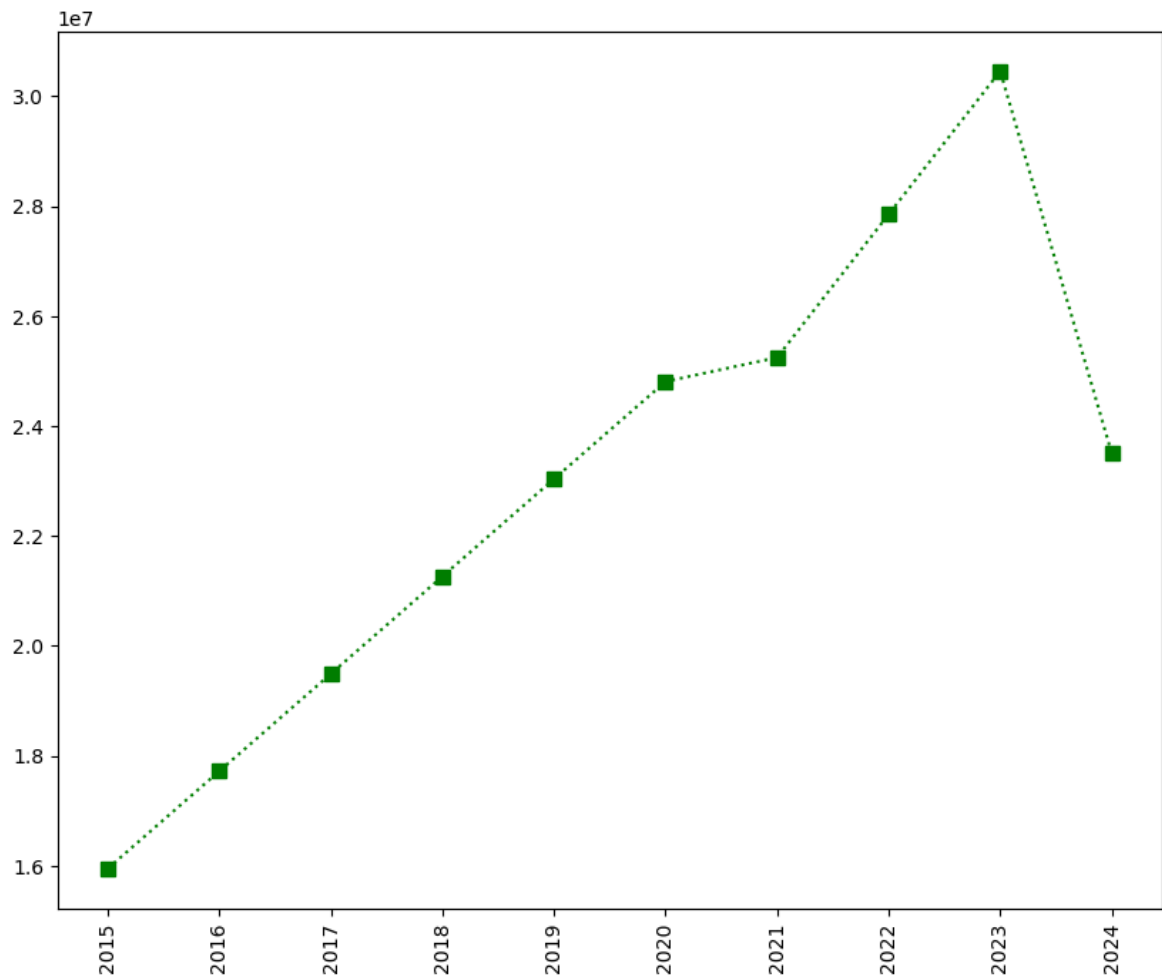
```
In [43]: Pdict
```

```
Out[43]: {'Sachin': 0,  
          'Rahul': 1,  
          'Smith': 2,  
          'Sami': 3,  
          'Pollard': 4,  
          'Morris': 5,  
          'Samson': 6,  
          'Dhoni': 7,  
          'Kohli': 8,  
          'Sky': 9}
```

```
In [44]: plt.plot(Salary[0], c='blue', ls = '--', marker = 's', ms = 7)
plt.xticks(list(range(0,10)), Seasons)
plt.show()
```



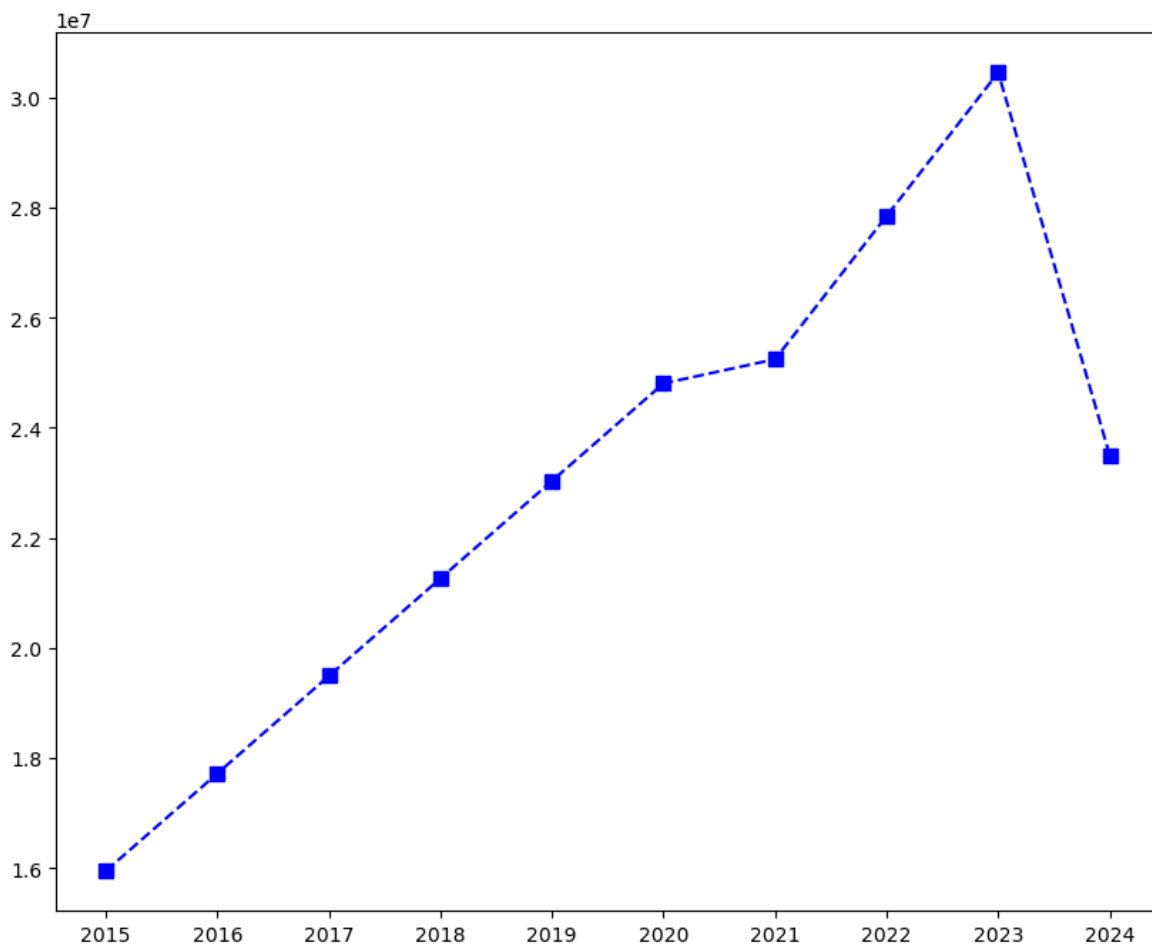
```
In [52]: plt.plot(Salary[0], c='Green', ls = ':', marker = 's', ms = 7, label = Players[0])
plt.xticks(list(range(0,10)), Seasons, rotation='vertical')
plt.show()
```



In [45]: Games

```
Out[45]: array([[80, 77, 82, 82, 73, 82, 58, 78, 6, 35],
                [82, 57, 82, 79, 76, 72, 60, 72, 79, 80],
                [79, 78, 75, 81, 76, 79, 62, 76, 77, 69],
                [80, 65, 77, 66, 69, 77, 55, 67, 77, 40],
                [82, 82, 82, 79, 82, 78, 54, 76, 71, 41],
                [70, 69, 67, 77, 70, 77, 57, 74, 79, 44],
                [78, 64, 80, 78, 45, 80, 60, 70, 62, 82],
                [35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
                [40, 40, 40, 81, 78, 81, 39, 0, 10, 51],
                [75, 51, 51, 79, 77, 76, 49, 69, 54, 62]])
```

```
In [47]: plt.plot(Salary[0], c='Blue', ls='--', marker='s', ms=7, label=Players[0])
plt.xticks(list(range(0,10)), Seasons,rotation='horizontal')
plt.show()
```



```
In [48]: Salary[0]
```

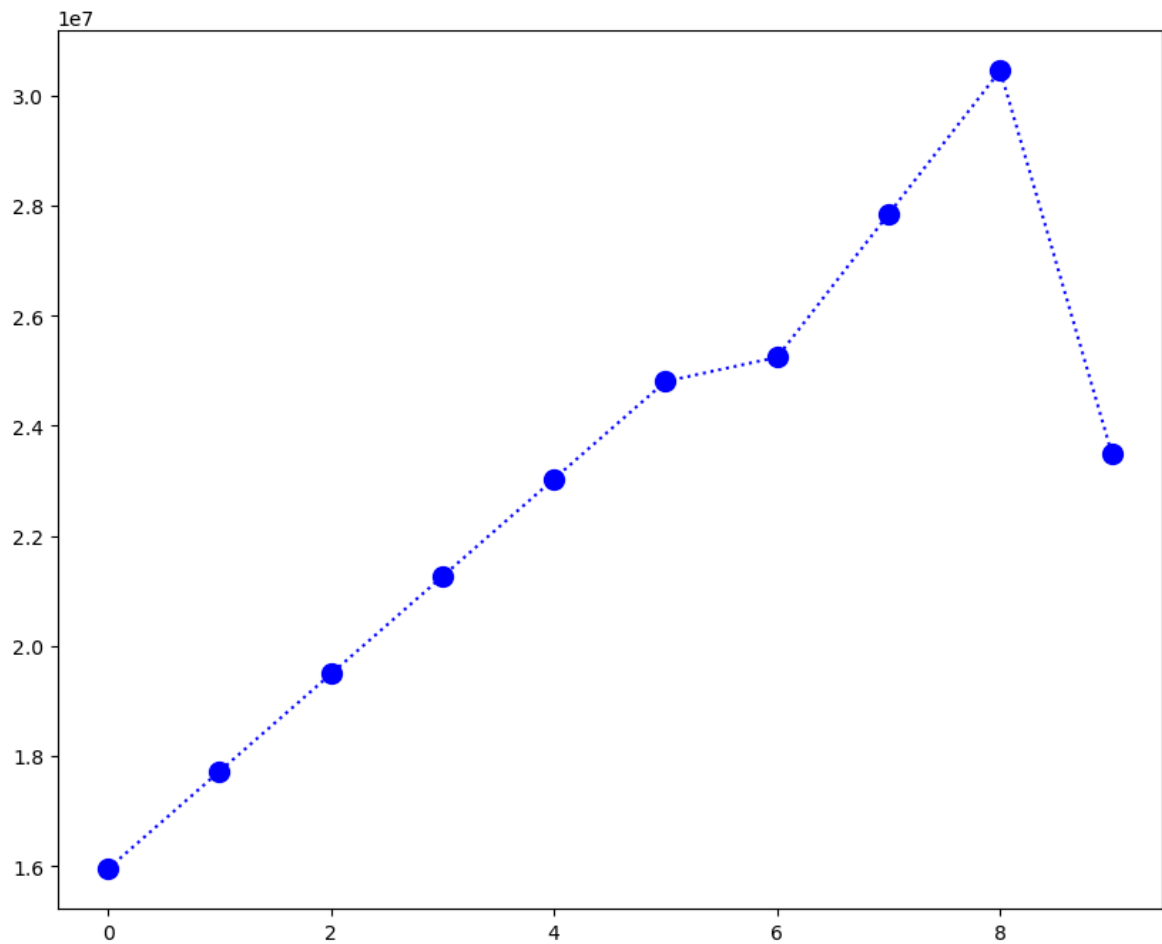
```
Out[48]: array([15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                25244493, 27849149, 30453805, 23500000])
```

```
In [49]: Salary[1]
```

```
Out[49]: array([12000000, 12744189, 13488377, 14232567, 14976754, 16324500,
                18038573, 19752645, 21466718, 23180790])
```

```
In [50]: plt.plot(Salary[0], c='Blue', ls = ':', marker = 'o', ms=10, label=Players[1])
```

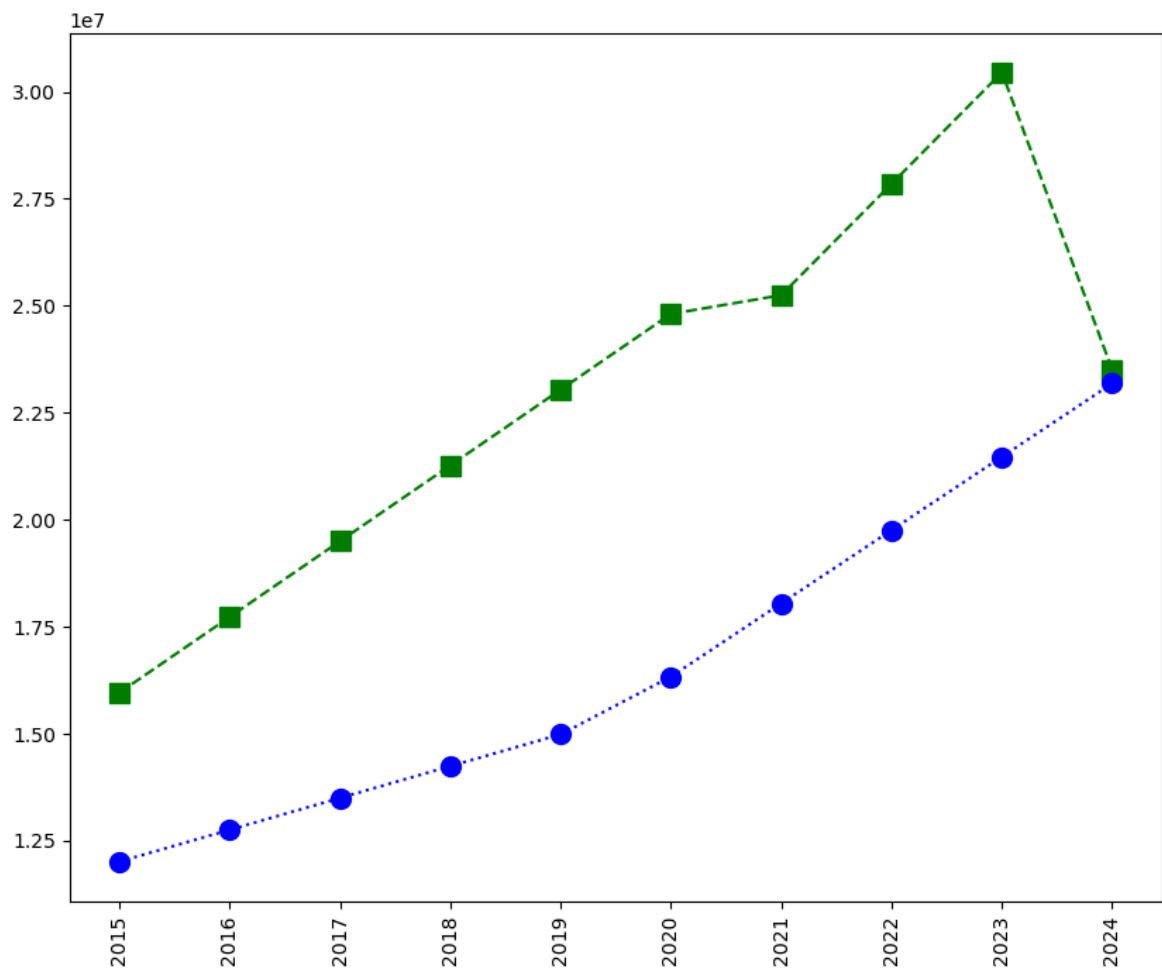
```
Out[50]: [ <matplotlib.lines.Line2D at 0x214b6629fd0>]
```

```
In [54]: plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms=10, label=Players[0])
plt.plot(Salary[1], c='Blue', ls = ':', marker = 'o', ms=10, label=Players[1])

plt.xticks(list(range(0,10)), Seasons,rotation='vertical')

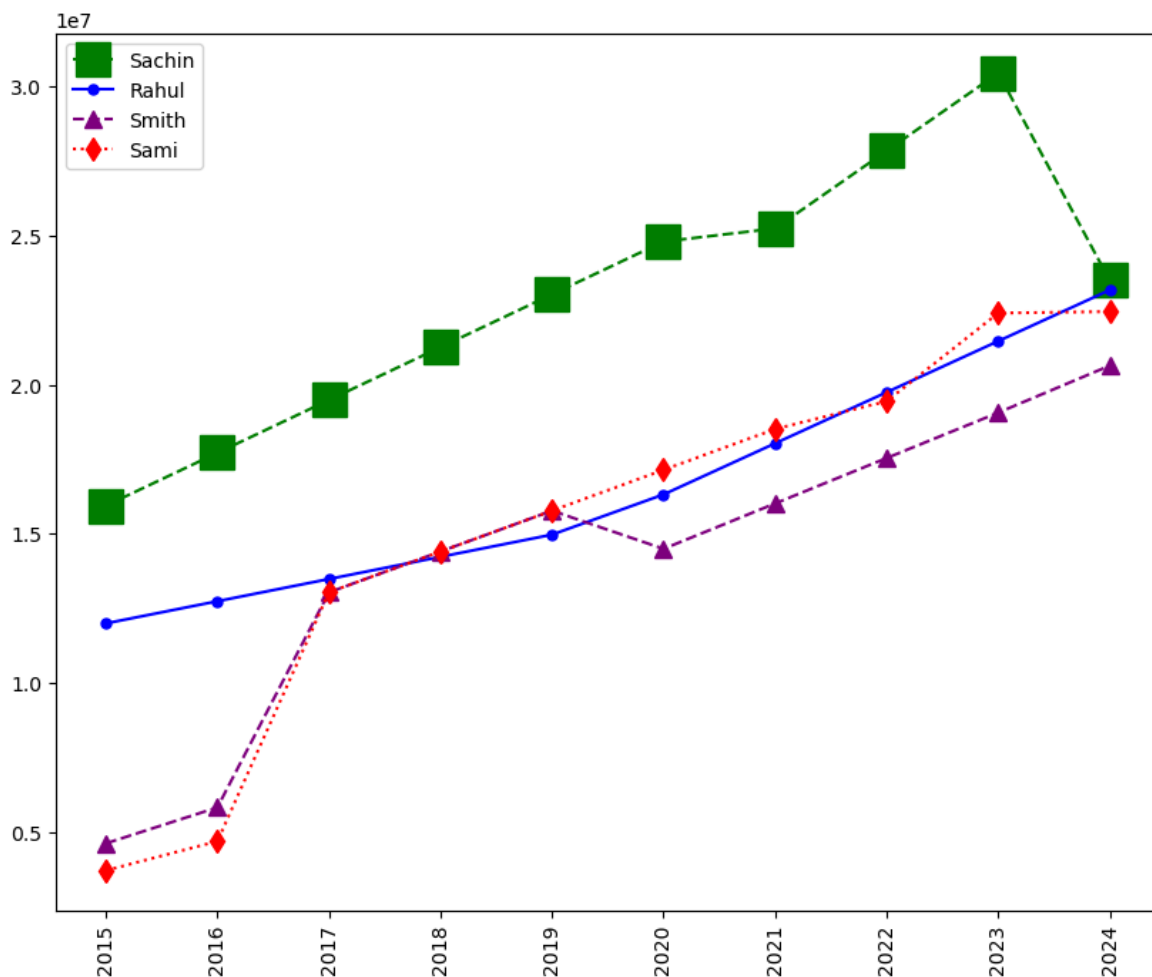
plt.show()
```



```
In [58]: plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms=17, label=Players[0])
plt.plot(Salary[1], c='Blue', ls = '-', marker = 'o', ms=5, label=Players[1])
plt.plot(Salary[2], c='purple', ls = '--', marker = '^', ms=8, label=Players[2])
plt.plot(Salary[3], c='red', ls = ':', marker = 'd', ms=8, label=Players[3])
plt.legend()

plt.xticks(list(range(0,10)), Seasons, rotation='vertical')

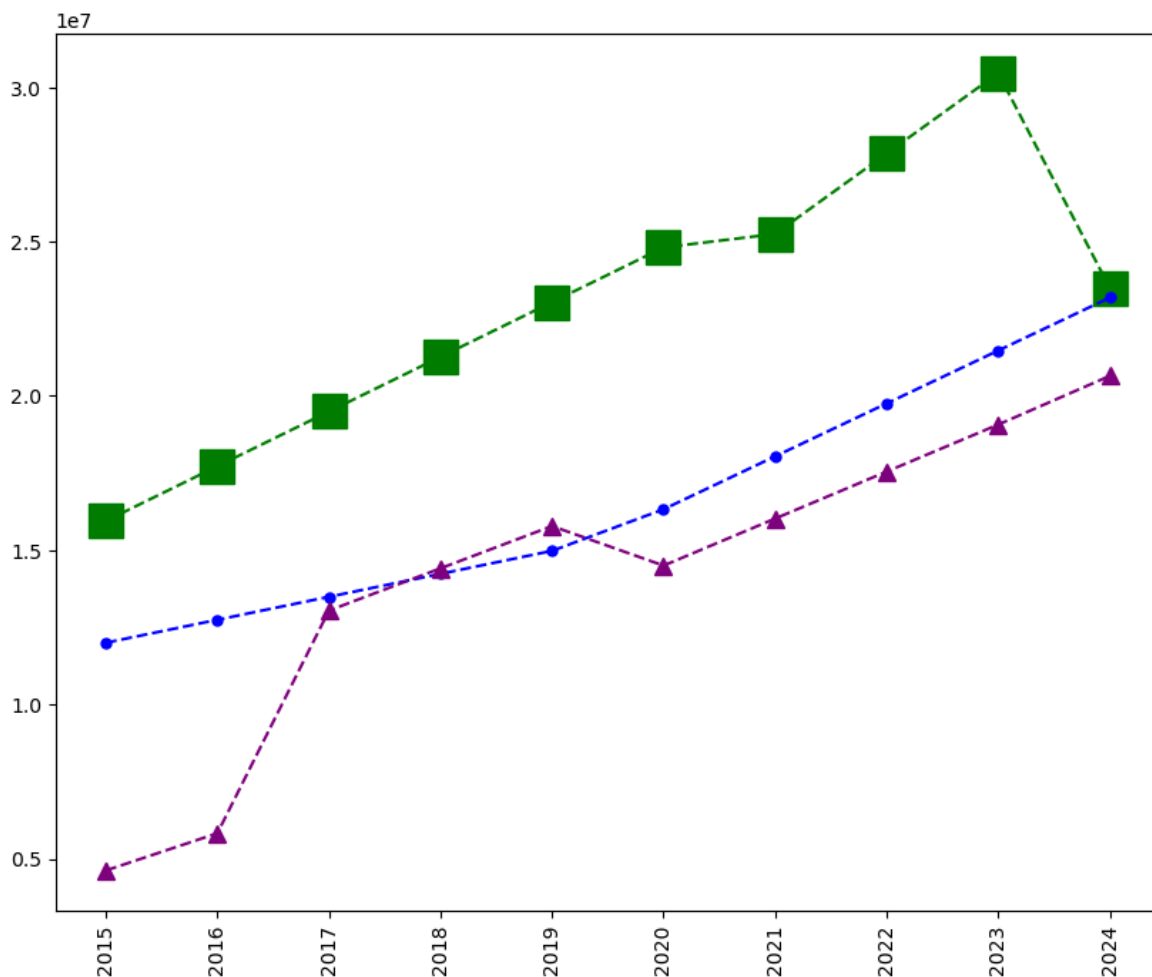
plt.show()
```



```
In [57]: plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms=17, label=Players[0])
plt.plot(Salary[1], c='Blue', ls = '--', marker = 'o', ms=5, label=Players[1])
plt.plot(Salary[2], c='purple', ls = '--', marker = '^', ms=8, label=Players[2])

plt.xticks(list(range(0,10)), Seasons, rotation='vertical')

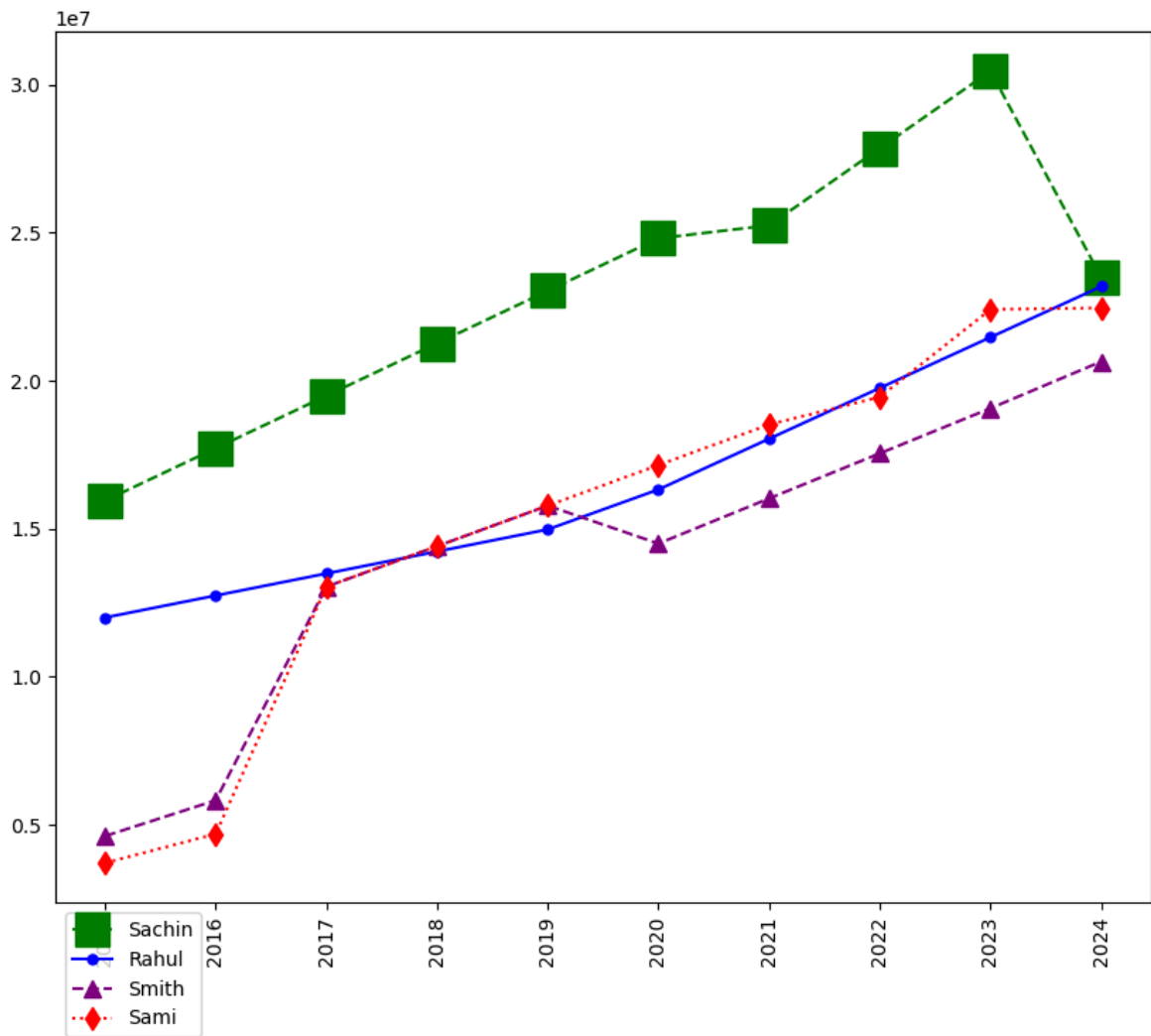
plt.show()
```



```
In [60]: plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms=17, label=Players[0])
plt.plot(Salary[1], c='Blue', ls = '-', marker = 'o', ms=5, label=Players[1])
plt.plot(Salary[2], c='purple', ls = '--', marker = '^', ms=8, label=Players[2])
plt.plot(Salary[3], c='red', ls = ':', marker = 'd', ms=8, label=Players[3])

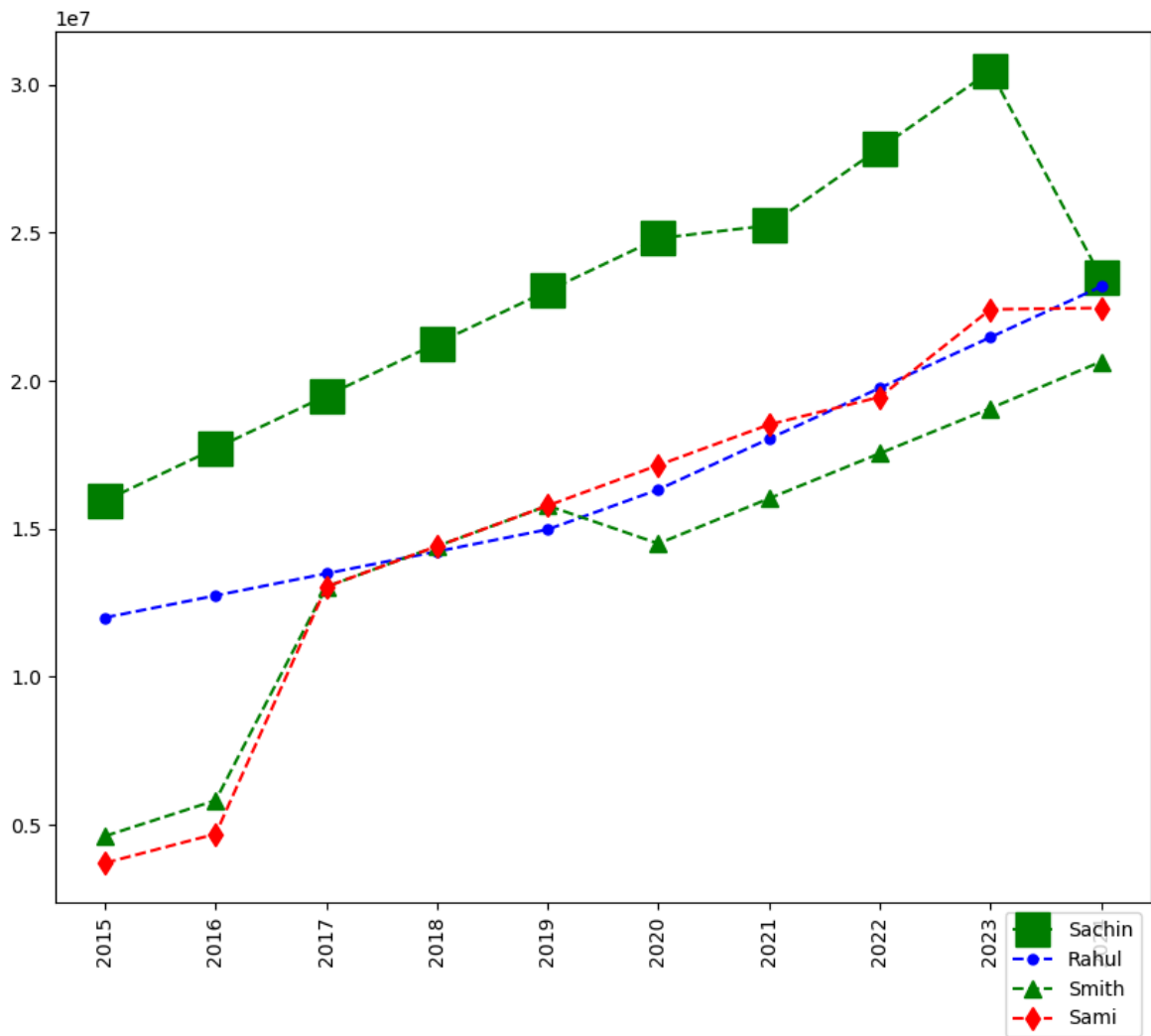
plt.legend(loc='upper left', bbox_to_anchor=(0,0) )

plt.xticks(list(range(0,10)), Seasons, rotation='vertical')
plt.show()
```



```
In [61]: plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms=17, label=Players[0])
plt.plot(Salary[1], c='Blue', ls = '--', marker = 'o', ms=5, label=Players[1])
plt.plot(Salary[2], c='Green', ls = '--', marker = '^', ms=8, label=Players[2])
plt.plot(Salary[3], c='red', ls = '--', marker = 'd', ms=8, label=Players[3])
plt.legend(loc='upper right',bbox_to_anchor=(1,0) )
plt.xticks(list(range(0,10)), Seasons, rotation='vertical')

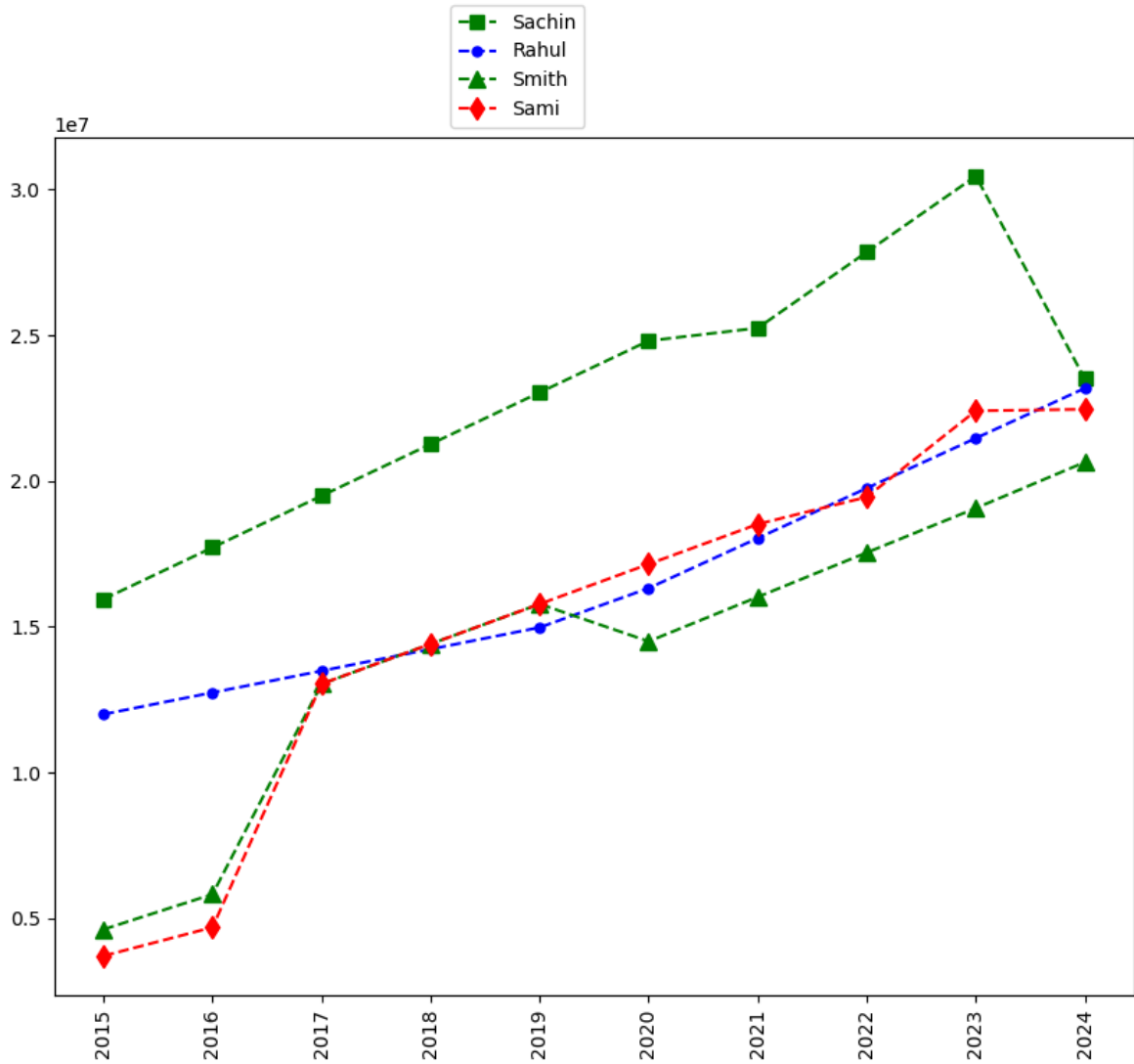
plt.show()
```



```
In [64]: plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms=7, label=Players[0])
plt.plot(Salary[1], c='Blue', ls = '--', marker = 'o', ms=5, label=Players[1])
plt.plot(Salary[2], c='Green', ls = '--', marker = '^', ms=8, label=Players[2])
plt.plot(Salary[3], c='red', ls = '--', marker = 'd', ms=8, label=Players[3])

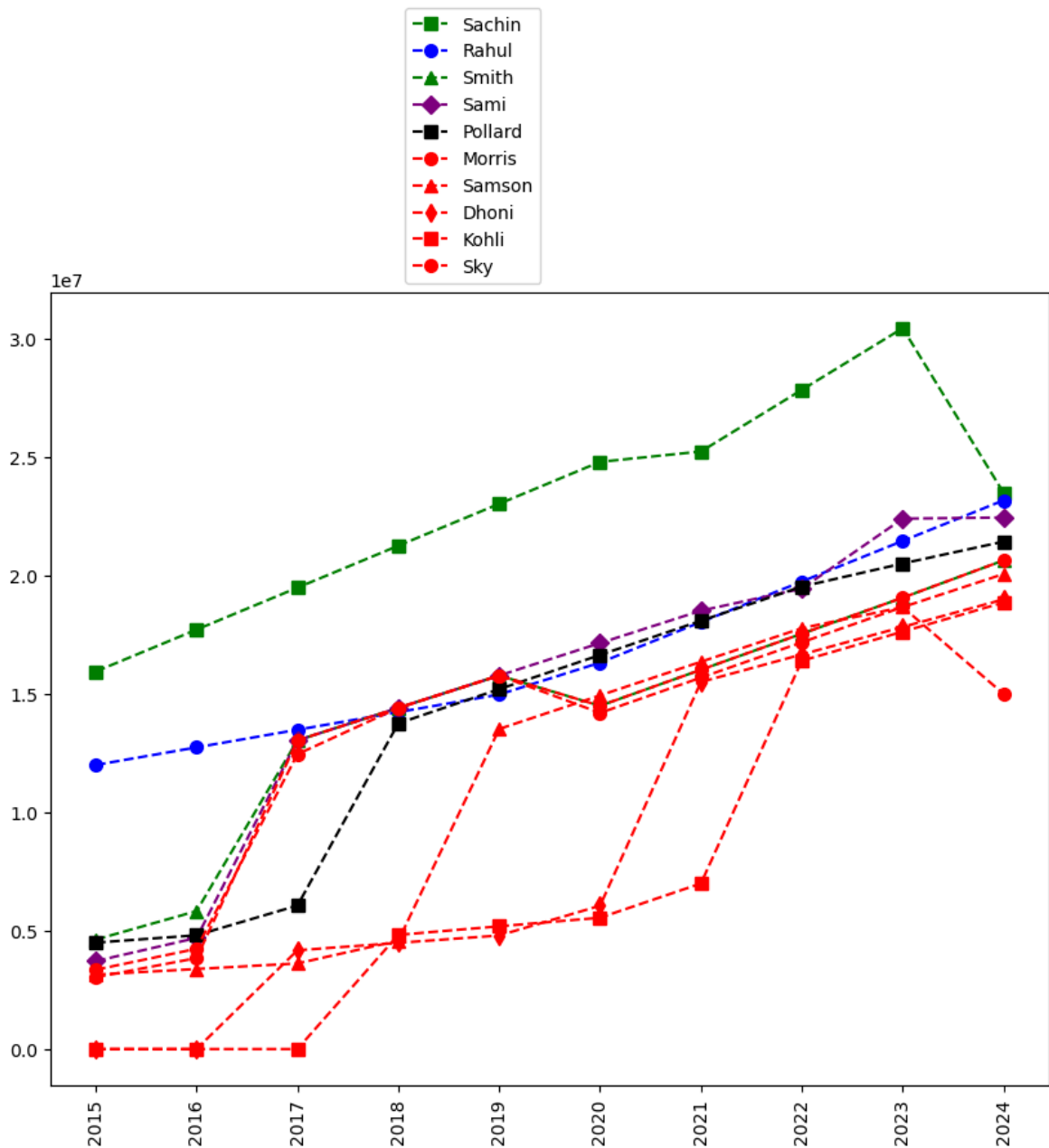
plt.legend(loc='lower right',bbox_to_anchor=(0.5,1) )
plt.xticks(list(range(0,10)), Seasons, rotation='vertical')

plt.show()
```



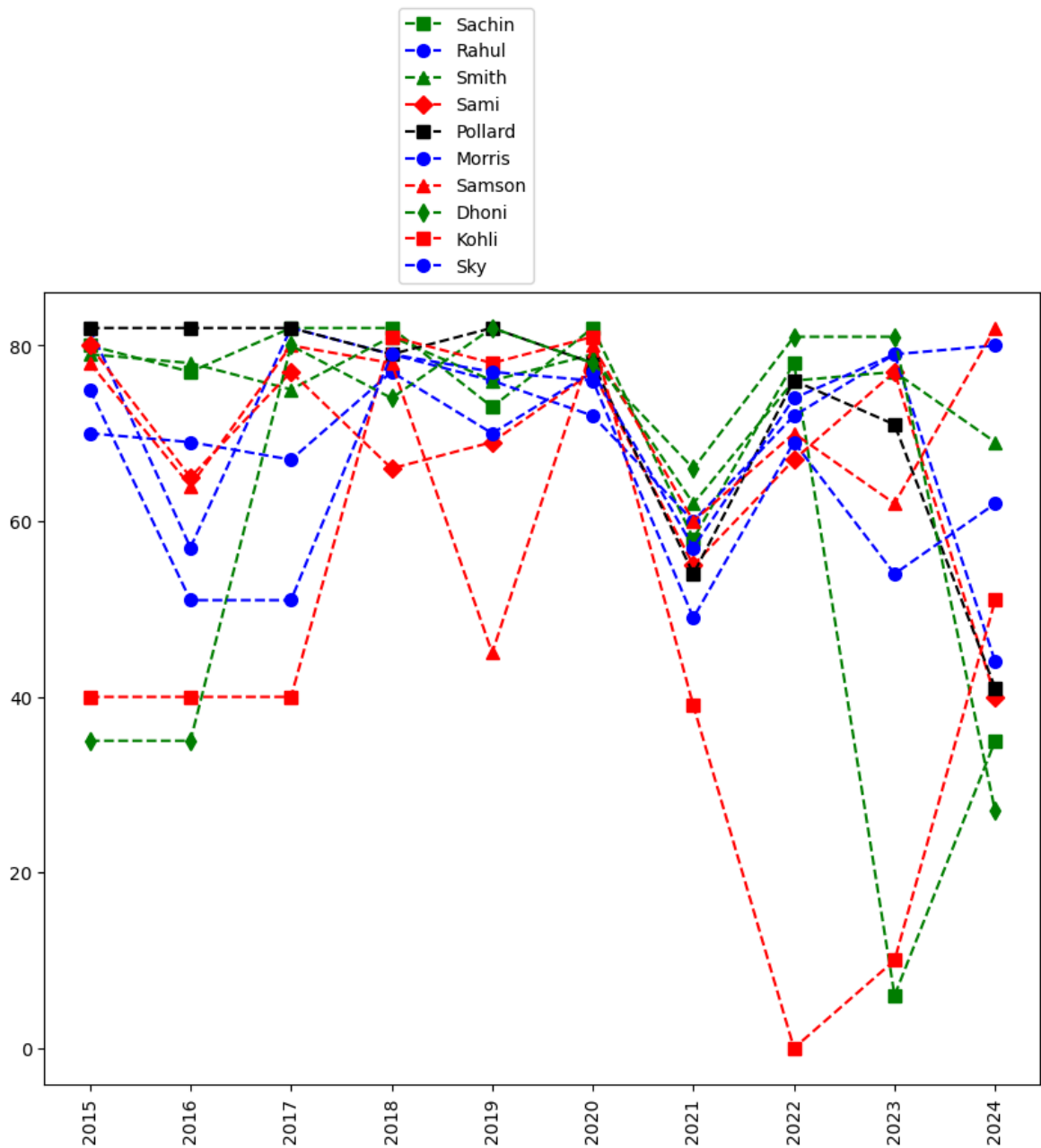
```
In [65]: plt.plot(Salary[0],c='Green',ls='--',marker='s',ms=7, label=Players[0])
plt.plot(Salary[1],c='Blue',ls='--',marker='o',ms=7, label=Players[1])
plt.plot(Salary[2],c='Green',ls='--',marker='^',ms=7, label=Players[2])
plt.plot(Salary[3],c='Purple',ls='--',marker='D',ms=7, label=Players[3])
plt.plot(Salary[4],c='Black',ls='--',marker='s',ms=7, label=Players[4])
plt.plot(Salary[5],c='red',ls='--',marker='o',ms=7, label=Players[5])
plt.plot(Salary[6],c='red',ls='--',marker='^',ms=7, label=Players[6])
plt.plot(Salary[7],c='red',ls='--',marker='d',ms=7, label=Players[7])
plt.plot(Salary[8],c='red',ls='--',marker='s',ms=7, label=Players[8])
plt.plot(Salary[9],c='red',ls='--',marker='o',ms=7, label=Players[9])
plt.legend(loc='lower right',bbox_to_anchor=(0.5,1) )
plt.xticks(list(range(0,10)), Seasons, rotation='vertical')

plt.show()
```



```
In [66]: plt.plot(Games[0],c='Green',ls='--',marker='s',ms=7, label=Players[0])
plt.plot(Games[1],c='Blue',ls='--',marker='o',ms=7, label=Players[1])
plt.plot(Games[2],c='Green',ls='--',marker='^',ms=7, label=Players[2])
plt.plot(Games[3],c='red',ls='--',marker='D',ms=7, label=Players[3])
plt.plot(Games[4],c='Black',ls='--',marker='s',ms=7, label=Players[4])
plt.plot(Games[5],c='Blue',ls='--',marker='o',ms=7, label=Players[5])
plt.plot(Games[6],c='red',ls='--',marker='^',ms=7, label=Players[6])
plt.plot(Games[7],c='Green',ls='--',marker='d',ms=7, label=Players[7])
plt.plot(Games[8],c='red',ls='--',marker='s',ms=7, label=Players[8])
plt.plot(Games[9],c='Blue',ls='--',marker='o',ms=7, label=Players[9])
plt.legend(loc='lower right',bbox_to_anchor=(0.5,1) )
plt.xticks(list(range(0,10)), Seasons, rotation='vertical')

plt.show()
```

- In this section we learned -

1>Matrices 2>Building matrices - np.reshape 3>Dictionaried in python (order doesnot mater) (keys & values) 4>visualizaing using pyplot 5>Basket ball analysis

In []: