

```

In [3]: #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 [5]: Salary #displaying salary

```

```
Out[5]: 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 [7]: Games *#displaying 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 [9]: Points *#displaying points*

```
Out[9]: 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 [11]: Games

```
Out[11]: 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 [13]: Games[5] # fetching only 5th row
```

```
Out[13]: array([70, 69, 67, 77, 70, 77, 57, 74, 79, 44])
```

```
In [15]: Games[0:5] #slicing from 0 to 5-1 rows
```

```
Out[15]: 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 [17]: Games[0,5] # fetching 0th row 5th col element
```

```
Out[17]: 82
```

```
In [19]: Games[0:2] # slicing 0 to 2-1 rows
```

```
Out[19]: array([[80, 77, 82, 82, 73, 82, 58, 78, 6, 35],
                [82, 57, 82, 79, 76, 72, 60, 72, 79, 80]])
```

```
In [21]: Games[1:2] # slicing 1 to 2-1 rows
```

```
Out[21]: array([[82, 57, 82, 79, 76, 72, 60, 72, 79, 80]])
```

```
In [23]: Games[-3:-1] # slicing from backward of array
```

```
Out[23]: array([[35, 35, 80, 74, 82, 78, 66, 81, 81, 27],
                [40, 40, 40, 81, 78, 81, 39, 0, 10, 51]])
```

```
In [25]: Points
```

```
Out[25]: 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 [27]: Points[0]
```

```
Out[27]: array([2832, 2430, 2323, 2201, 1970, 2078, 1616, 2133, 83, 782])
```

```
In [29]: Points[:] # prints whole points array
```

```
Out[29]: 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 [31]: Games
```

```
Out[31]: 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 [33]: Pdict
```

```
Out[33]: {'Sachin': 0,
          'Rahul': 1,
          'Smith': 2,
          'Sami': 3,
          'Pollard': 4,
          'Morris': 5,
          'Samson': 6,
          'Dhoni': 7,
          'Kohli': 8,
          'Sky': 9}
```

```
In [35]: Pdict['Sachin']
```

```
Out[35]: 0
```

```
In [37]: Games[0]
```

```
Out[37]: array([80, 77, 82, 82, 73, 82, 58, 78, 6, 35])
```

```
In [39]: Games[Pdict['Sachin']]
```

```
Out[39]: array([80, 77, 82, 82, 73, 82, 58, 78, 6, 35])
```

```
In [41]: Games
```

```
Out[41]: 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 [43]: Pdict['Rahul']
```

```
Out[43]: 1
```

```
In [45]: Games[Pdict['Rahul']]
```

```
Out[45]: array([82, 57, 82, 79, 76, 72, 60, 72, 79, 80])
```

```
In [47]: Points
```

```
Out[47]: 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 [49]: Salary
```

```
Out[49]: 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 [51]: Games
```

```
Out[51]: 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 [53]: Salary/Games
```

C:\Users\ss\AppData\Local\Temp\ipykernel\_11208\3709746658.py:1: RuntimeWarning: divide by zero encountered in divide  
Salary/Games

```
Out[53]: 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 [55]: np.round(Salary/Games) # to remove decimals we use round here
```

```
C:\Users\ss\AppData\Local\Temp\ipykernel_11208\3232172828.py:1: RuntimeWarning: d
ivide by zero encountered in divide
  np.round(Salary/Games)
```

```
Out[55]: 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 [57]: import warnings
warnings.filterwarnings('ignore')
```

```
In [59]: import numpy as np
import matplotlib.pyplot as plt
```

```
In [60]: %matplotlib inline # keep the plot inside jupyter nots insted of getting in othe

UsageError: unrecognized arguments: # keep the plot inside jupyter nots insted of
getting in other screen
```

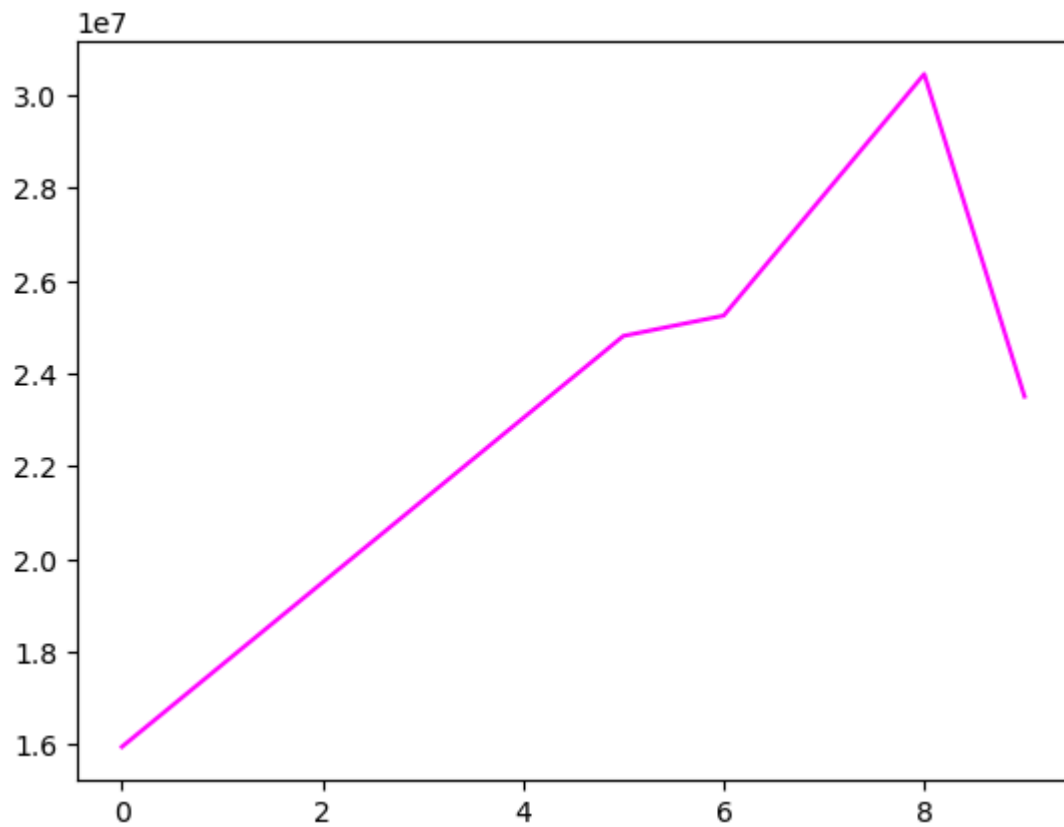
```
In [ ]: Salary
```

```
In [63]: Salary[0]
```

```
Out[63]: array([15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                25244493, 27849149, 30453805, 23500000])
```

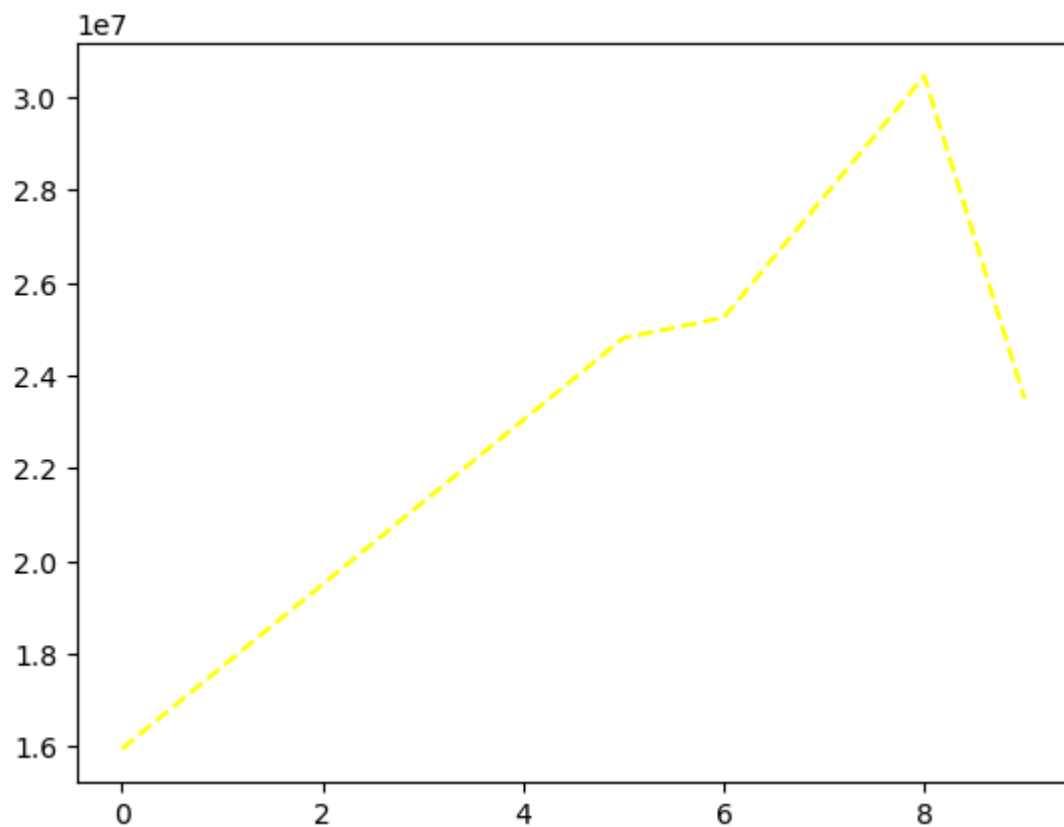
```
In [65]: plt.plot(Salary[0],color='magenta') # colors cab be 'b' for blue 'g' for green '
        # 'm' for magenta 'y' for yellow 'k' for bla
```

```
Out[65]: [<matplotlib.lines.Line2D at 0x16505873380>]
```



```
In [67]: plt.plot(Salary[0],color='yellow',ls='--') # Linestyle(ls) can be like '-' solid  
# ':' dotted line '-.' dashdot 'noli
```

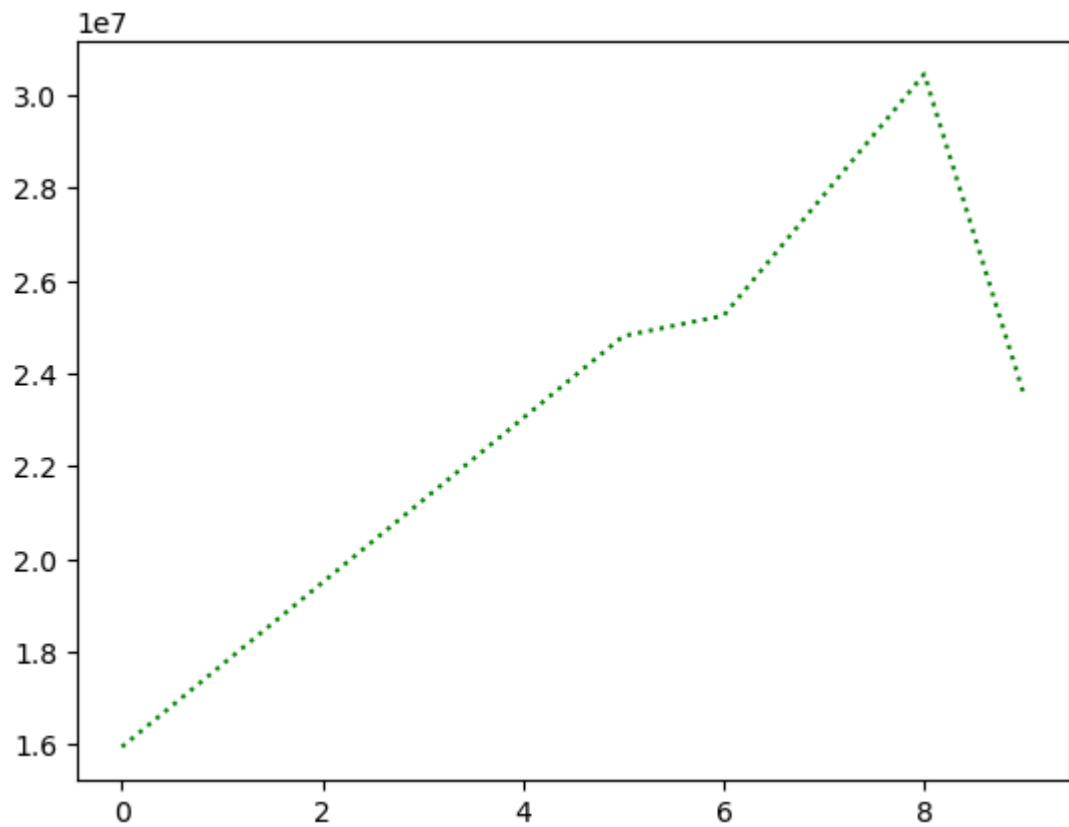
```
Out[67]: [<matplotlib.lines.Line2D at 0x165061a8f80>]
```



```
In [69]: plt.plot(Salary[0],color='green',ls='dotted')
```

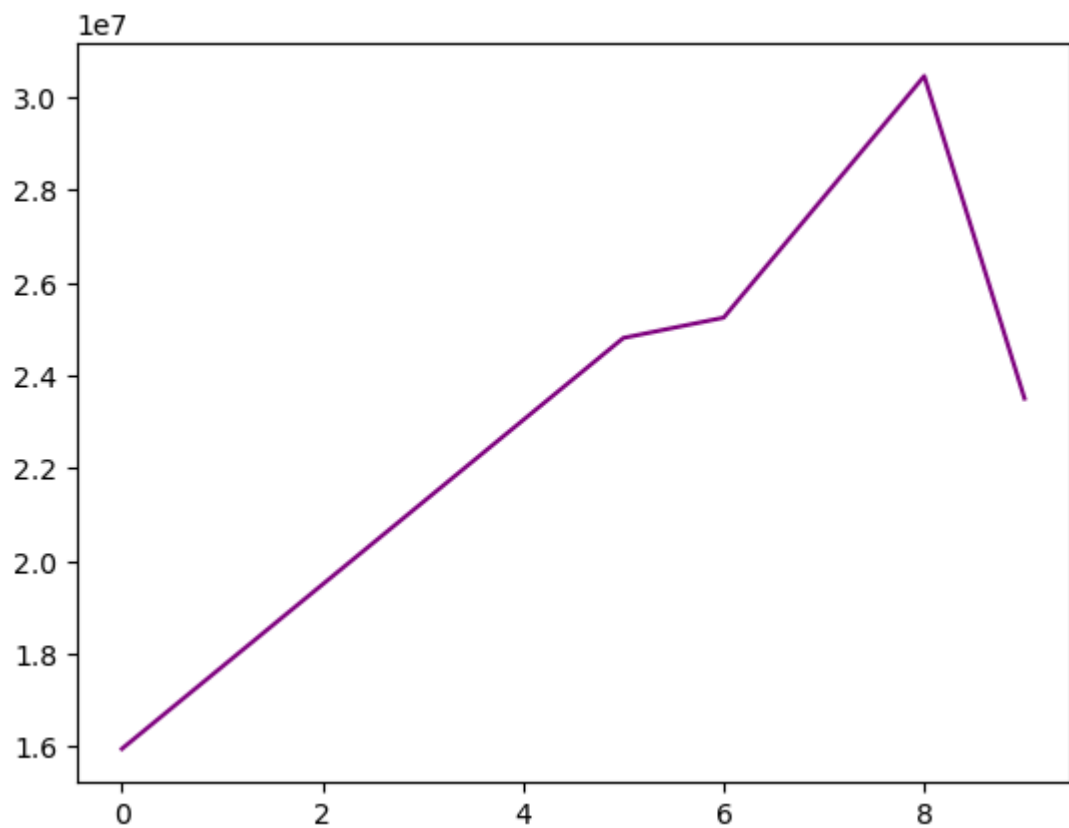
```
Out[69]: [<matplotlib.lines.Line2D at 0x165061e6930>]
```





```
In [94]: plt.plot(Salary[0],color='purple',ls='solid')
```

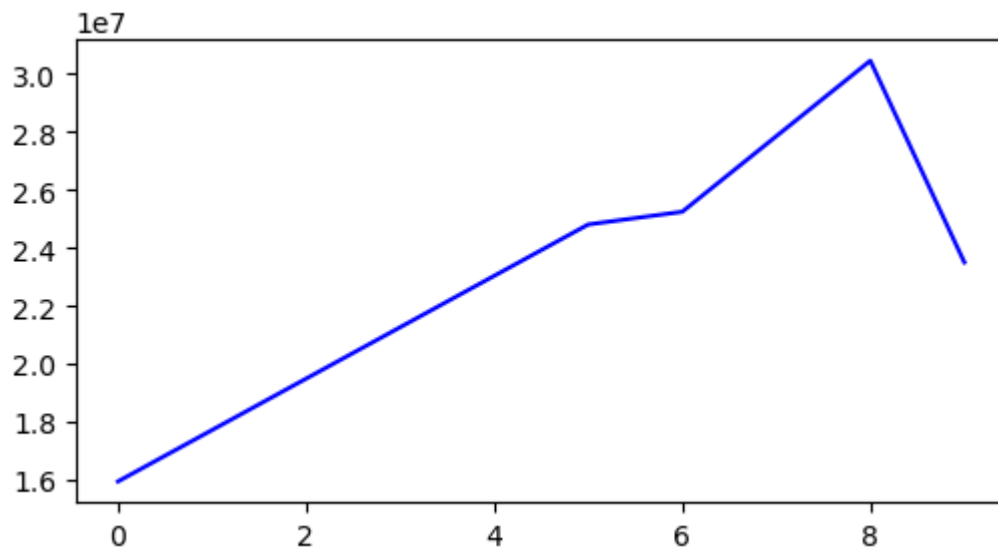
```
Out[94]: [<matplotlib.lines.Line2D at 0x11193ed74a0>]
```



```
In [273... %matplotlib inline  
plt.rcParams['figure.figsize'] = 6,3 # 6=width 3=height
```

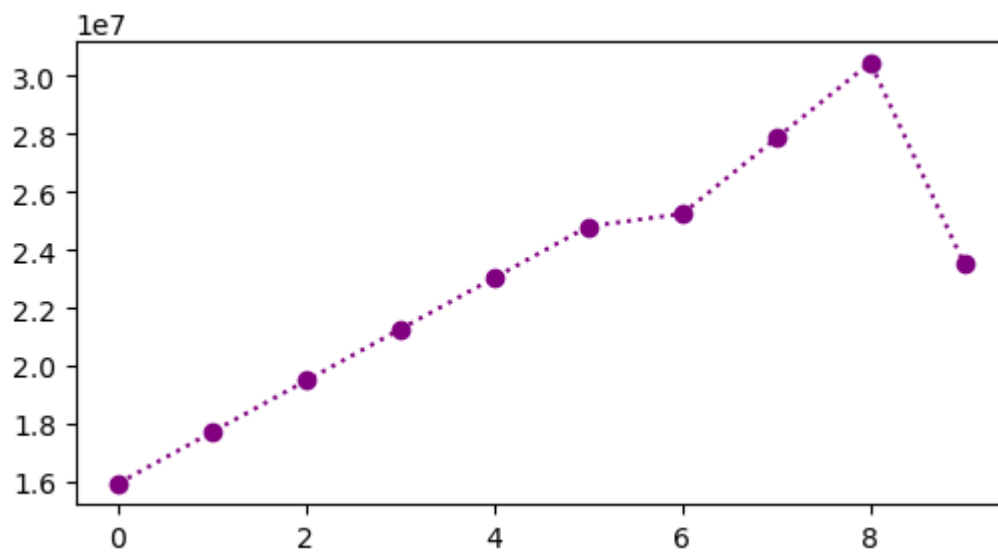
```
In [275... plt.plot(Salary[0],color='blue',linestyle='solid')
```

```
Out[275... [<matplotlib.lines.Line2D at 0x16510b7c290>]
```



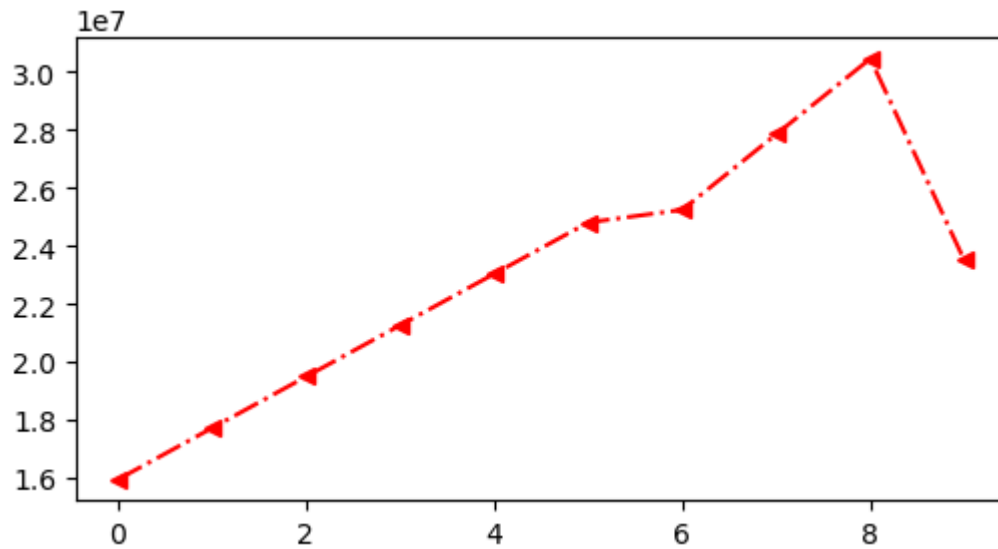
```
In [289... plt.plot(Salary[0],color='purple',ls='dotted',marker='o') # marker specify the s
# ',': Pixel marker 'o'
```

```
Out[289... [<matplotlib.lines.Line2D at 0x1650f43c200>]
```



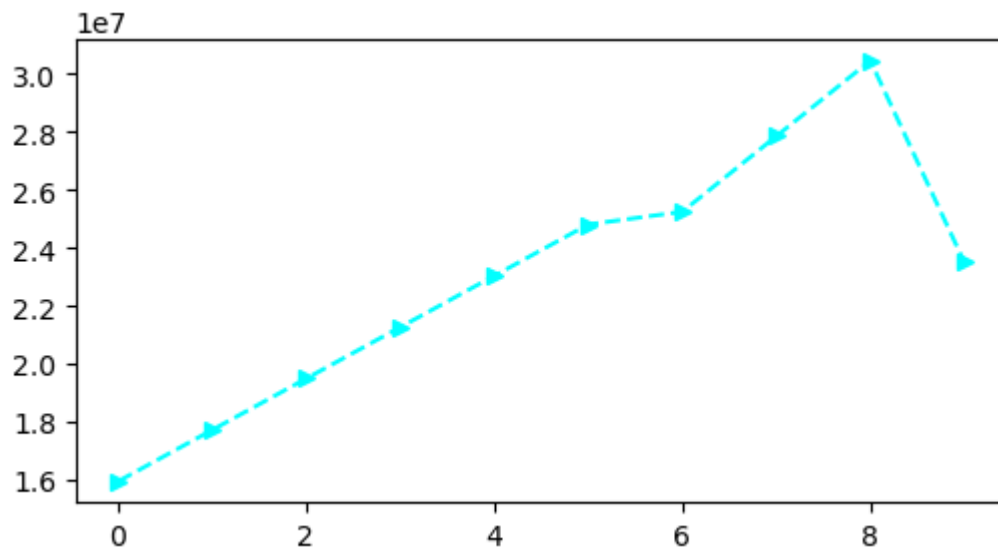
```
In [291... plt.plot(Salary[0],color='red',ls='-.',marker='<')
```

```
Out[291... [<matplotlib.lines.Line2D at 0x1650f3e5760>]
```



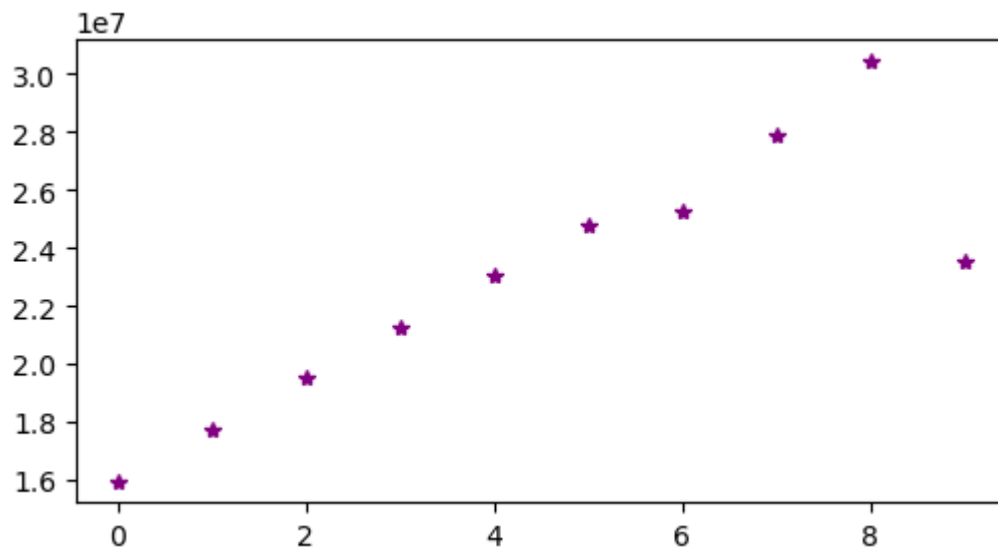
```
In [293... plt.plot(Salary[0],color='cyan',ls='--',marker='>')
```

```
Out[293... [<matplotlib.lines.Line2D at 0x1650f365a60>]
```

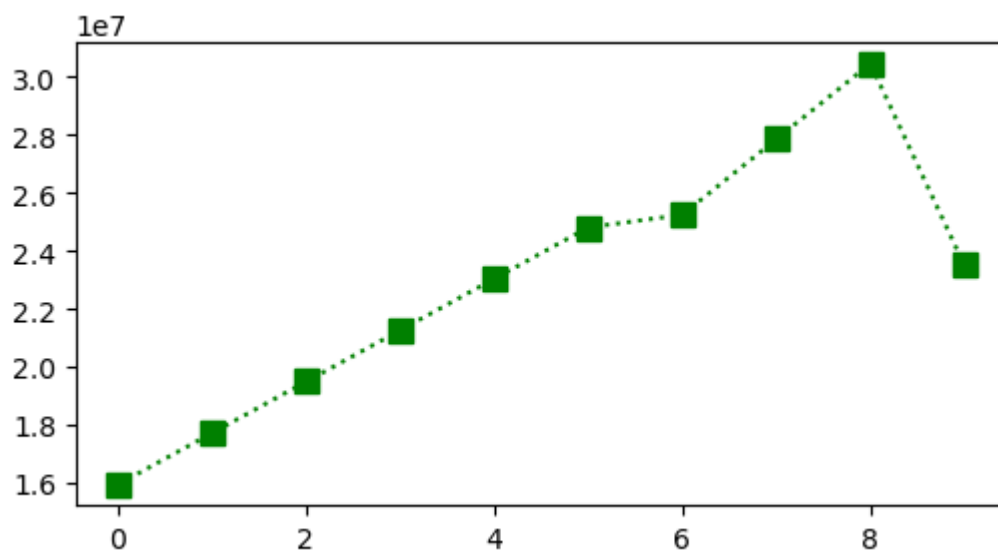


```
In [295... plt.plot(Salary[0],color='purple',ls=' ',marker='*') # when linestyle i.e ls=' '
```

```
Out[295... [<matplotlib.lines.Line2D at 0x1650d3f9610>]
```

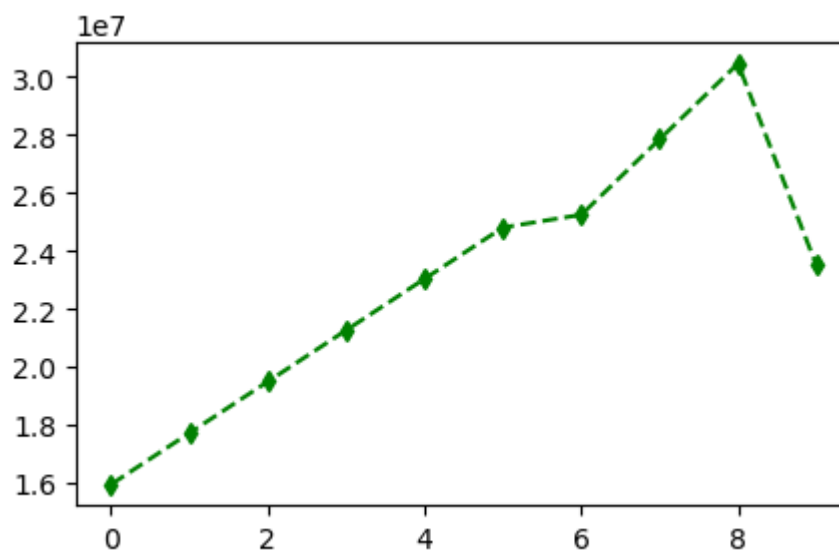


```
In [297... plt.plot(Salary[0],color='green',ls='dotted',marker='s',ms=8) # ms means makersi  
plt.show()
```



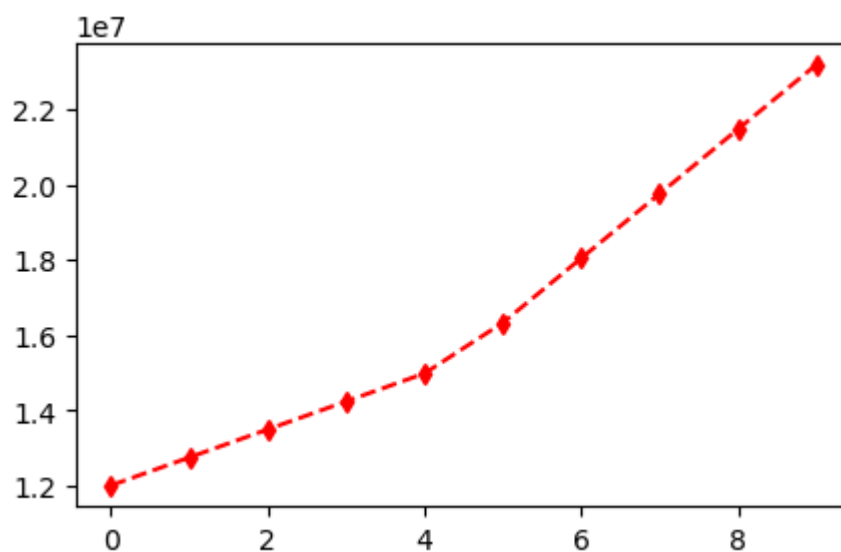
```
In [196... plt.plot(Salary[0],color='green',ls='--',marker='d',ms=5)
```

```
Out[196... [<matplotlib.lines.Line2D at 0x16510905790>]
```



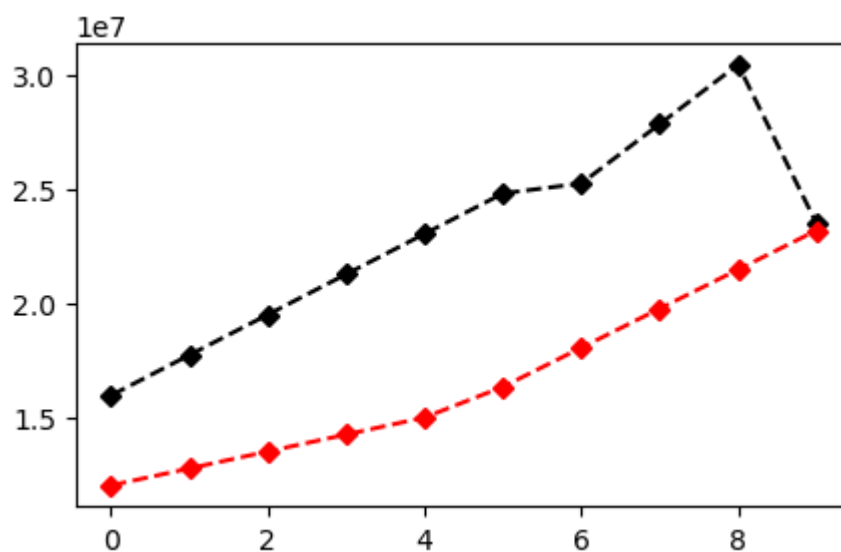
```
In [198... plt.plot(Salary[1],color='red',ls='--',marker='d',ms=5)
```

```
Out[198... [<matplotlib.lines.Line2D at 0x1650f7d0410>]
```



```
In [186... plt.plot(Salary[0],color='black',ls='--',marker='D',ms=5)
plt.plot(Salary[1],color='red',ls='--',marker='D',ms=5)
```

```
Out[186... [<matplotlib.lines.Line2D at 0x1650f7b7530>]
```



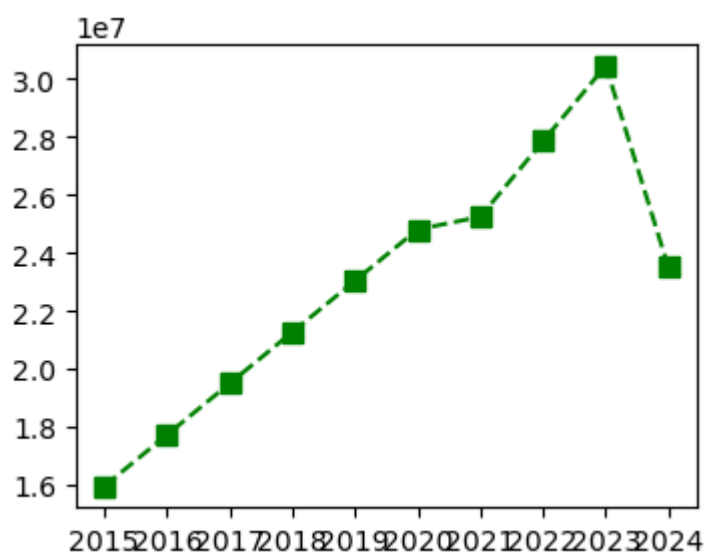
## Xticks:

Arguments of xticks we can pass are like below:

1. ticks - a list or array specifies the location on x-axis
2. labels - Specifies the labels to place at the specified tick locations
3. rotation- horizontal , vertical
4. fontsize- numeric or string
5. fontweight- can be bold ,light,normal etc.,
6. color- specifies the color of tick

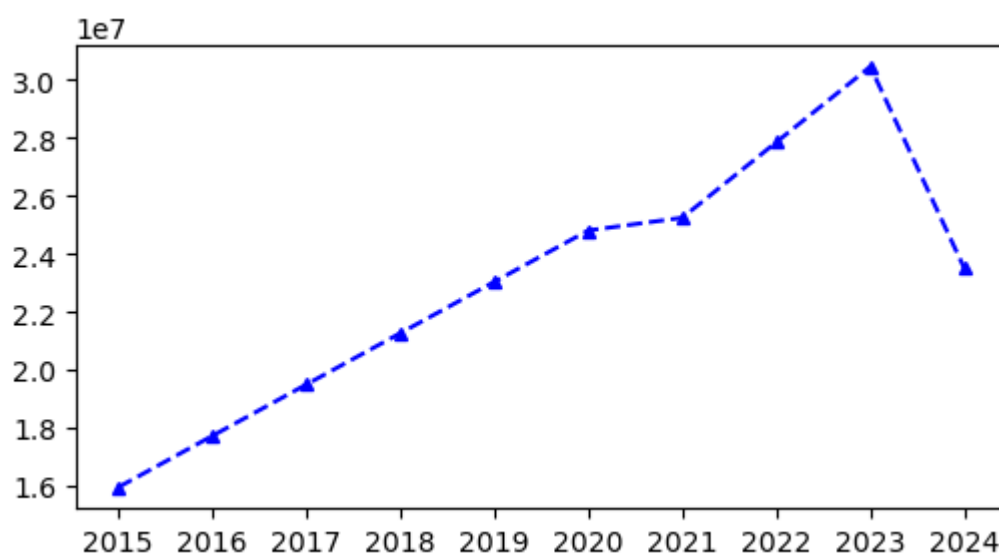
In [206...

```
plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms = 7)
plt.xticks(list(range(0,10)), Seasons) # ticks here are list of numbers replaced
plt.show()
```



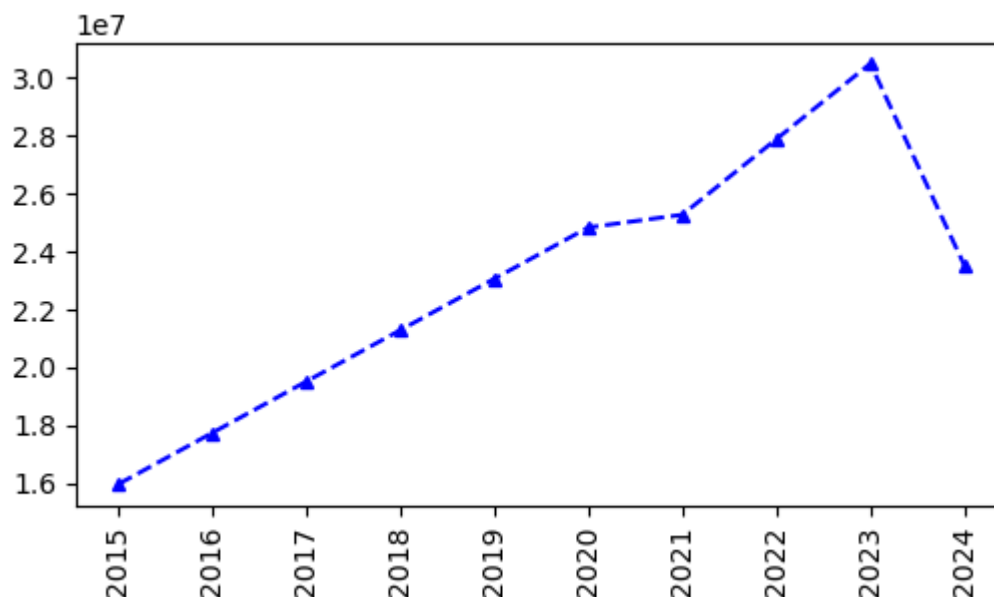
In [301...

```
plt.plot(Salary[0], color='b', ls='--', marker='^', ms=5)
plt.xticks(list(range(0,10)), Seasons, rotation='horizontal') # xticks location of
plt.show()
```

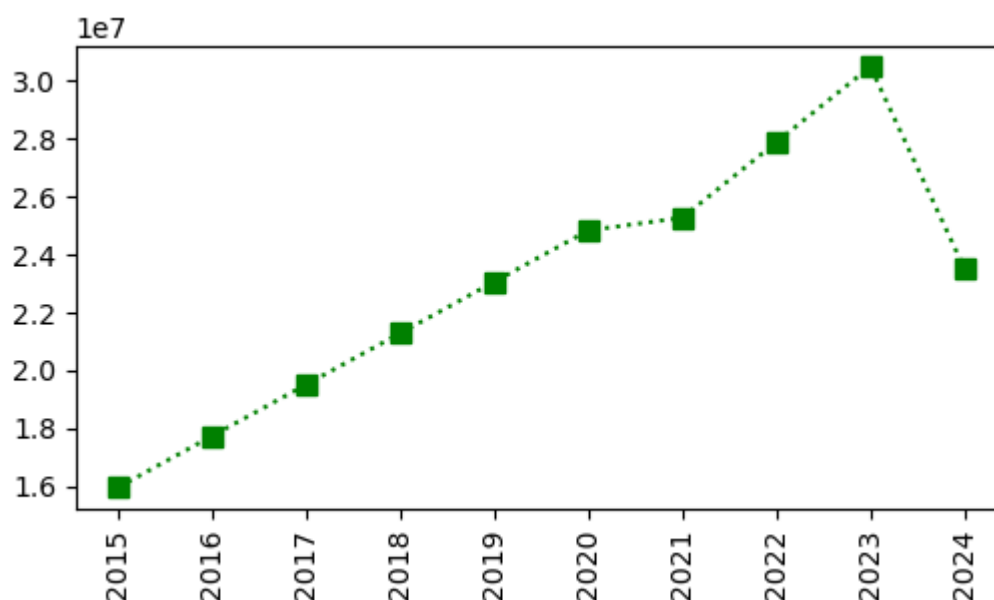


In [299...

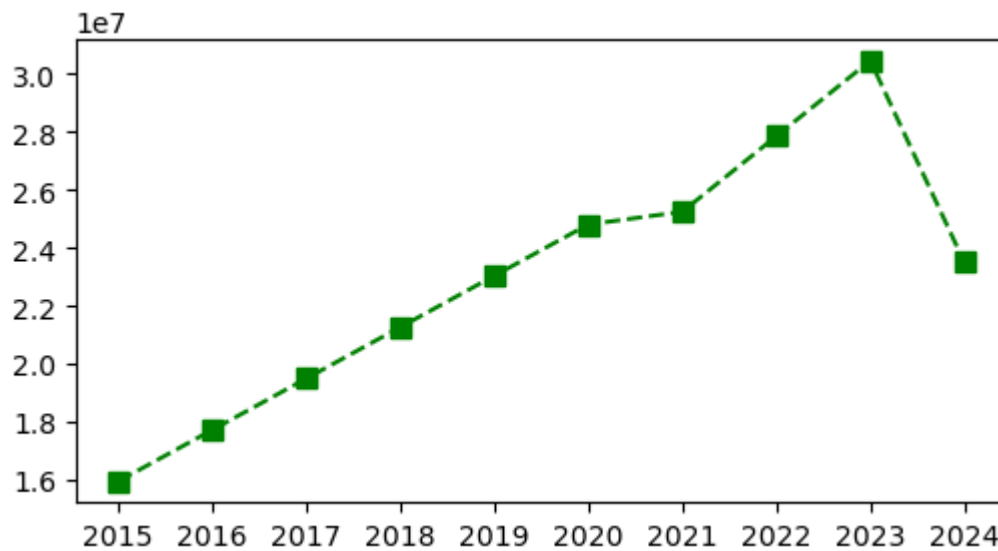
```
plt.plot(Salary[0], color='b', ls='--', marker='^', ms=5)
plt.xticks(list(range(0,10)), Seasons, rotation='vertical') # location of ticks on
plt.show()
```



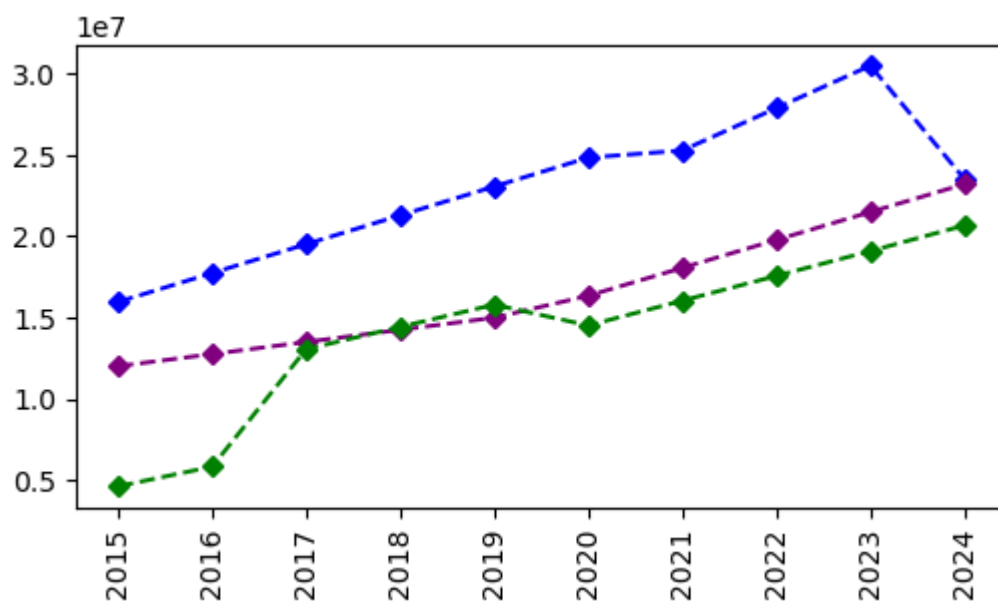
```
In [303... plt.plot(Salary[0], c='Green', ls = ':', marker = 's', ms = 7, label = Players[0])
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



```
In [305... plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[0])
plt.xticks(list(range(0,10)), Seasons,rotation='horizontal')
plt.show()
```



```
In [307... plt.plot(Salary[0],color='blue',ls='--',marker='D',ms=5,label=Players[0])
plt.plot(Salary[1],color='purple',ls='--',marker='D',ms=5,label=Players[1])
plt.plot(Salary[2],color='green',ls='--',marker='D',ms=5,label=Players[2])
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```

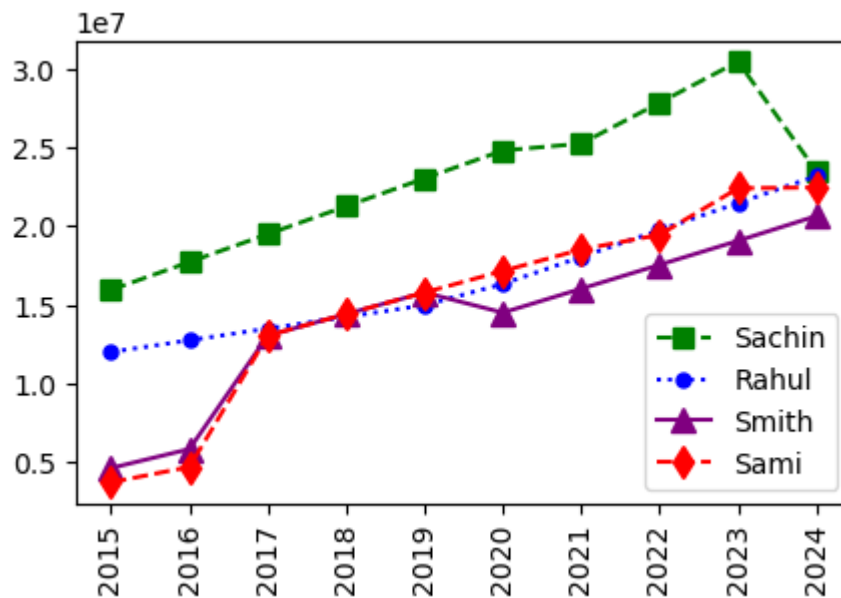


## legend

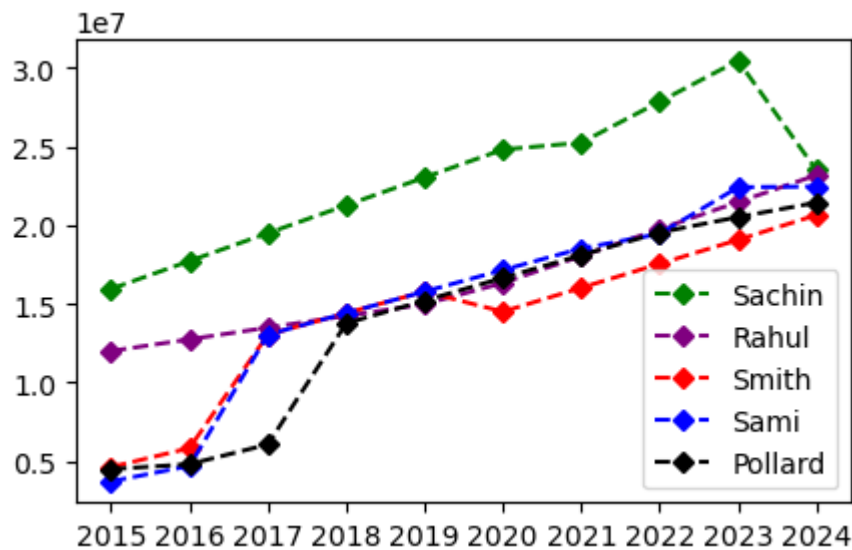
argumentst can be: loc- specifies the location of legend ex: upper left lower left  
 bbox\_to\_anchor - Specify a bounding box to position the legend. ncol - Number of columns in the legend. fontsize - Font size of the legend text. etc..

```
In [246... 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='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()
```

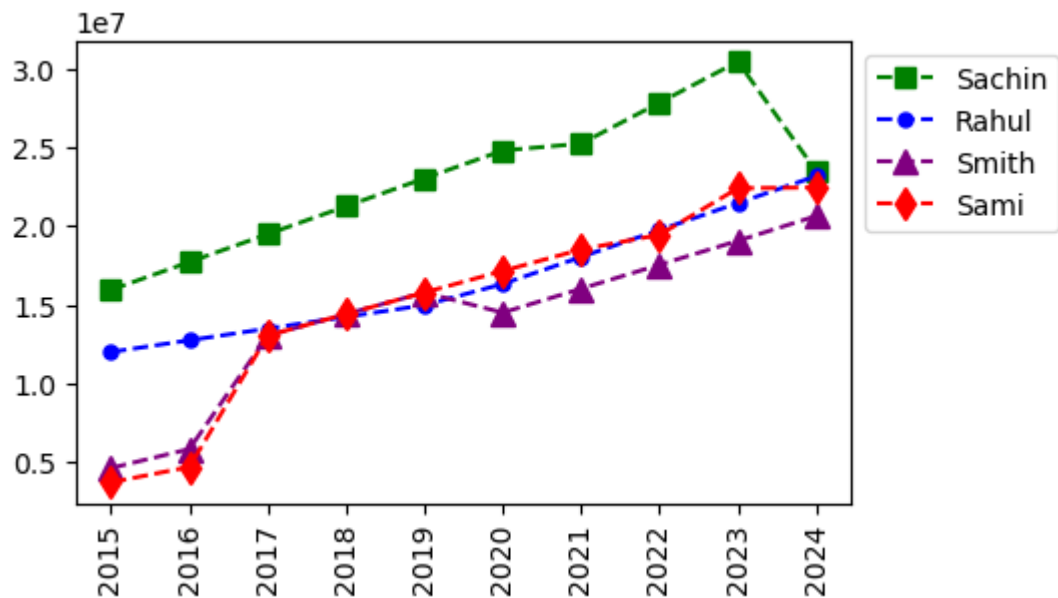




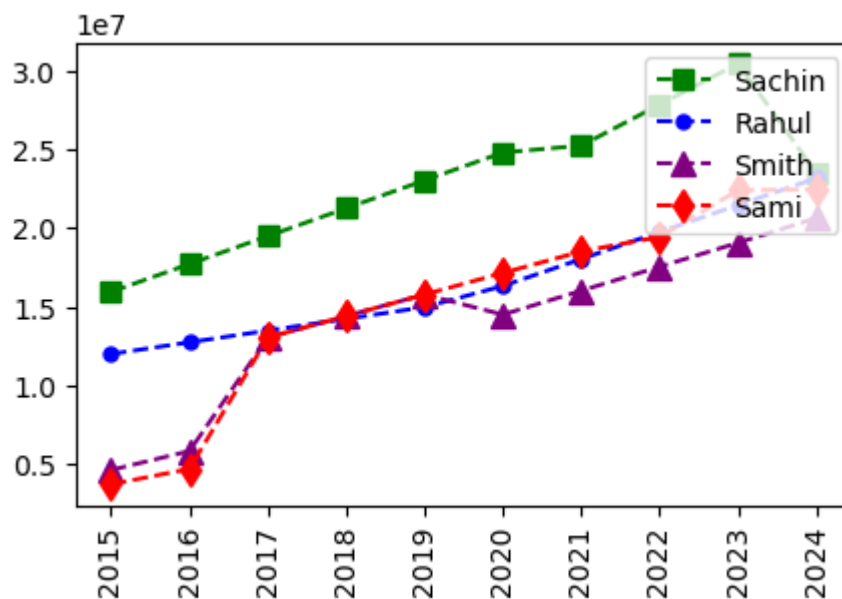
```
In [224... plt.plot(Salary[0],color='green',ls='--',marker='D',ms=5,label=Players[0])
plt.plot(Salary[1],color='purple',ls='--',marker='D',ms=5,label=Players[1])
plt.plot(Salary[2],color='red',ls='--',marker='D',ms=5,label=Players[2])
plt.plot(Salary[3],color='blue',ls='--',marker='D',ms=5,label=Players[3])
plt.plot(Salary[4],color='k',ls='--',marker='D',ms=5,label=Players[4])
plt.legend()
plt.xticks(list(range(0,10)),Seasons,rotation='horizontal')
plt.show()
```



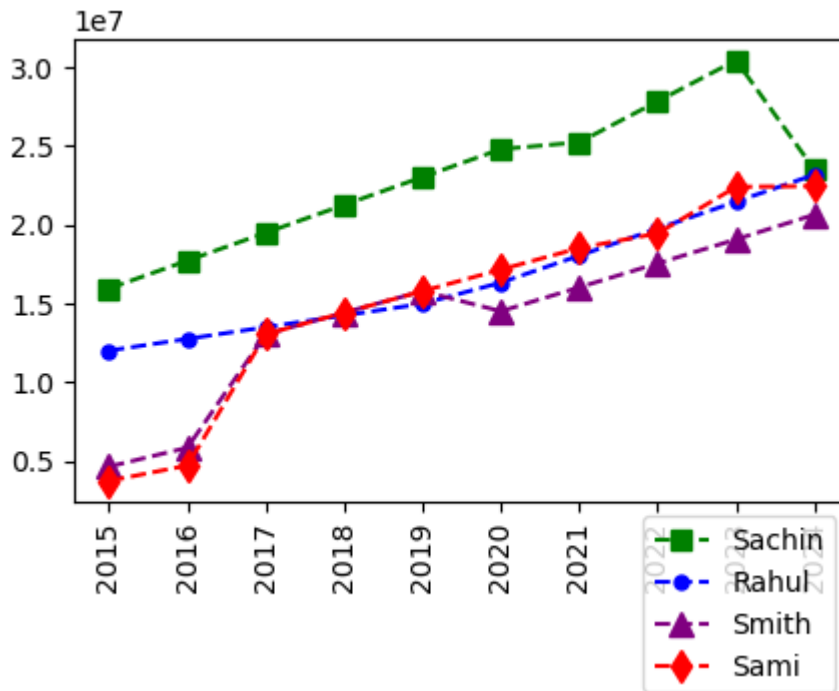
```
In [248... plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[
plt.plot(Salary[1], c='Blue', ls = '--', marker = 'o', ms = 5, label = Players[1
plt.plot(Salary[2], c='purple', ls = '--', marker = '^', ms = 8, label = Players
plt.plot(Salary[3], c='Red', ls = '--', marker = 'd', ms = 8, label = Players[3]
plt.legend(loc = 'upper left',bbox_to_anchor=(1,1) )
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



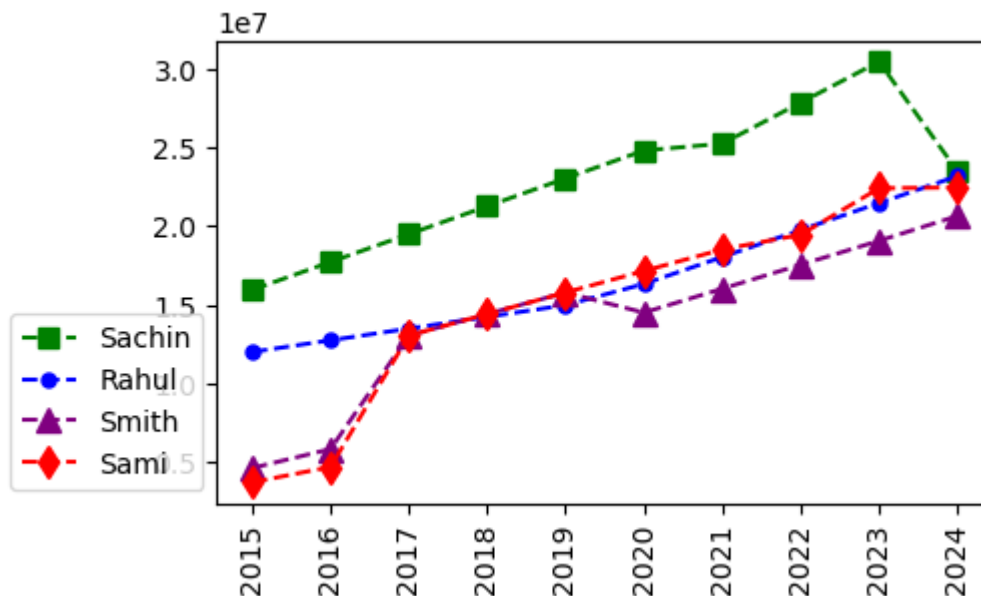
```
In [250... plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[0])
plt.plot(Salary[1], c='Blue', ls = '--', marker = 'o', ms = 5, label = Players[1])
plt.plot(Salary[2], c='purple', ls = '--', marker = '^', ms = 8, label = Players[2])
plt.plot(Salary[3], c='Red', ls = '--', marker = 'd', ms = 8, label = Players[3])
plt.legend(loc = 'upper right',bbox_to_anchor=(1,1) )
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



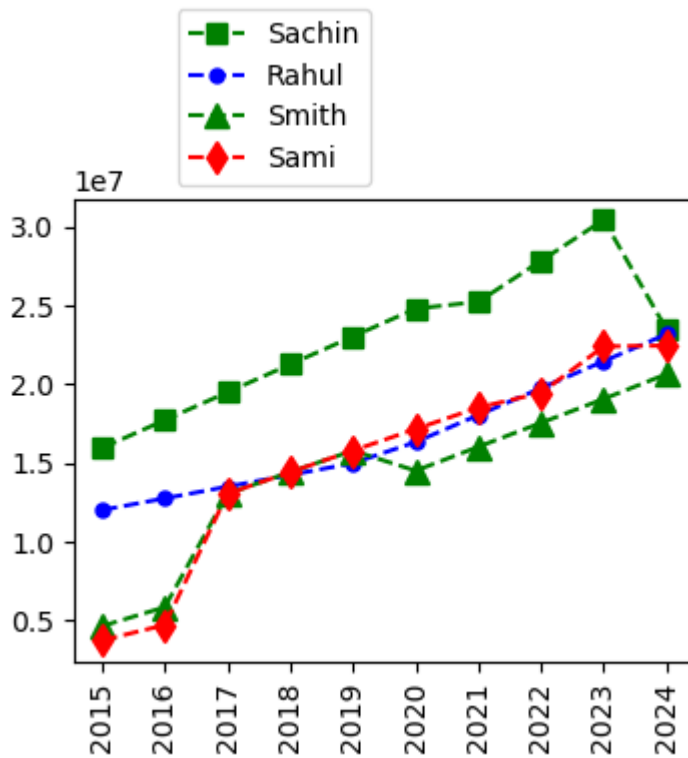
```
In [244... plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[0])
plt.plot(Salary[1], c='Blue', ls = '--', marker = 'o', ms = 5, label = Players[1])
plt.plot(Salary[2], c='purple', ls = '--', marker = '^', ms = 8, label = Players[2])
plt.plot(Salary[3], c='Red', ls = '--', marker = 'd', ms = 8, label = Players[3])
plt.legend(loc = 'upper right',bbox_to_anchor=(1,0) )
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



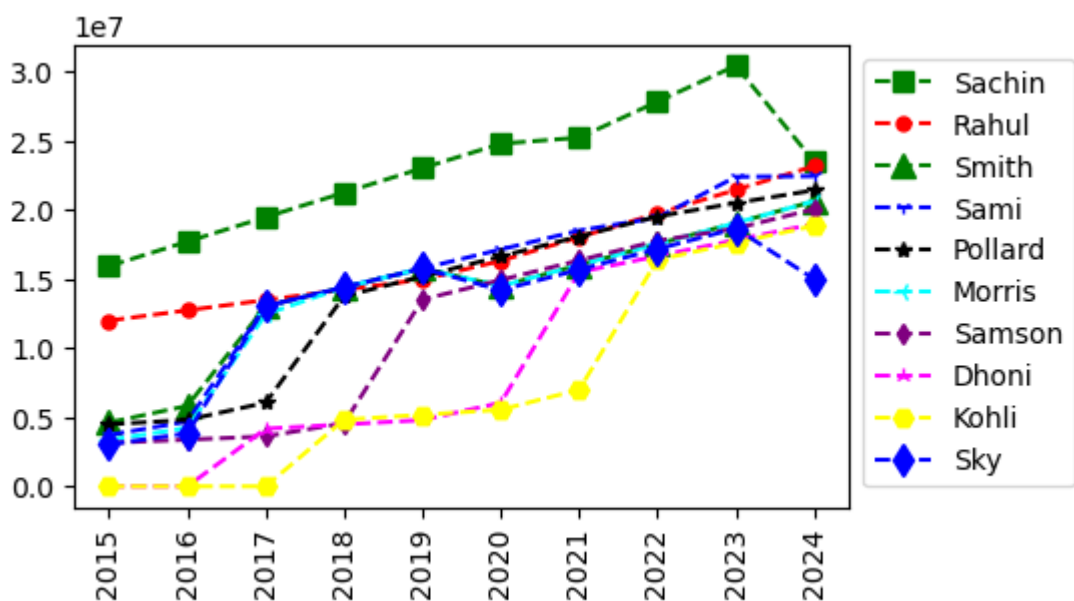
```
In [228... plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[0])
plt.plot(Salary[1], c='Blue', ls = '--', marker = 'o', ms = 5, label = Players[1])
plt.plot(Salary[2], c='purple', ls = '--', marker = '^', ms = 8, label = Players[2])
plt.plot(Salary[3], c='Red', ls = '--', marker = 'd', ms = 8, label = Players[3])
plt.legend(loc = 'lower right',bbox_to_anchor=(0,0) )
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



```
In [186... 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()
```

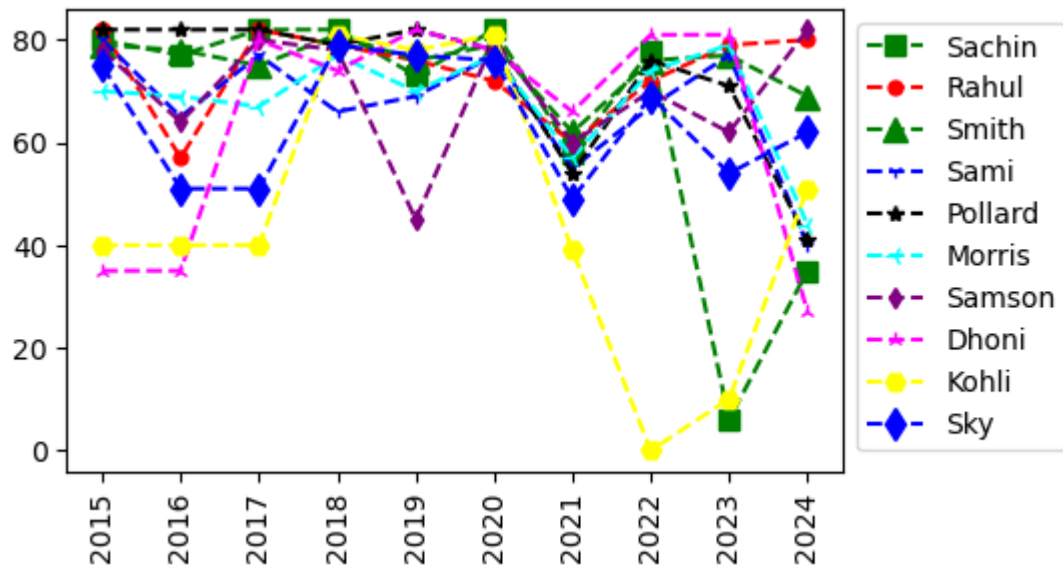


```
In [267... plt.plot(Salary[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[0])
plt.plot(Salary[1], c='red', ls = '--', marker = 'o', ms = 5, label = Players[1])
plt.plot(Salary[2], c='Green', ls = '--', marker = '^', ms = 8, label = Players[2])
plt.plot(Salary[3], c='blue', ls = '--', marker = '1', ms = 5, label = Players[3])
plt.plot(Salary[4], c='black', ls = '--', marker = '*', ms = 6, label = Players[4])
plt.plot(Salary[5], c='cyan', ls = '--', marker = '3', ms = 7, label = Players[5])
plt.plot(Salary[6], c='purple', ls = '--', marker = 'd', ms = 5, label = Players[6])
plt.plot(Salary[7], c='magenta', ls = '--', marker = '2', ms = 6, label = Players[7])
plt.plot(Salary[8], c='yellow', ls = '--', marker = 'H', ms = 7, label = Players[8])
plt.plot(Salary[9], c='blue', ls = '--', marker = 'd', ms = 8, label = Players[9])
plt.legend(loc = 'upper left',bbox_to_anchor=(1,1) )
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



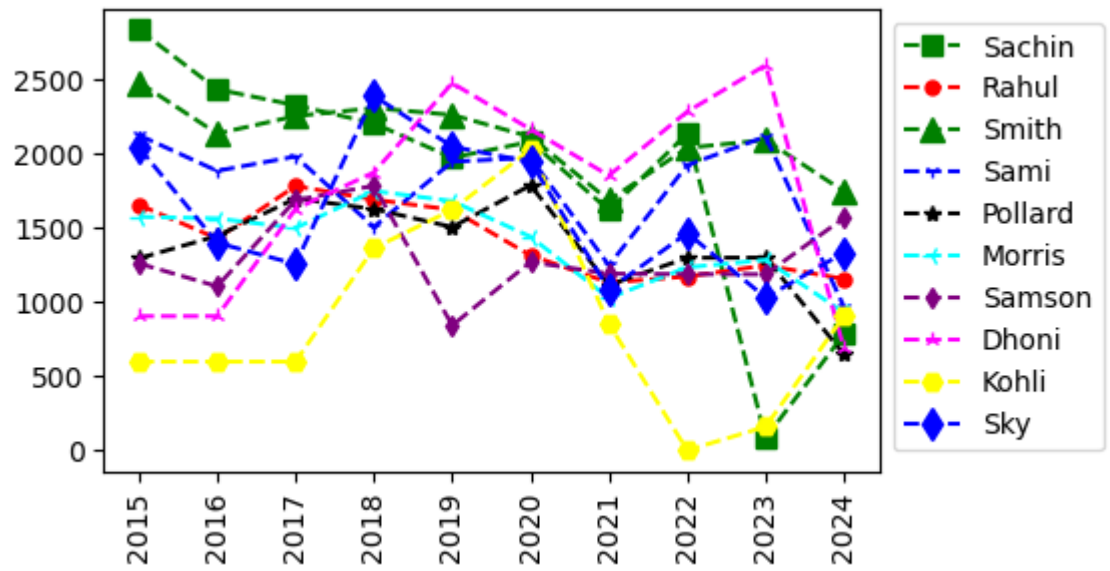
```
In [269... plt.plot(Games[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[0])
plt.plot(Games[1], c='red', ls = '--', marker = 'o', ms = 5, label = Players[1])
plt.plot(Games[2], c='Green', ls = '--', marker = '^', ms = 8, label = Players[2])
```

```
plt.plot(Games[3], c='blue', ls = '--', marker = '1', ms = 5, label = Players[3])
plt.plot(Games[4], c='black', ls = '--', marker = '*', ms = 6, label = Players[4])
plt.plot(Games[5], c='cyan', ls = '--', marker = '3', ms = 7, label = Players[5])
plt.plot(Games[6], c='purple', ls = '--', marker = 'd', ms = 5, label = Players[6])
plt.plot(Games[7], c='magenta', ls = '--', marker = '2', ms = 6, label = Players[7])
plt.plot(Games[8], c='yellow', ls = '--', marker = 'H', ms = 7, label = Players[8])
plt.plot(Games[9], c='blue', ls = '--', marker = 'd', ms = 8, label = Players[9])
plt.legend(loc = 'upper left',bbox_to_anchor=(1,1) )
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



In [271...

```
plt.plot(Points[0], c='Green', ls = '--', marker = 's', ms = 7, label = Players[0])
plt.plot(Points[1], c='red', ls = '--', marker = 'o', ms = 5, label = Players[1])
plt.plot(Points[2], c='Green', ls = '--', marker = '^', ms = 8, label = Players[2])
plt.plot(Points[3], c='blue', ls = '--', marker = '1', ms = 5, label = Players[3])
plt.plot(Points[4], c='black', ls = '--', marker = '*', ms = 6, label = Players[4])
plt.plot(Points[5], c='cyan', ls = '--', marker = '3', ms = 7, label = Players[5])
plt.plot(Points[6], c='purple', ls = '--', marker = 'd', ms = 5, label = Players[6])
plt.plot(Points[7], c='magenta', ls = '--', marker = '2', ms = 6, label = Player[7])
plt.plot(Points[8], c='yellow', ls = '--', marker = 'H', ms = 7, label = Players[8])
plt.plot(Points[9], c='blue', ls = '--', marker = 'd', ms = 8, label = Players[9])
plt.legend(loc = 'upper left',bbox_to_anchor=(1,1) )
plt.xticks(list(range(0,10)), Seasons,rotation='vertical')
plt.show()
```



In [ ]:

In [ ]:

In [ ]:

In [ ]: