

In [4]: `import numpy as np`

```
In [5]: Seasons = ["2010", "2011", "2012", "2013", "2014", "2015", "2016", "2017", "2018", "2019"]
Sdict = {"2010":0, "2011":1, "2012":2, "2013":3, "2014":4, "2015":5, "2016":6, "2017":7, "2018":8, "2019":9}

#Players
Players = ["Sachin", "Rahul", "Smith", "Sami", "Pollard", "Morris", "Samson", "Dhoni", "Kohli", "Sky"]
Pdict = {"Sachin":0, "Rahul":1, "Smith":2, "Sami":3, "Pollard":4, "Morris":5, "Samson":6, "Dhoni":7, "Kohli":8, "Sky":9}

#Salaries
Sachin_Salary = [15946875, 17718750, 19490625, 21262500, 23034375, 24806250, 25244493, 26125000, 27000000, 28000000]
Rahul_Salary = [12000000, 12744189, 13488377, 14232567, 14976754, 16324500, 18038573, 19000000, 20000000, 21000000]
Smith_Salary = [4621800, 5828090, 13041250, 14410581, 15779912, 14500000, 16022500, 17500000, 18500000, 19500000]
Sami_Salary = [3713640, 4694041, 13041250, 14410581, 15779912, 17149243, 18518574, 19450000, 20400000, 21350000]
Pollard_Salary = [4493160, 4806720, 6061274, 13758000, 15202590, 16647180, 18091770, 19000000, 20000000, 21000000]
Morris_Salary = [3348000, 4235220, 12455000, 14410581, 15779912, 14500000, 16022500, 17500000, 18500000, 19500000]
Samson_Salary = [3144240, 3380160, 3615960, 4574189, 13520500, 14940153, 16359805, 17700000, 18500000, 19500000]
Dhoni_Salary = [0, 0, 4171200, 4484040, 4796880, 6053663, 15506632, 16669630, 17832627, 19000000]
Kohli_Salary = [0, 0, 0, 4822800, 5184480, 5546160, 6993708, 16402500, 17632688, 18862875]
Sky_Salary = [3031920, 3841443, 13041250, 14410581, 15779912, 14200000, 15691000, 17182000, 18000000, 19000000]

#Matrix
Salary = np.array([Sachin_Salary, Rahul_Salary, Smith_Salary, Sami_Salary, Pollard_Salary, Morris_Salary, Samson_Salary, Dhoni_Salary, Kohli_Salary, Sky_Salary])

#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, Samson_G, Dhoni_G, Kohli_G, Sky_G])

#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, Morris_PTS, Samson_PTS, Dhoni_PTS, Kohli_PTS, Sky_PTS])

In [6]: Salary
```

```
Out[6]: 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

```
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]: Points

```
Out[8]: 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 [9]: Salary//Games

C:\Users\ADMIN\AppData\Local\Temp\ipykernel\_3188\1634212085.py:1: RuntimeWarning:  
divide by zero encountered in floor\_divide  
Salary//Games

```
Out[9]: array([[ 199335,  230113,  237690,  259298,  315539,  302515,  435249,
                  357040,  5075634,  671428],
                [ 146341,  223582,  164492,  180159,  197062,  226729,  300642,
                  274342,  271730,  289759],
                [  58503,   74719,  173883,  177908,  207630,  183544,  258427,
                  230855,  247629,  299194],
                [  46420,   72216,  169366,  218342,  228694,  222717,  336701,
                  290298,  291006,  561450],
                [  54794,   58618,   73917,  174151,  185397,  213425,  335032,
                  257057,  288918,  522835],
                [  47828,   61380,  185895,  187150,  225427,  188311,  281096,
                  237094,  241360,  469190],
                [  40310,   52815,   45199,   58643,  300455,  186751,  272663,
                  253992,  301103,  244738],
                [    0,         0,   52140,   60595,   58498,   77611,  234948,
                  205797,  220155,  703541],
                [    0,         0,         0,   59540,   66467,   68471,  179325,
                   0, 1763268,  369860],
                [  40425,   75322,  255710,  182412,  204933,  186842,  320224,
                  249014,  345796,  241935]])
```

```
In [10]: np.round(Salary//Games)
```

C:\Users\ADMIN\AppData\Local\Temp\ipykernel\_3188\3663165759.py:1: RuntimeWarning:  
divide by zero encountered in floor\_divide  
np.round(Salary//Games)

```
Out[10]: array([[ 199335,  230113,  237690,  259298,  315539,  302515,  435249,
                  357040,  5075634,  671428],
                [ 146341,  223582,  164492,  180159,  197062,  226729,  300642,
                  274342,  271730,  289759],
                [  58503,   74719,  173883,  177908,  207630,  183544,  258427,
                  230855,  247629,  299194],
                [  46420,   72216,  169366,  218342,  228694,  222717,  336701,
                  290298,  291006,  561450],
                [  54794,   58618,   73917,  174151,  185397,  213425,  335032,
                  257057,  288918,  522835],
                [  47828,   61380,  185895,  187150,  225427,  188311,  281096,
                  237094,  241360,  469190],
                [  40310,   52815,   45199,   58643,  300455,  186751,  272663,
                  253992,  301103,  244738],
                [    0,         0,   52140,   60595,   58498,   77611,  234948,
                  205797,  220155,  703541],
                [    0,         0,         0,   59540,   66467,   68471,  179325,
                   0, 1763268,  369860],
                [  40425,   75322,  255710,  182412,  204933,  186842,  320224,
                  249014,  345796,  241935]])
```

```
In [11]: import warnings
         warnings.filterwarnings('ignore')
```

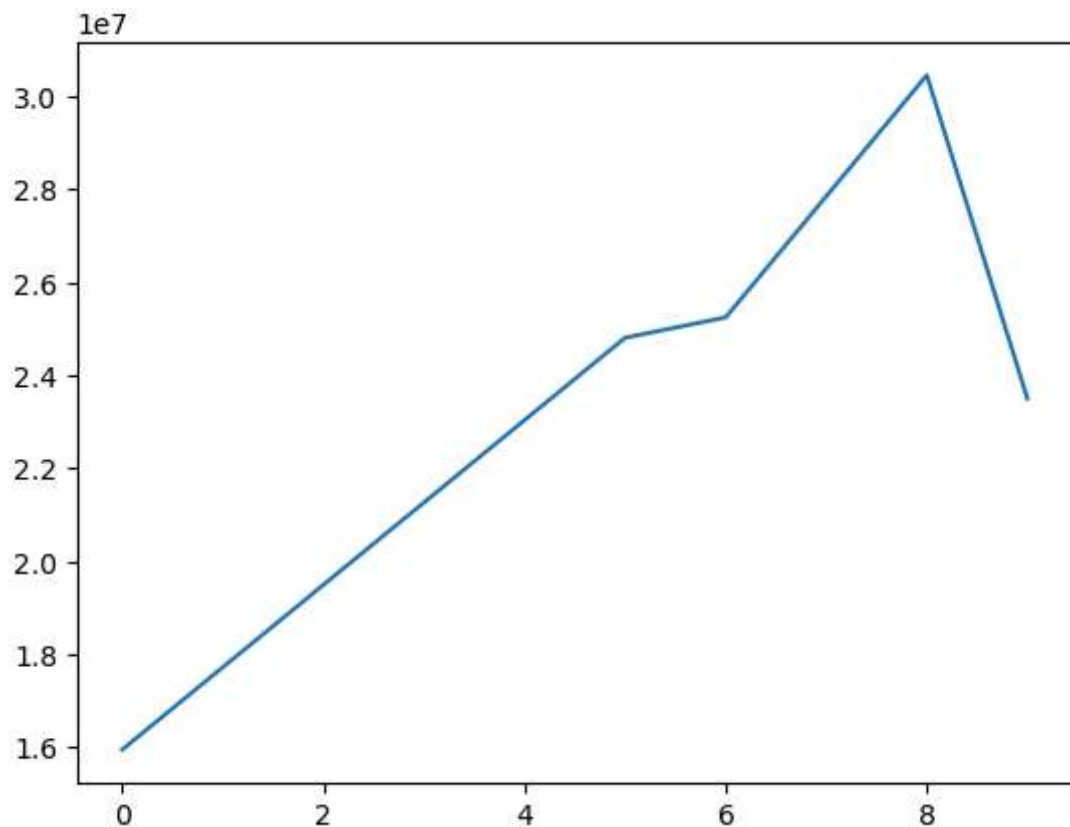
```
In [12]: import matplotlib.pyplot as plt
```

```
In [13]: Salary[0]
```

```
Out[13]: array([15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
                 25244493, 27849149, 30453805, 23500000])
```

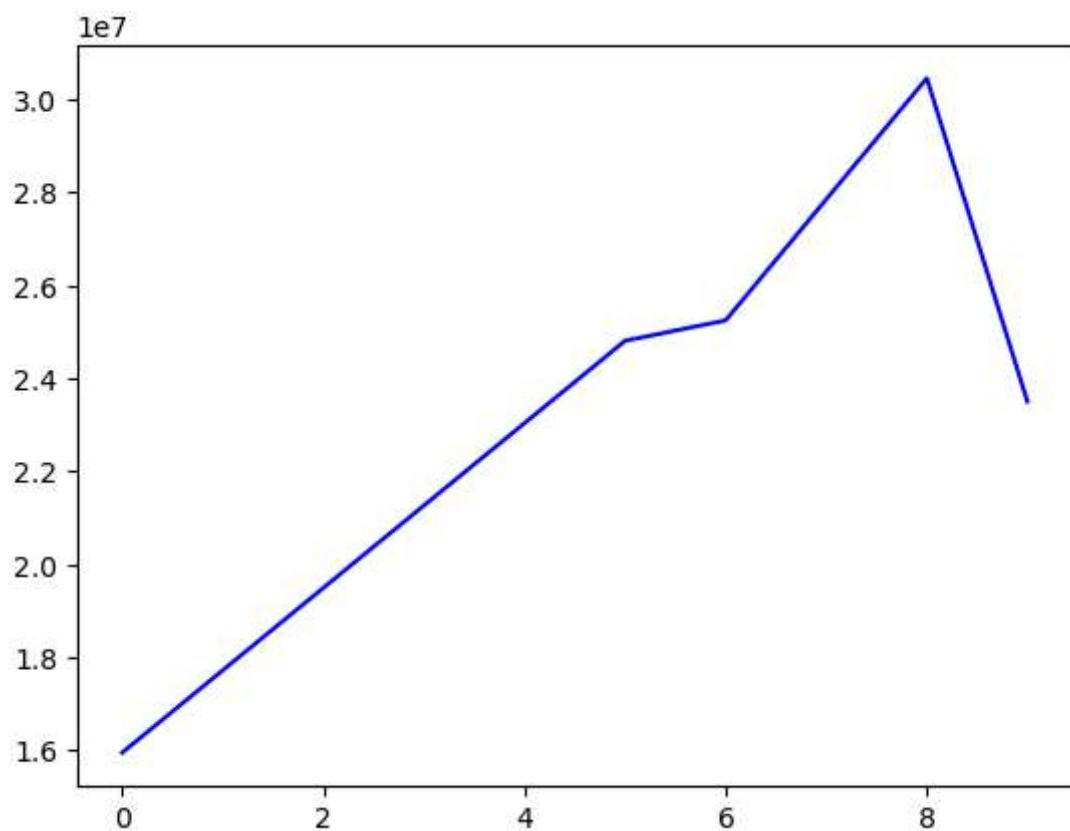
```
In [14]: plt.plot(Salary[0])
```

Out[14]: [



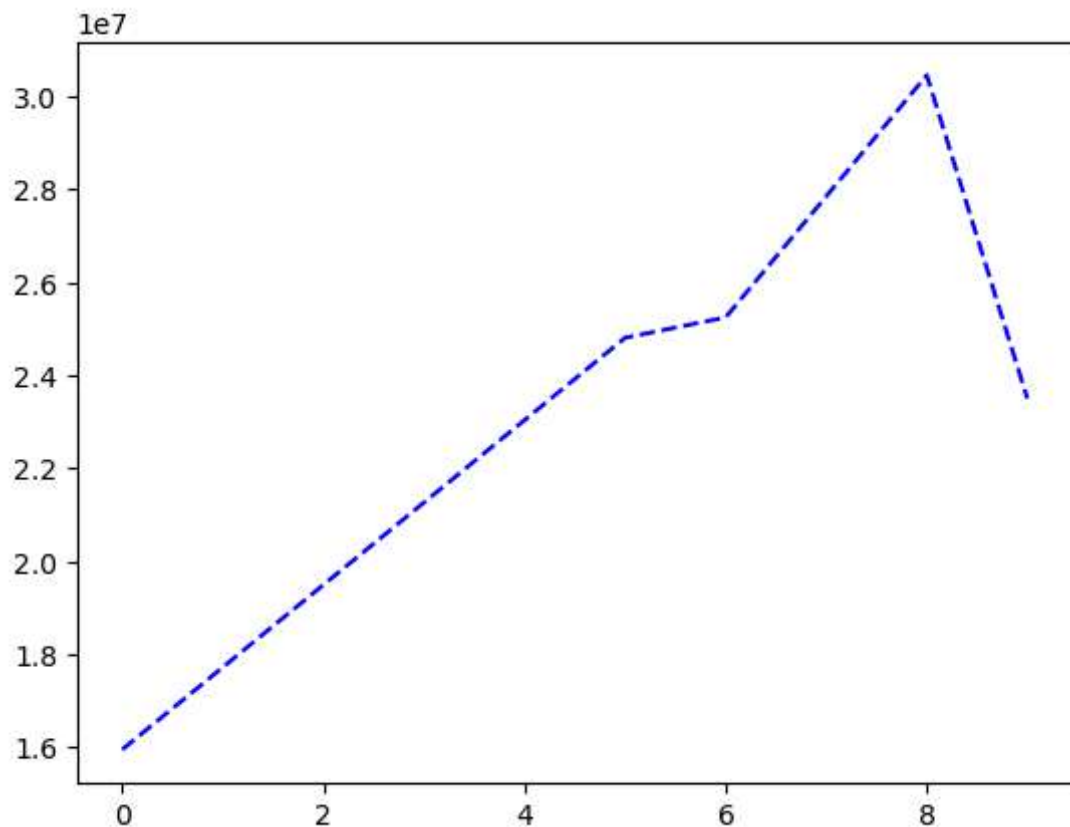
In [15]: `plt.plot(Salary[0],c = 'b')`

Out[15]: [



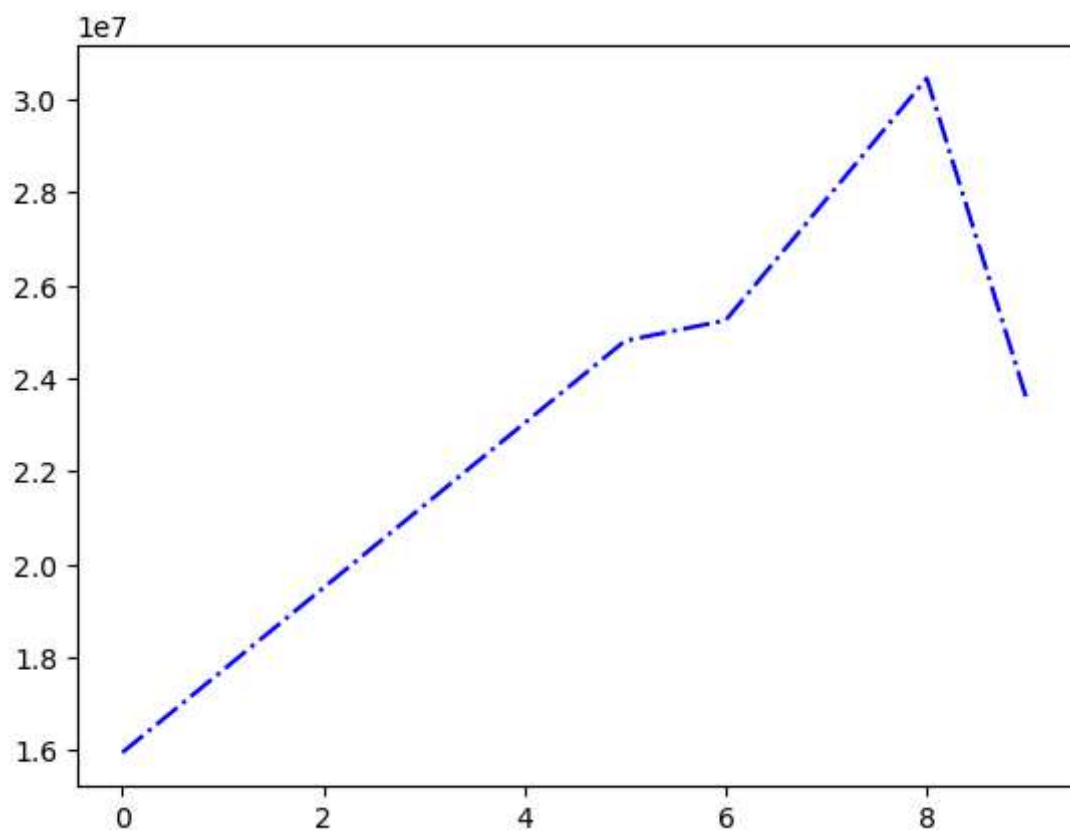
In [16]: `plt.plot(Salary[0],c = 'b',ls='--')`

Out[16]: [



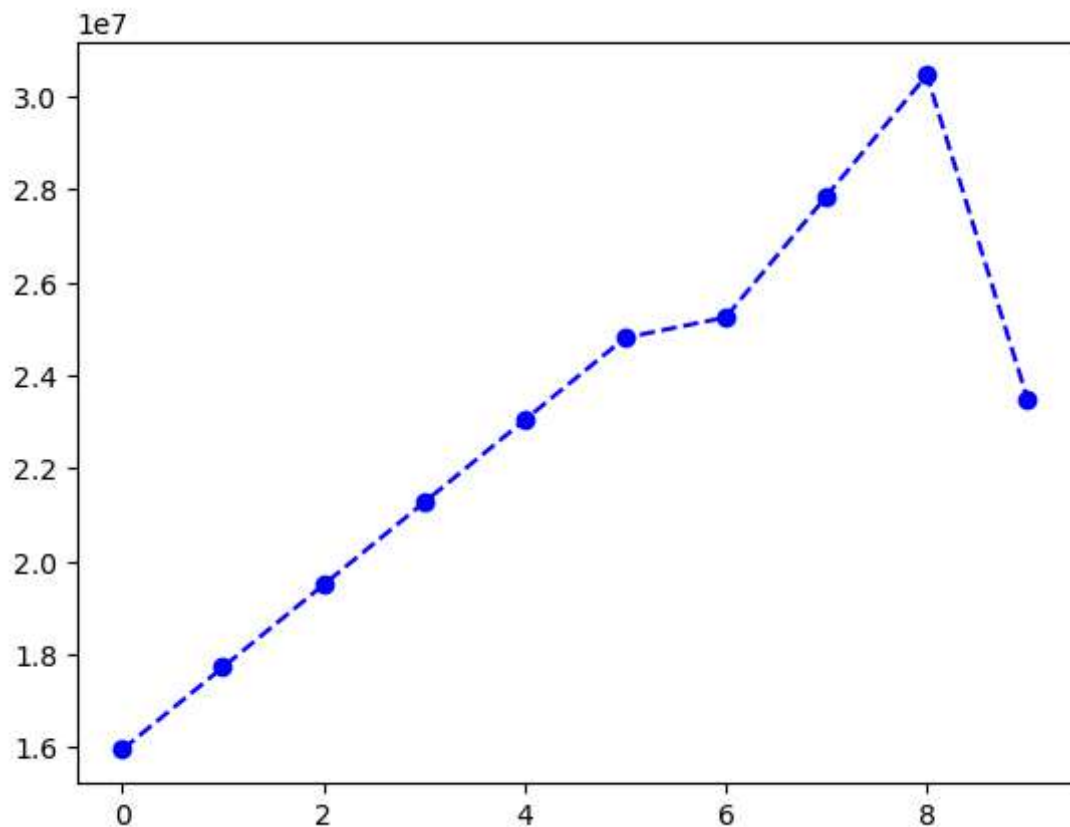
In [17]: `plt.plot(Salary[0],c = 'b',ls='-.')`

Out[17]: [



In [18]: `plt.plot(Salary[0],c = 'b',ls='--', marker = 'o')`

Out[18]: [



In [19]: Games[0]

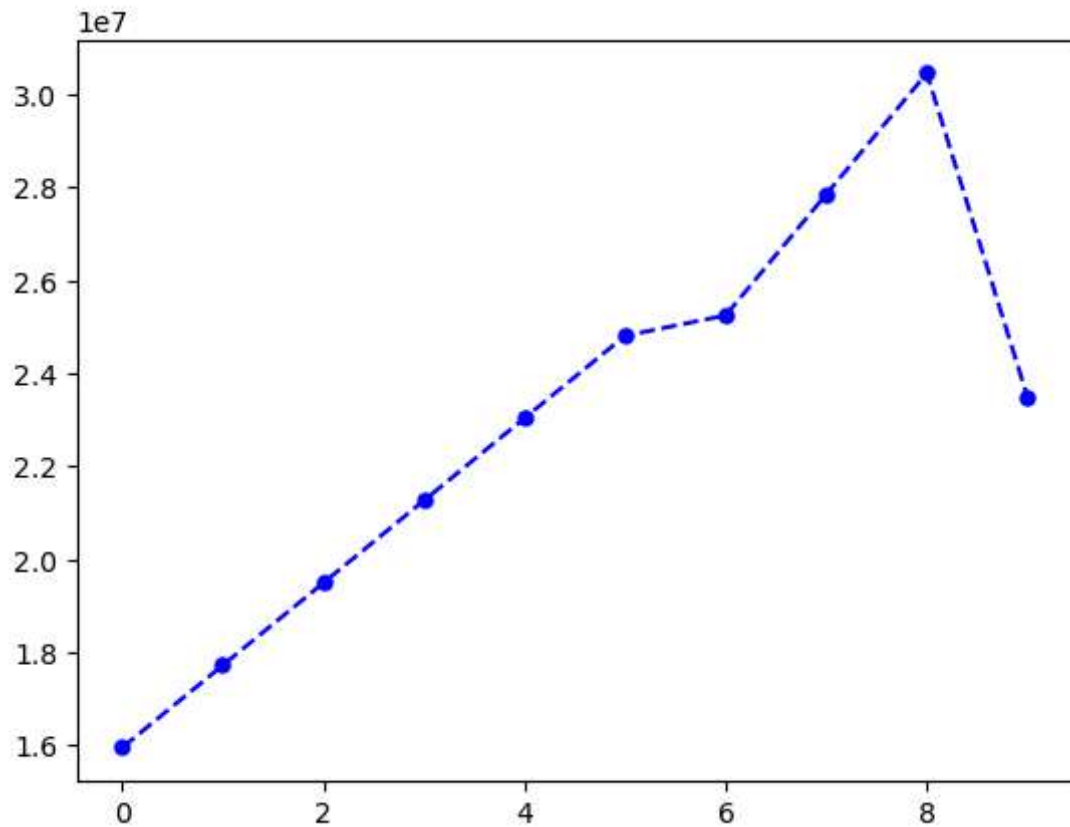
Out[19]: array([80, 77, 82, 82, 73, 82, 58, 78, 6, 35])

In [23]: `%matplotlib inline`  
`plt.rcParams['figure.figsize']=10,6`

UsageError: Line magic function ``%matplotlib`` not found.

In [24]: `plt.plot(Salary[0],c = 'b',ls='--', marker = 'o',ms=5)`

Out[24]: [



In [25]: Sdict

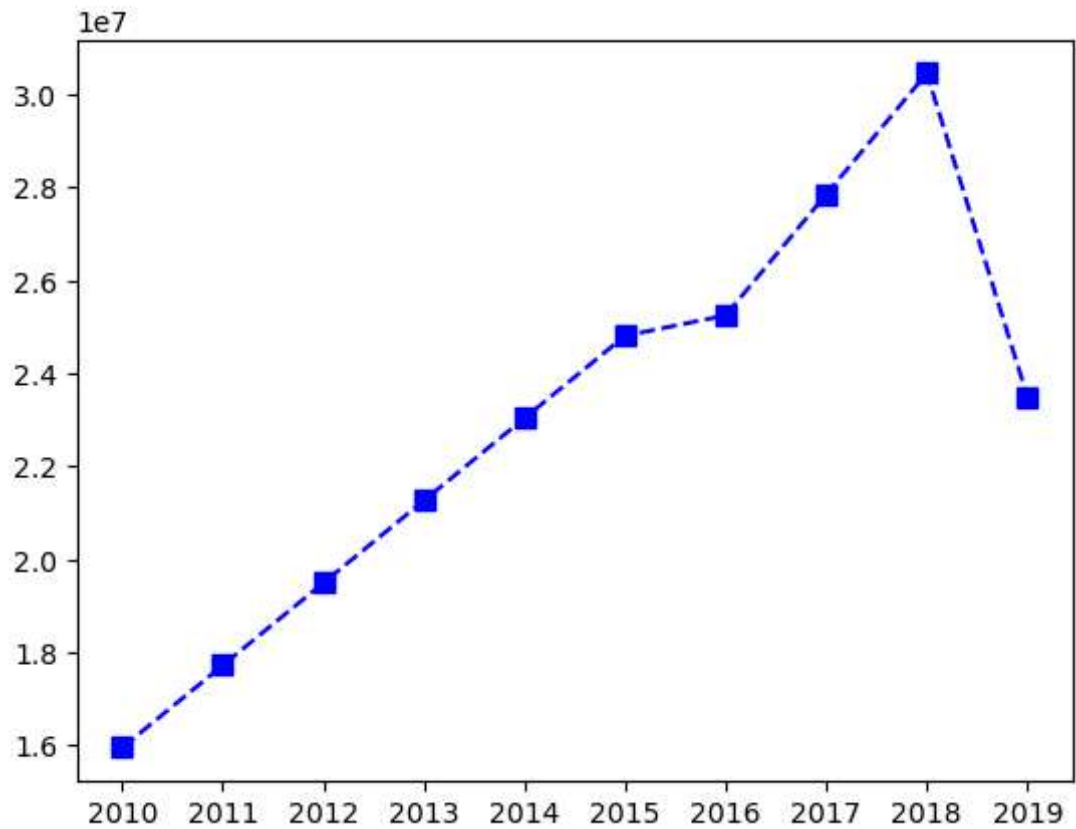
Out[25]: {'2010': 0,  
'2011': 1,  
'2012': 2,  
'2013': 3,  
'2014': 4,  
'2015': 5,  
'2016': 6,  
'2017': 7,  
'2018': 8,  
'2019': 9}

In [26]: Pdict

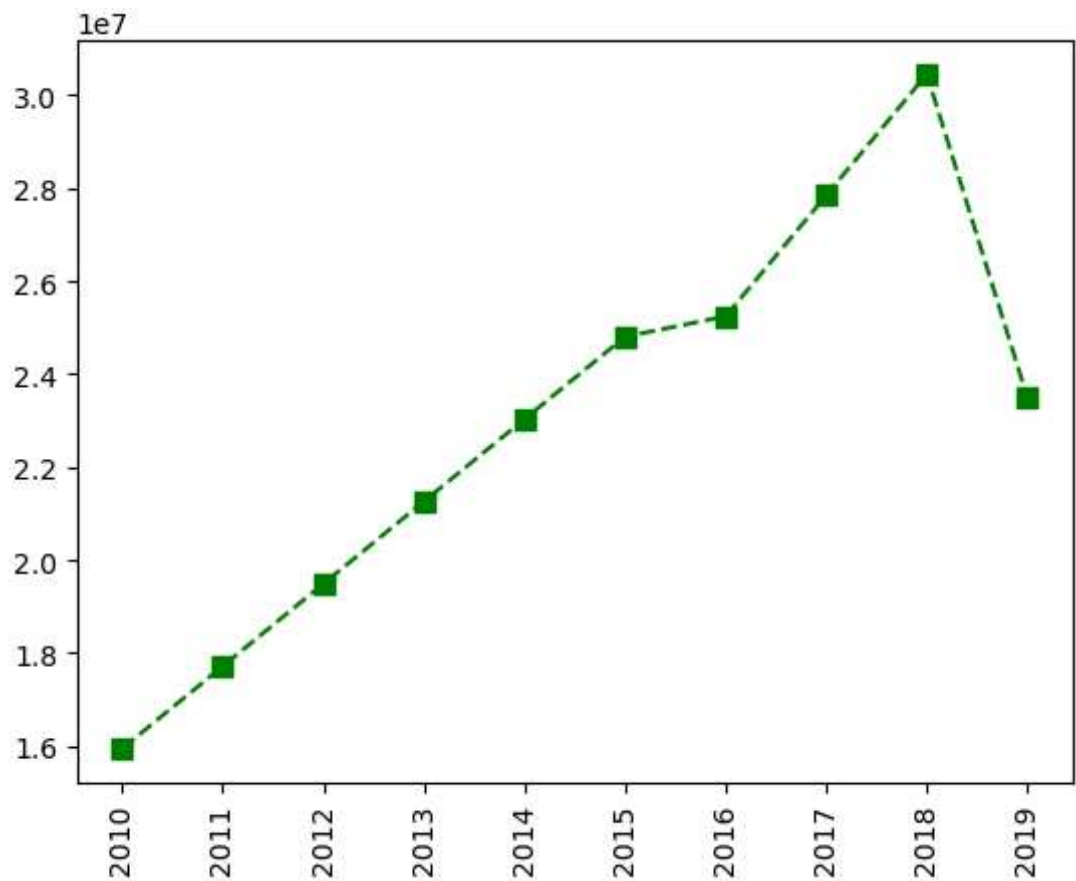
Out[26]: {'Sachin': 0,  
'Rahul': 1,  
'Smith': 2,  
'Sami': 3,  
'Pollard': 4,  
'Morris': 5,  
'Samson': 6,  
'Dhoni': 7,  
'Kohli': 8,  
'Sky': 9}

In [27]: plt.plot(Salary[0],c = 'b',ls='--', marker = 's',ms=7)  
plt.xticks(list(range(0,10)),Seasons)  
plt.show()





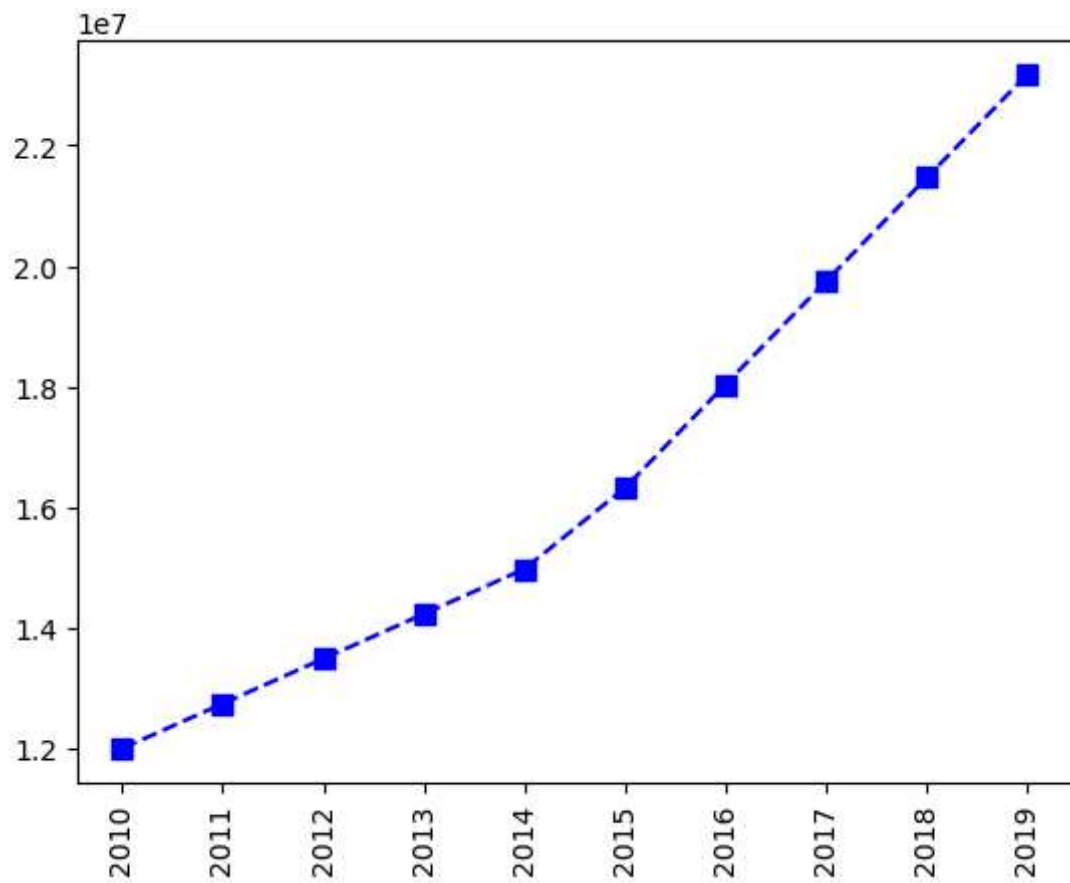
```
In [31]: plt.plot(Salary[0],c = 'Green',ls='--', marker = 's',ms=7 , label=Players[0])  
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')  
plt.show()
```



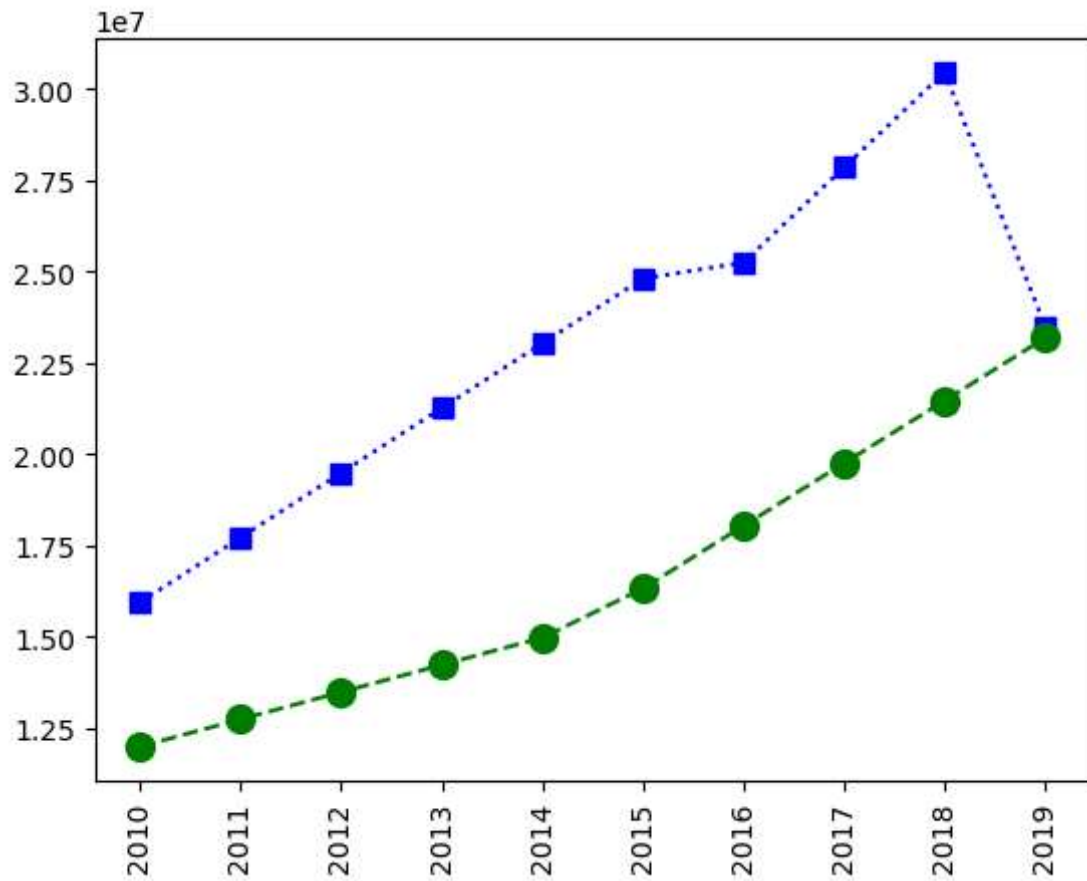
```
In [66]: plt.plot(Salary[1],c = 'b',ls='--', marker = 's',ms=7)  
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
```



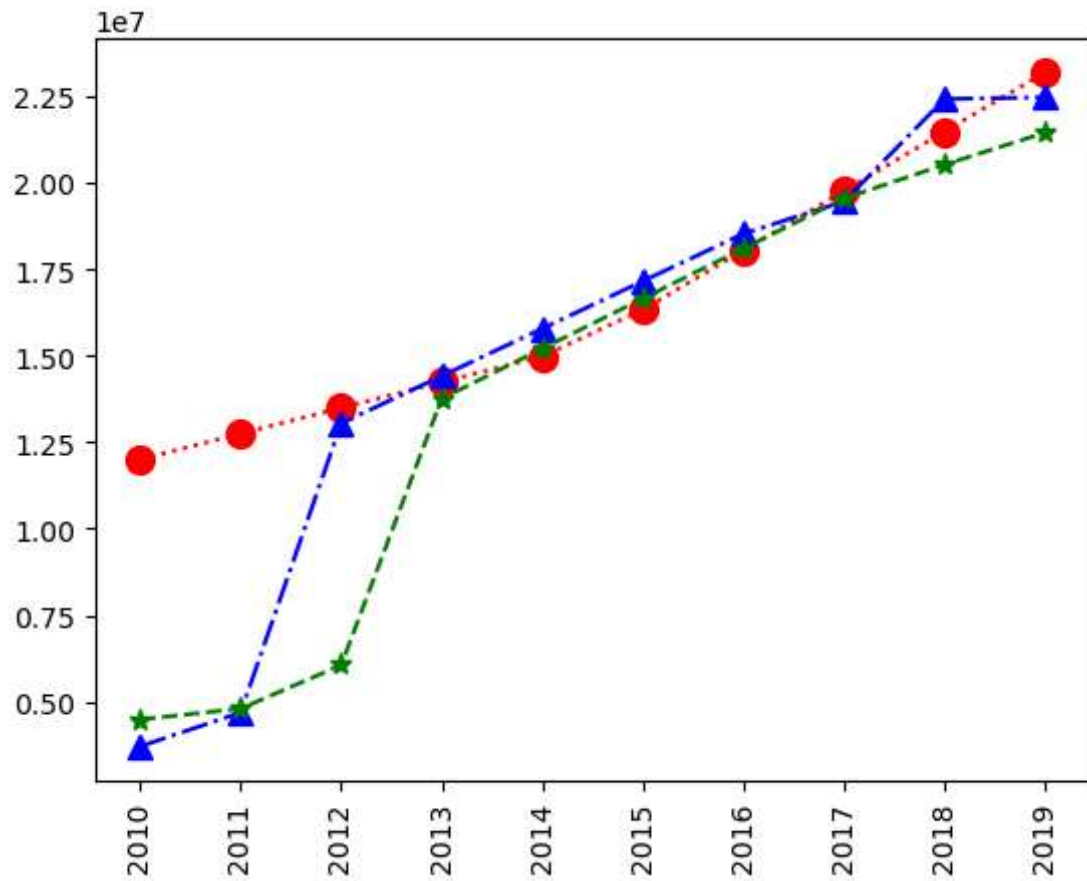
```
plt.show()
```



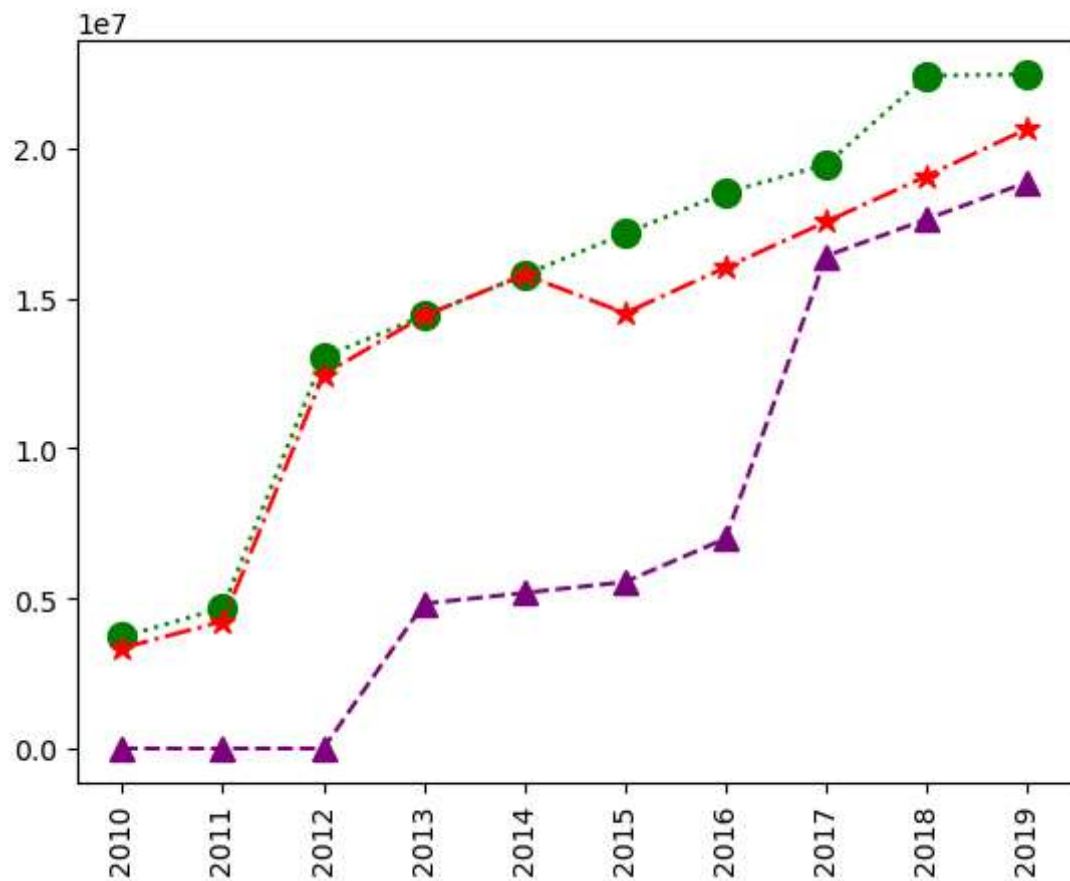
```
In [40]: plt.plot(Salary[0],c = 'Blue',ls=':', marker = 's',ms=7, label=Players[0])
plt.plot(Salary[1],c = 'Green',ls='--', marker = 'o',ms=10,label=Players[1])
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



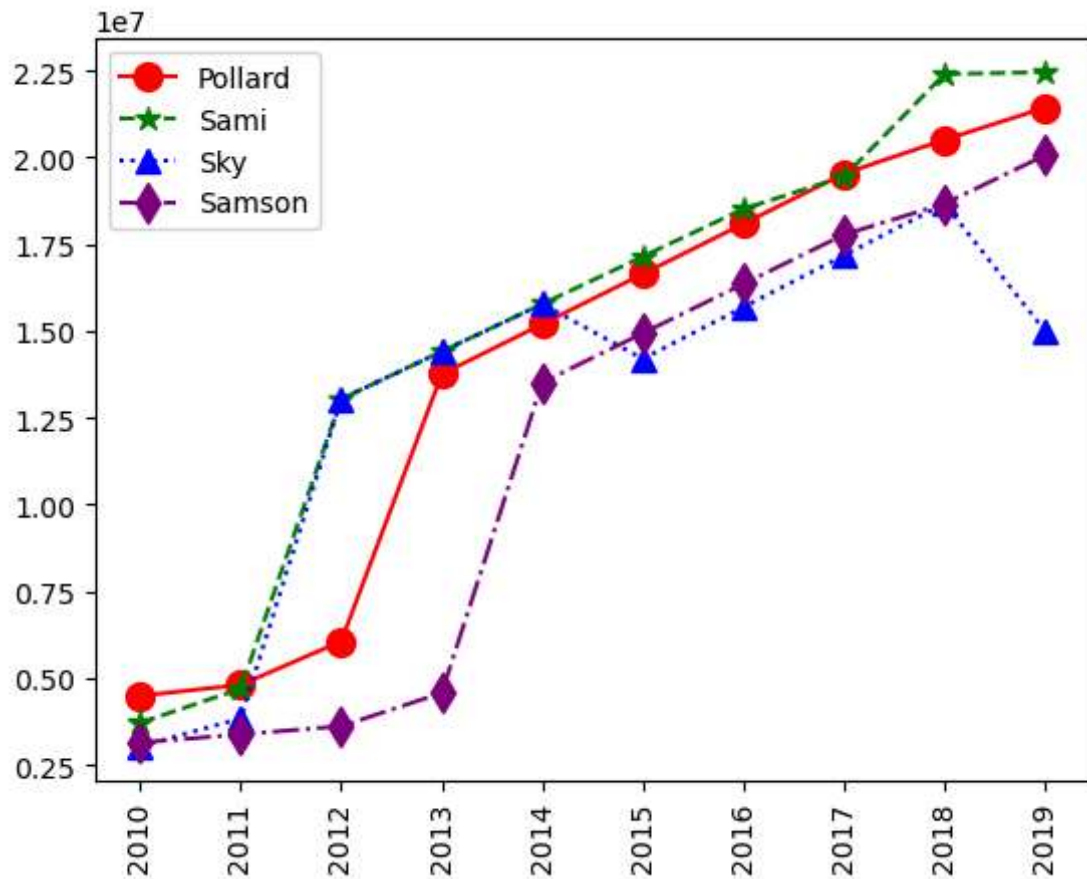
```
In [43]: plt.plot(Salary[1], c='r', ls=':', marker='o', ms=10, label=Players[1])
plt.plot(Salary[3], c='b', ls='- .', marker='^', ms=9, label=Players[3])
plt.plot(Salary[4], c='g', ls='--', marker='*', ms=8, label=Players[4])
plt.xticks(list(range(0,10)), Seasons, rotation='vertical')
plt.show()
```



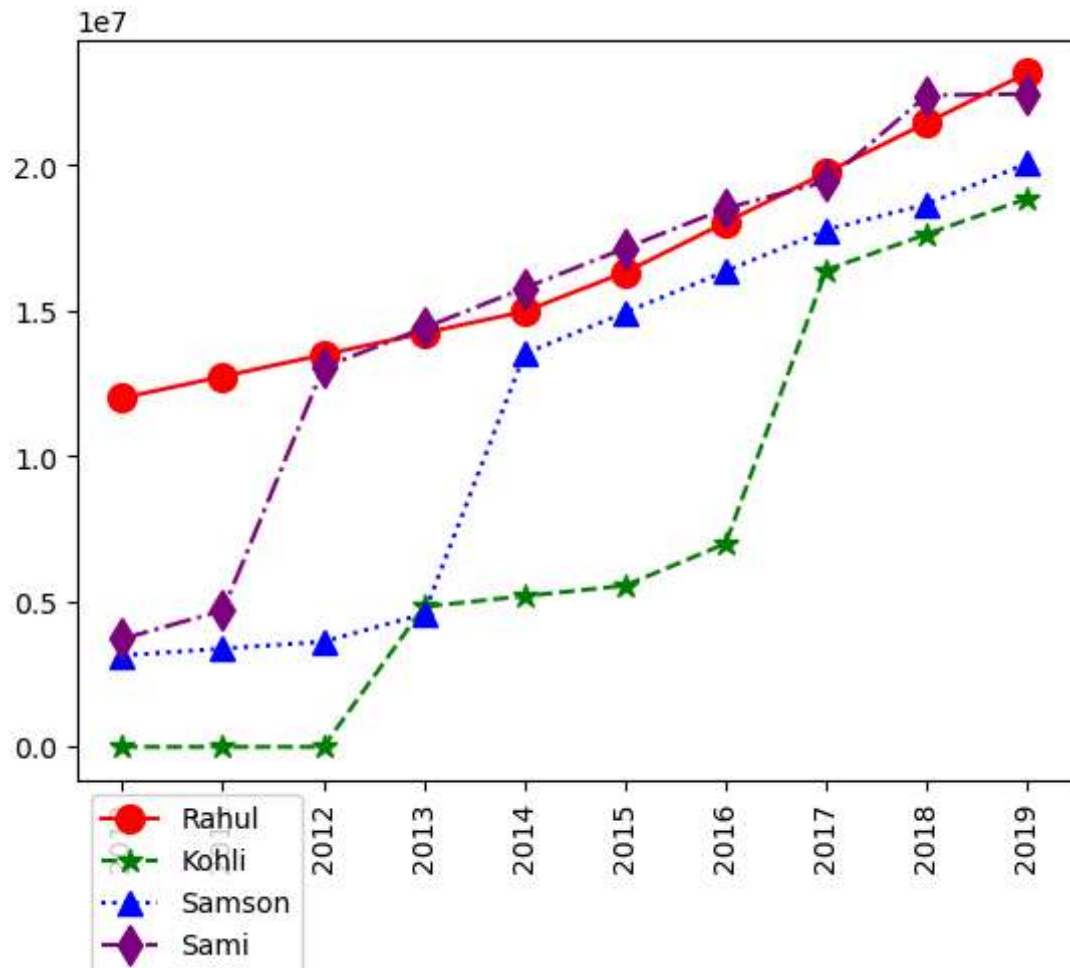
```
In [46]: plt.plot(Salary[3],c='g',ls=':',marker='o',ms=10,label=Players[3])
plt.plot(Salary[5],c='r',ls='-.',marker='*',ms=9,label=Players[5])
plt.plot(Salary[8],c='Purple',ls='--',marker='^',ms=9,label=Players[8])
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



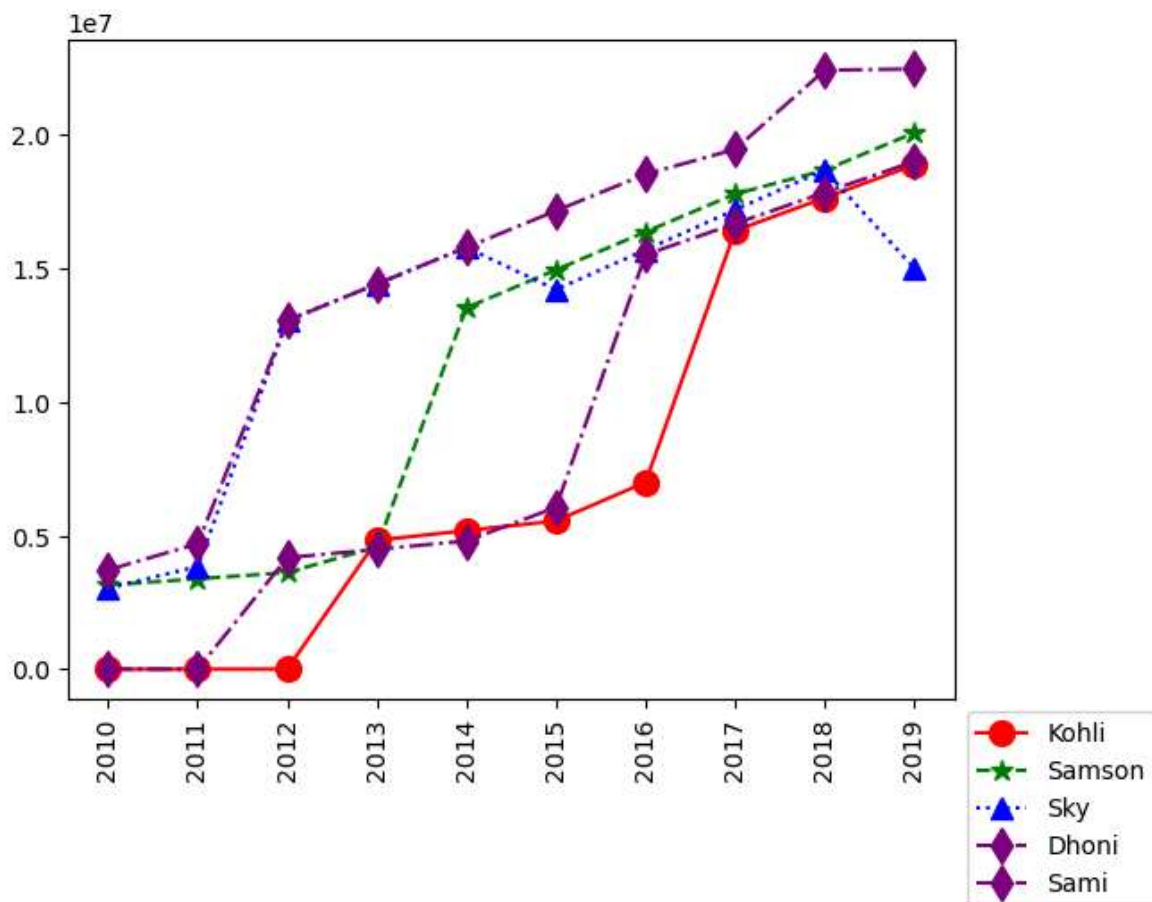
```
In [59]: plt.plot(Salary[4],c='r',ls='-',marker='o',ms=10,label=Players[4])
plt.plot(Salary[3],c='Green',ls='--',marker='*',ms=9,label=Players[3])
plt.plot(Salary[9],c='b',ls=':',marker='^',ms=9,label=Players[9])
plt.plot(Salary[6],c='purple',ls='-.',marker='d',ms=10,label=Players[6])
plt.legend()
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



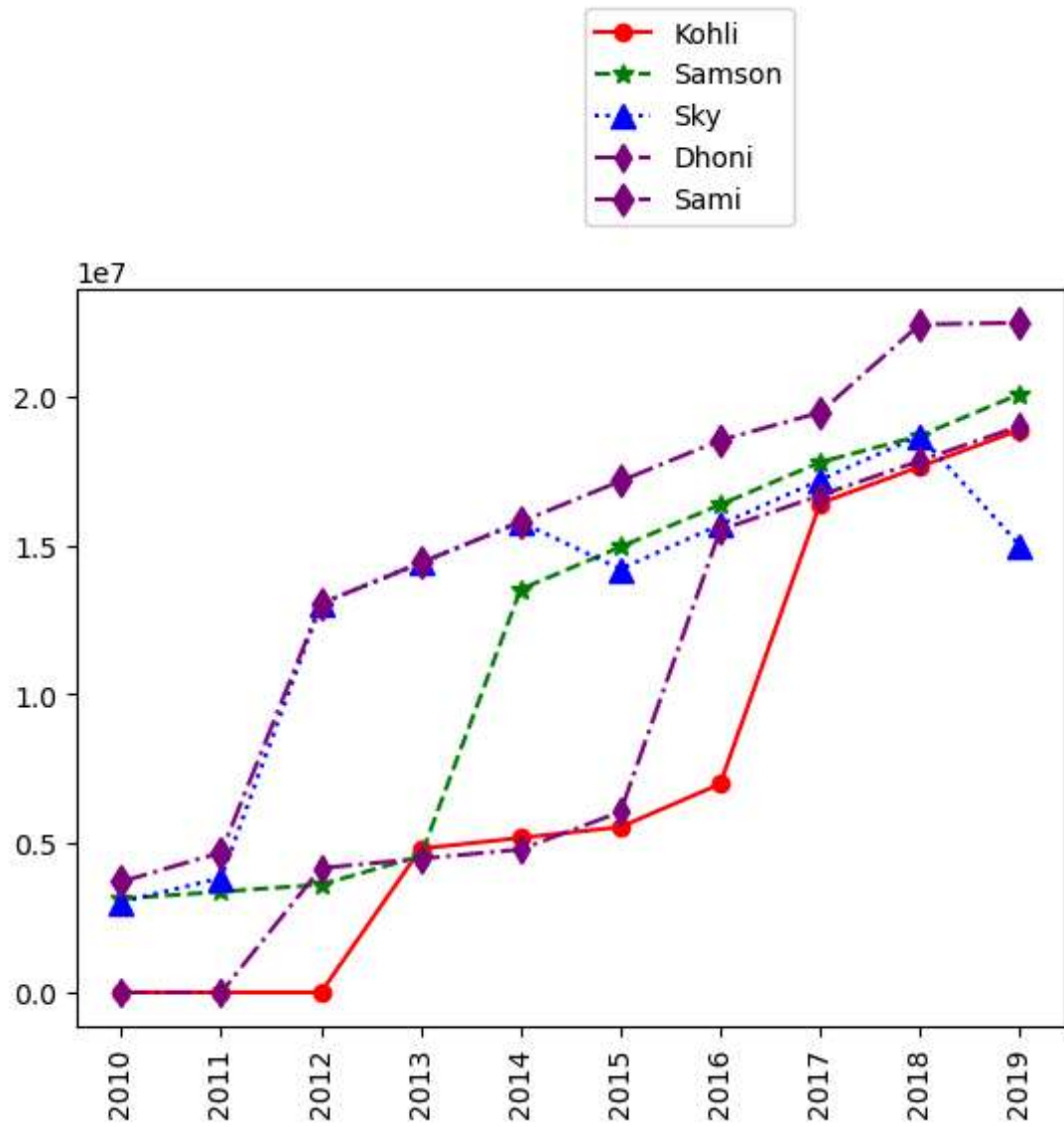
```
In [62]: plt.plot(Salary[1],c='r',ls='-',marker='o',ms=10,label=Players[1])
plt.plot(Salary[8],c='Green',ls='--',marker='*',ms=9,label=Players[8])
plt.plot(Salary[6],c='b',ls=':',marker='^',ms=9,label=Players[6])
plt.plot(Salary[3],c='purple',ls='-.',marker='d',ms=10,label=Players[3])
plt.legend(loc='upper left',bbox_to_anchor=(0,0))
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



```
In [78]: plt.plot(Salary[8],c='r',ls='-',marker='o',ms=10,label=Players[8])
plt.plot(Salary[6],c='Green',ls='--',marker='*',ms=9,label=Players[6])
plt.plot(Salary[9],c='b',ls=':',marker='^',ms=9,label=Players[9])
plt.plot(Salary[7],c='purple',ls='-.-',marker='d',ms=10,label=Players[7])
plt.plot(Salary[3],c='purple',ls='-.-',marker='d',ms=10,label=Players[3])
plt.legend(loc='upper left',bbox_to_anchor=(1,0))
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



```
In [71]: plt.plot(Salary[8],c='r',ls='-',marker='o',ms=6,label=Players[8])
plt.plot(Salary[6],c='Green',ls='--',marker='*',ms=7,label=Players[6])
plt.plot(Salary[9],c='b',ls=':',marker='^',ms=9,label=Players[9])
plt.plot(Salary[7],c='purple',ls='-.',marker='d',ms=7,label=Players[7])
plt.plot(Salary[3],c='purple',ls='-.',marker='d',ms=8,label=Players[3])
plt.legend(loc='upper left',bbox_to_anchor=(0.5,1.4))
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```



In [ ]: