In [2]:
```
#Import numpy
import numpy as np

#Seasons
Seasons = ["2015","2016","2017","2018","2019","2020","2021","2022","2023","202
Sdict = {"2015":0,"2016":1,"2017":2,"2018":3,"2019":4,"2020":5,"2021":6,"2022"

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

#Salaries
Sachin_Salary = [15946875,17718750,19490625,21262500,23034375,24806250,252444
Rahul_Salary = [12000000,12744189,13488377,14232567,14976754,16324500,18038573
Smith_Salary = [4621800,5828090,13041250,14410581,15779912,14500000,16022500,1
Sami_Salary = [3713640,4694041,13041250,14410581,15779912,17149243,18518574,19
Pollard_Salary = [4493160,4806720,6061274,13758000,15202590,16647180,18091770,
Morris_Salary = [3348000,4235220,12455000,14410581,15779912,14500000,16022500,
Samson_Salary = [3144240,3380160,3615960,4574189,13520500,14940153,16359805,17
Dhoni_Salary = [0,0,4171200,4484040,4796880,6053663,15506632,16669630,17832627
Kohli_Salary = [0,0,0,4822800,5184480,5546160,6993708,16402500,17632688,188628
Sky_Salary = [3031920,3841443,13041250,14410581,15779912,14200000,15691000,171
#Matrix
Salary = np.array([Sachin_Salary, Rahul_Salary, Smith_Salary, Sami_Salary, Pol

#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, Sam

#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, Mc
```

In [4]:
```
Salary
```

Out[4]:
```
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 [5]:
```
Games
```

Out[5]:
```
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 [6]:
```
Players
```

Out[6]:
```
['Sachin',
 'Rahul',
 'Smith',
 'Sami',
 'Pollard',
 'Morris',
 'Samson',
 'Dhoni',
 'Kohli',
 'Sky']
```

Salary/Games

In [7]:
```
Salary/Games
```

```
/var/folders/rk/tgcftpfx5wdg_zhb9fq1y8_c0000gn/T/ipykernel_65095/3709746658.p
y:1: RuntimeWarning: divide by zero encountered in divide
  Salary/Games
```

Out[7]:
```
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 [8]:
```
np.round(Salary/Games)
```

```
/var/folders/rk/tgcftpfx5wdg_zhb9fq1y8_c0000gn/T/ipykernel_65095/3232172828.p
y:1: RuntimeWarning: divide by zero encountered in divide
  np.round(Salary/Games)
```

Out[8]:
```
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 [9]:
```
Games[5]
```

Out[9]:
```
array([70, 69, 67, 77, 70, 77, 57, 74, 79, 44])
```

In [11]:
```
Sdict
```

Out[11]:
```
{'2015': 0,
 '2016': 1,
 '2017': 2,
 '2018': 3,
 '2019': 4,
 '2020': 5,
 '2021': 6,
 '2022': 7,
 '2023': 8,
 '2024': 9}
```

In [12]:
```
import warnings
warnings.filterwarnings('ignore')
```

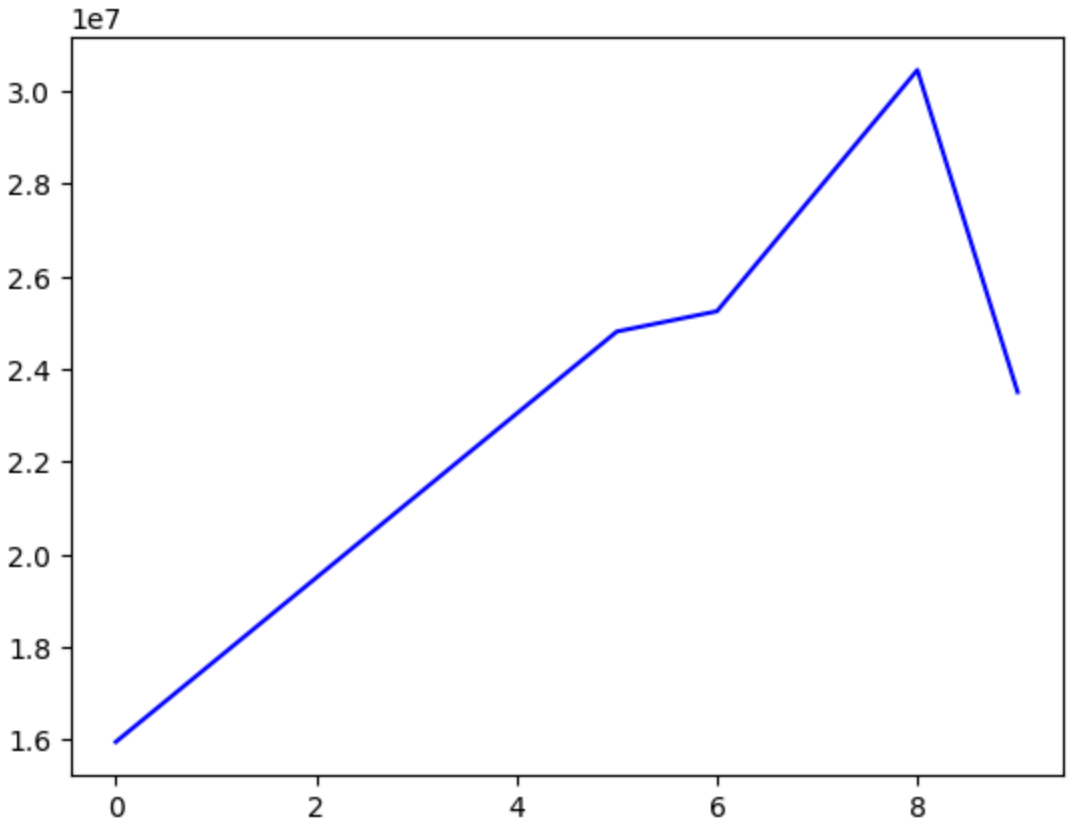
In [13]:
```
import matplotlib.pyplot as plt
```

In [14]:
```
Salary[0]
```

Out[14]:
```
array([15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
       25244493, 27849149, 30453805, 23500000])
```

In [20]:
```
plt.plot(Salary[0], c = 'b')
```

Out[20]:
```
[<matplotlib.lines.Line2D at 0x10afc6010>]
```



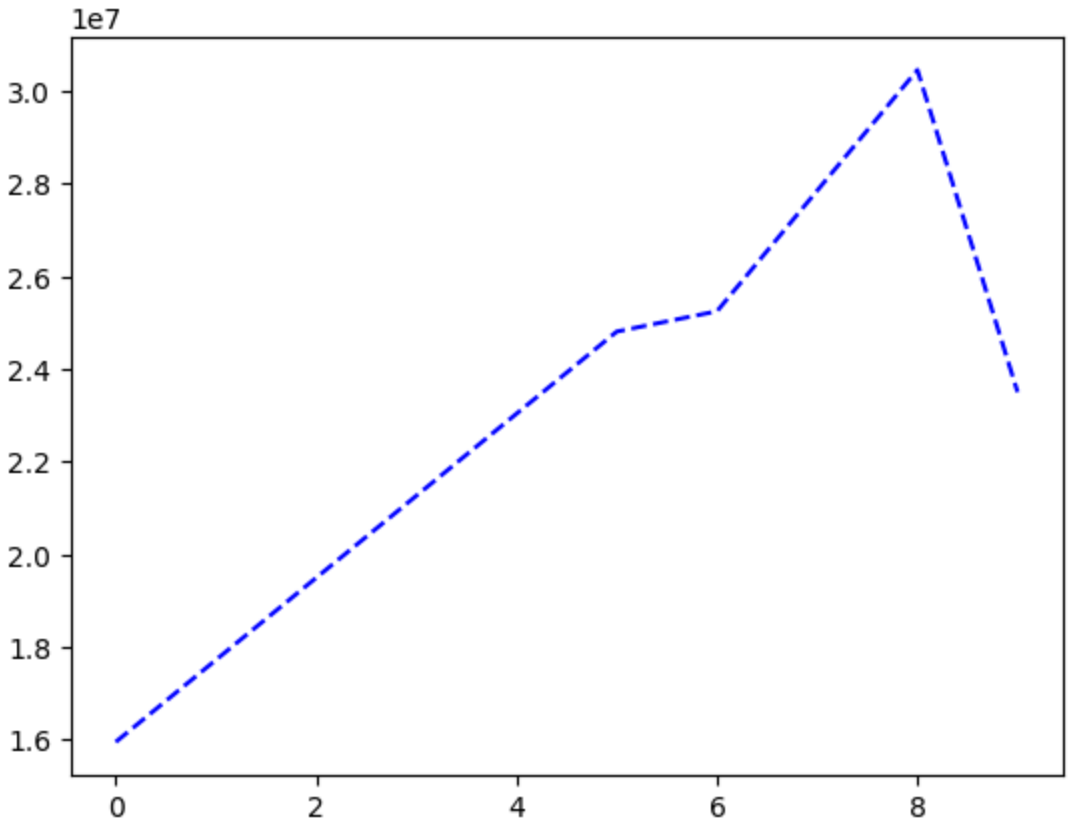
In [17]:
```
Games[0]
```

Out[17]:
```
array([80, 77, 82, 82, 73, 82, 58, 78,  6, 35])
```

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

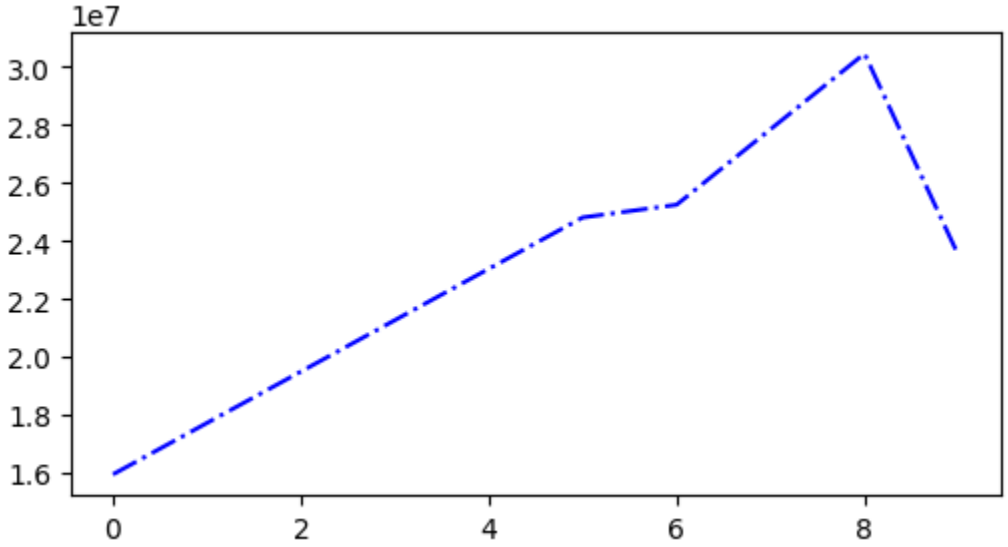
In [25]:
```
plt.plot(Salary[0], c = 'b', ls = '--')
```

Out[25]:
```
[<matplotlib.lines.Line2D at 0x10b298990>]
```

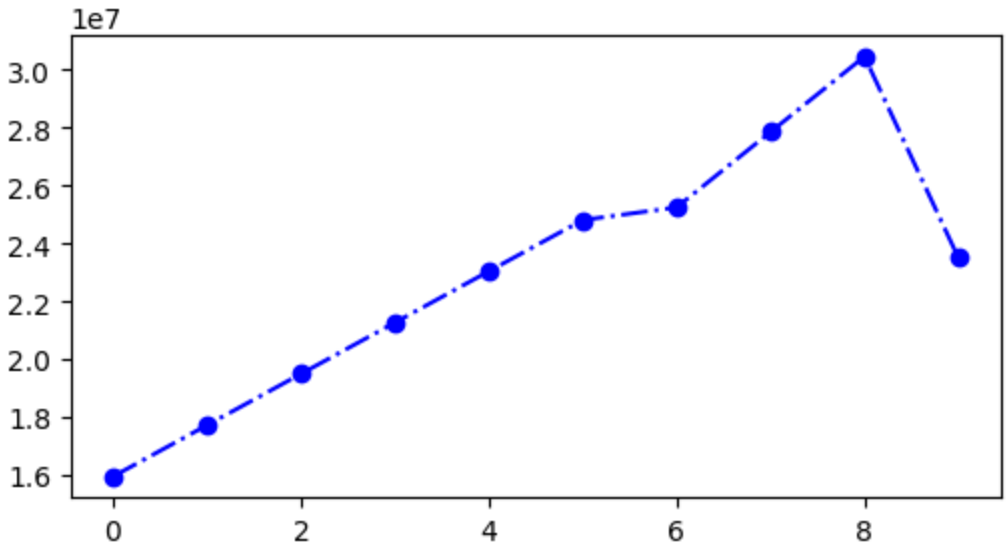


In [29]:
```
%matplotlib inline
plt.rcParams['figure.figsize'] = 6,3
```

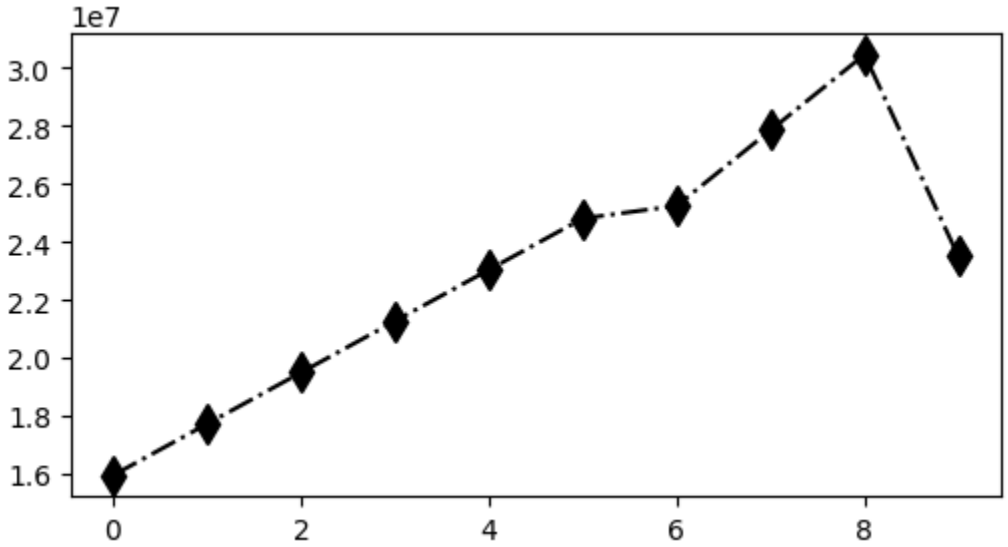
In [30]:
```
plt.plot(Salary[0], c = 'b', ls ='-.')
plt.show()
```



In [31]:
```
plt.plot(Salary[0], c = 'b', ls='-.', marker = 'o')
plt.show()
```



In [33]:
```
plt.plot(Salary[0], c = 'k', ls='-.', marker = 'd', ms = 10 )
plt.show()
```

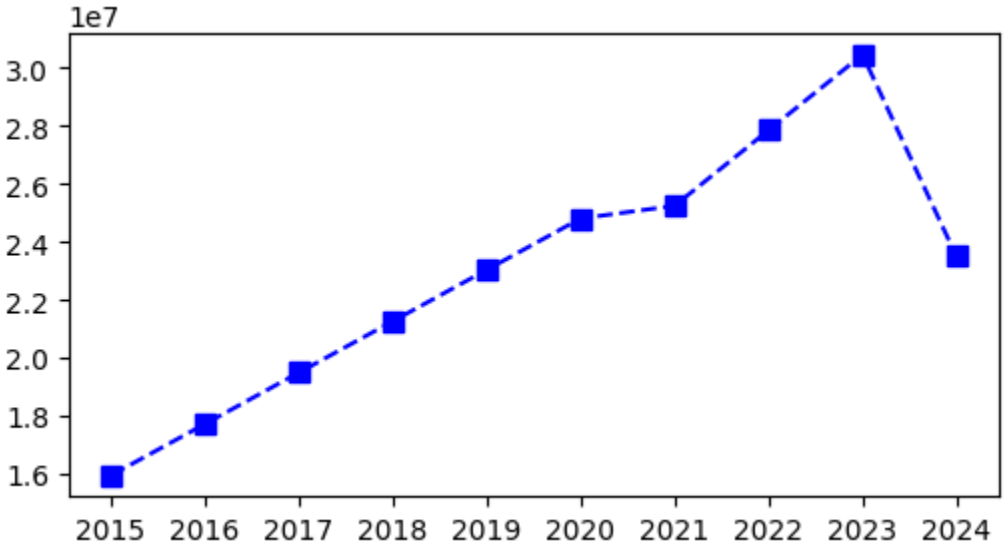


In [35]:
```
Sdict
```

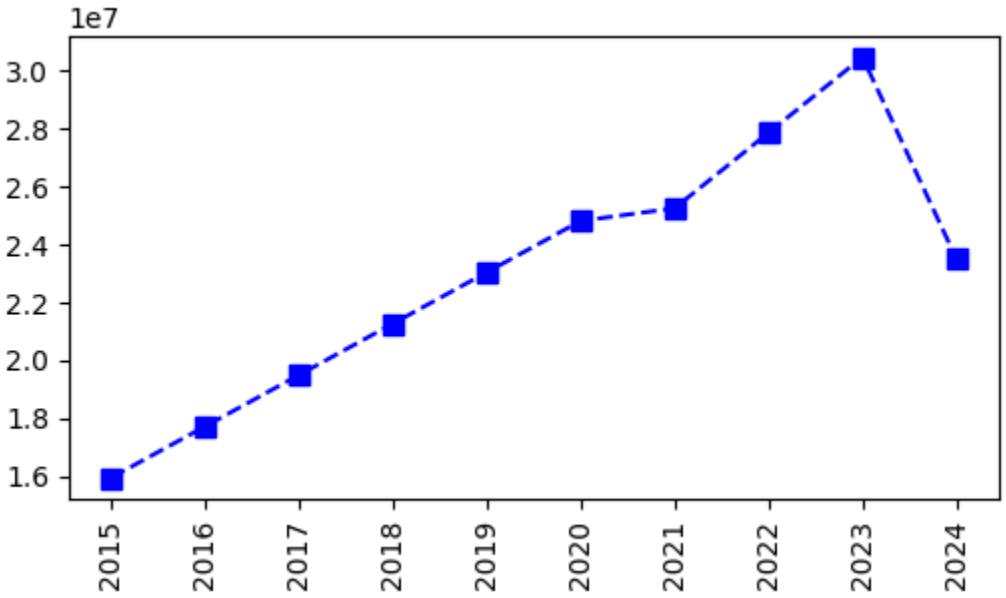
Out[35]:
```
{'2015': 0,
 '2016': 1,
 '2017': 2,
 '2018': 3,
 '2019': 4,
 '2020': 5,
 '2021': 6,
 '2022': 7,
 '2023': 8,
 '2024': 9}
```

In [36]:
```
plt.plot(Salary[0], c='blue', ls='--',marker ='s', ms =7)
plt.xticks(list(range(0,10)),Seasons)
```

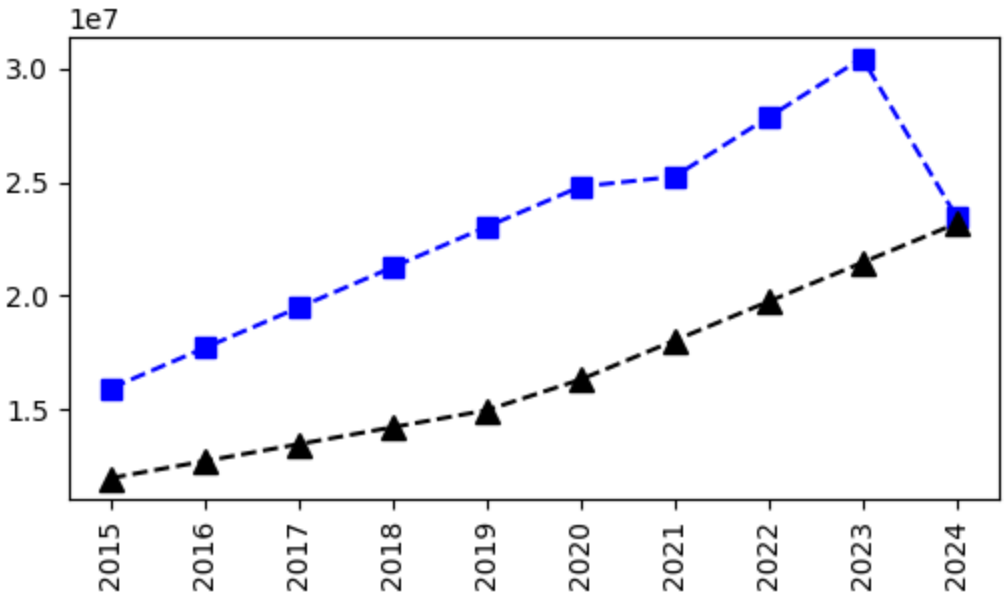
```
plt.show()
```



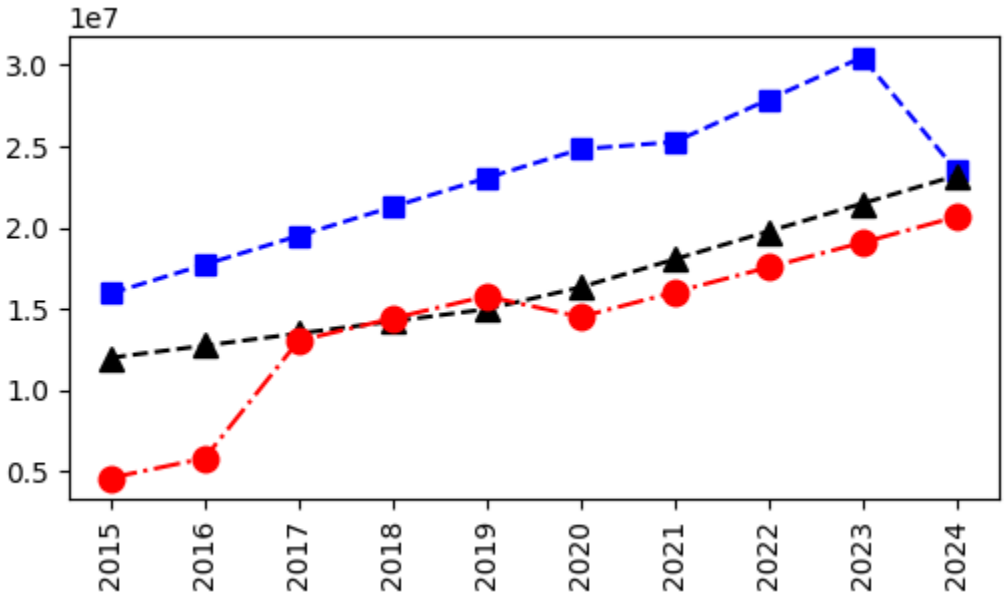
In [38]:
```
plt.plot(Salary[0], c='blue', ls='--',marker ='s', ms =7)
plt.xticks(list(range(0,10)),Seasons, rotation = 'vertical')
plt.show()
```



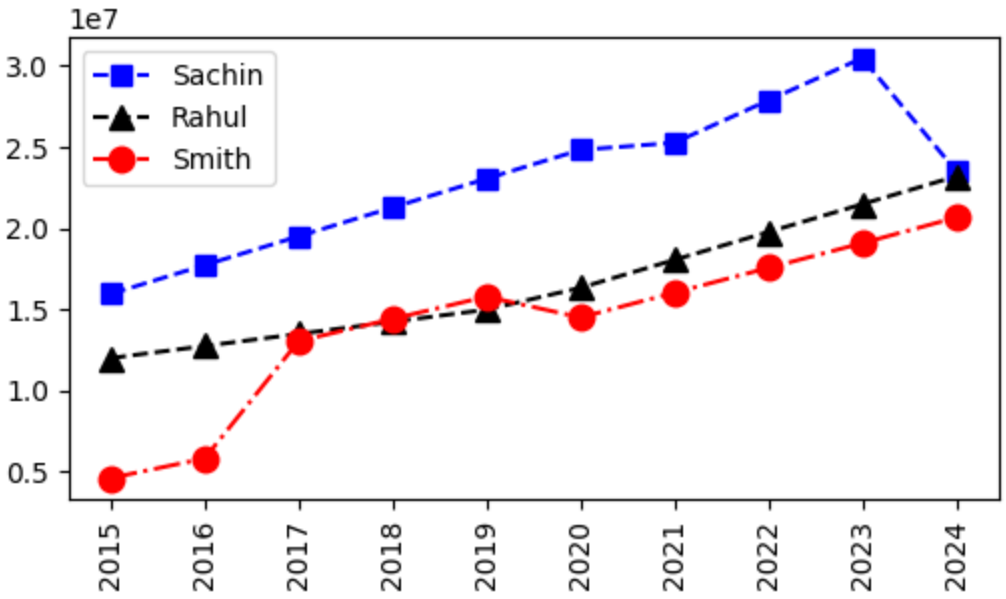
In [39]:
```
plt.plot(Salary[0], c='blue', ls='--',marker ='s', ms =7)
plt.plot(Salary[1], c='k', ls='--',marker ='^', ms =9)
plt.xticks(list(range(0,10)),Seasons, rotation = 'vertical')
plt.show()
```



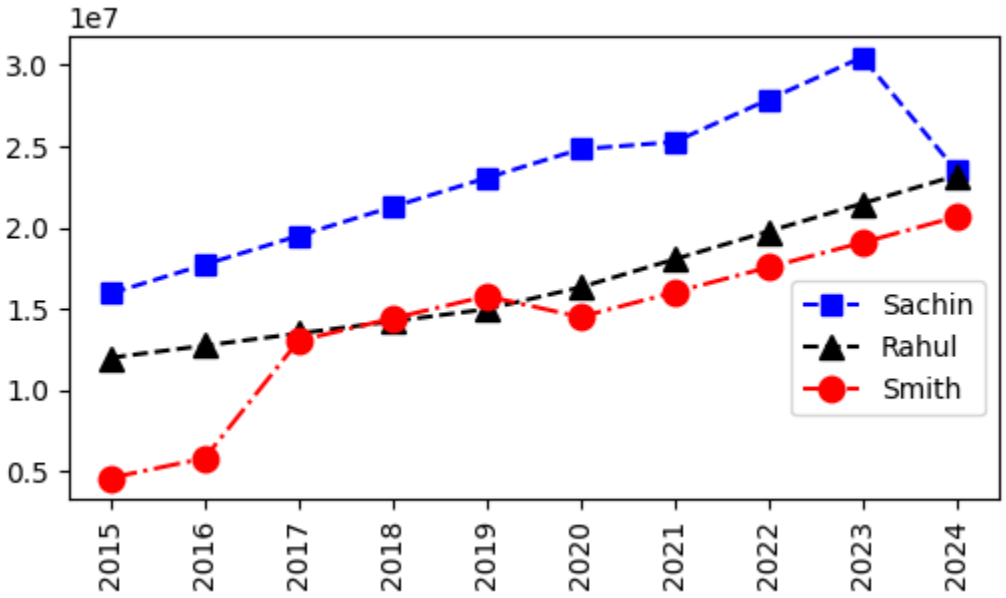
In [41]:
```
plt.plot(Salary[0], c='blue', ls='--',marker ='s', ms =7)
plt.plot(Salary[1], c='k', ls='--',marker ='^', ms =9)
plt.plot(Salary[2], c='r', ls='-.',marker ='o', ms =9)

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



In [42]:
```
plt.plot(Salary[0], c='blue', ls='--',marker ='s', ms =7, label = Players[0])
plt.plot(Salary[1], c='k', ls='--',marker ='^', ms =9,label = Players[1])
plt.plot(Salary[2], c='r', ls='-.',marker ='o', ms =9,label = Players[2])

plt.legend()

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



In [45]:
```
plt.plot(Salary[0], c='blue', ls='--',marker ='s', ms =7, label = Players[0])
plt.plot(Salary[1], c='k', ls='--',marker ='^', ms =9,label = Players[1])
plt.plot(Salary[2], c='r', ls='-.',marker ='o', ms =9,label = Players[2])

plt.legend( loc = 'upper right', bbox_to_anchor=(1,0.5))


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



In [ ]:

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