

```

#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, "2023":8, "2024":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, "Samso
n":6, "Dhoni":7, "Kohli":8, "Sky":9}

#Salaries
Sachin_Salary =
[15946875, 17718750, 19490625, 21262500, 23034375, 24806250, 25244493, 278491
49, 30453805, 23500000]
Rahul_Salary =
[12000000, 12744189, 13488377, 14232567, 14976754, 16324500, 18038573, 197526
45, 21466718, 23180790]
Smith_Salary =
[4621800, 5828090, 13041250, 14410581, 15779912, 14500000, 16022500, 17545000
, 19067500, 20644400]
Sami_Salary =
[3713640, 4694041, 13041250, 14410581, 15779912, 17149243, 18518574, 19450000
, 22407474, 22458000]
Pollard_Salary =
[4493160, 4806720, 6061274, 13758000, 15202590, 16647180, 18091770, 19536360,
20513178, 21436271]
Morris_Salary =
[3348000, 4235220, 12455000, 14410581, 15779912, 14500000, 16022500, 17545000
, 19067500, 20644400]
Samson_Salary =
[3144240, 3380160, 3615960, 4574189, 13520500, 14940153, 16359805, 17779458, 1
8668431, 20068563]
Dhoni_Salary =
[0, 0, 4171200, 4484040, 4796880, 6053663, 15506632, 16669630, 17832627, 189956
24]
Kohli_Salary =
[0, 0, 0, 4822800, 5184480, 5546160, 6993708, 16402500, 17632688, 18862875]
Sky_Salary =
[3031920, 3841443, 13041250, 14410581, 15779912, 14200000, 15691000, 17182000
, 18673000, 15000000]
#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])
```

#### Salary

```
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]])
```

Games

```
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]])
```

Points

```
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]])
```

Games

```
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]])
```

Games[0,6]

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Salary

```
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]])
```

Games

```
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]])
```

Salary/Games

C:\Users\Admin\AppData\Local\Temp\ipykernel\_38536\3709746658.py:1:

RuntimeWarning: divide by zero encountered in divide

Salary/Games

```
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]])

```

```
np.round(Salary//Games)
```

```

C:\Users\Admin\AppData\Local\Temp\ipykernel_38536\3663165759.py:1:
RuntimeWarning: divide by zero encountered in floor_divide
np.round(Salary//Games)

```

```

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]])

```

```

import warnings
warnings.filterwarnings('ignore')
#we are using above code to ignore unknown error cause by os updation
on monthly basis.

```

```

import matplotlib.pyplot as plt

```

```

Salary[0]

```

```

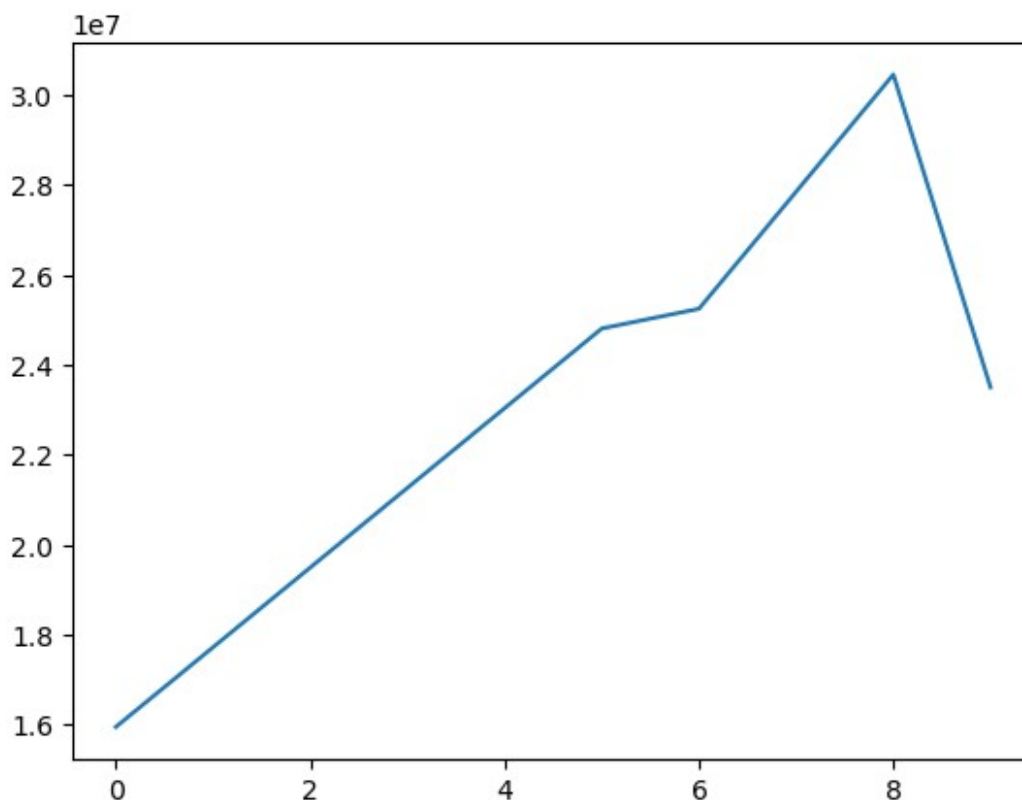
array([15946875, 17718750, 19490625, 21262500, 23034375, 24806250,
       25244493, 27849149, 30453805, 23500000])

```

```

plt.plot(Salary[0])
plt.show()

```

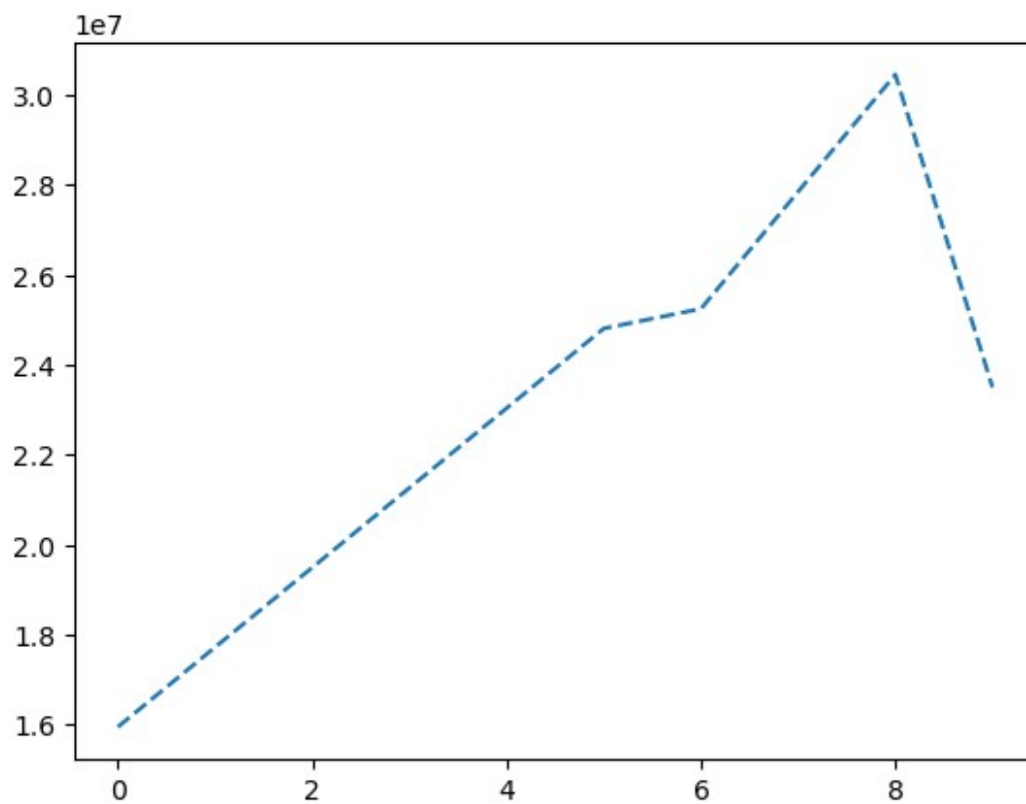


```

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

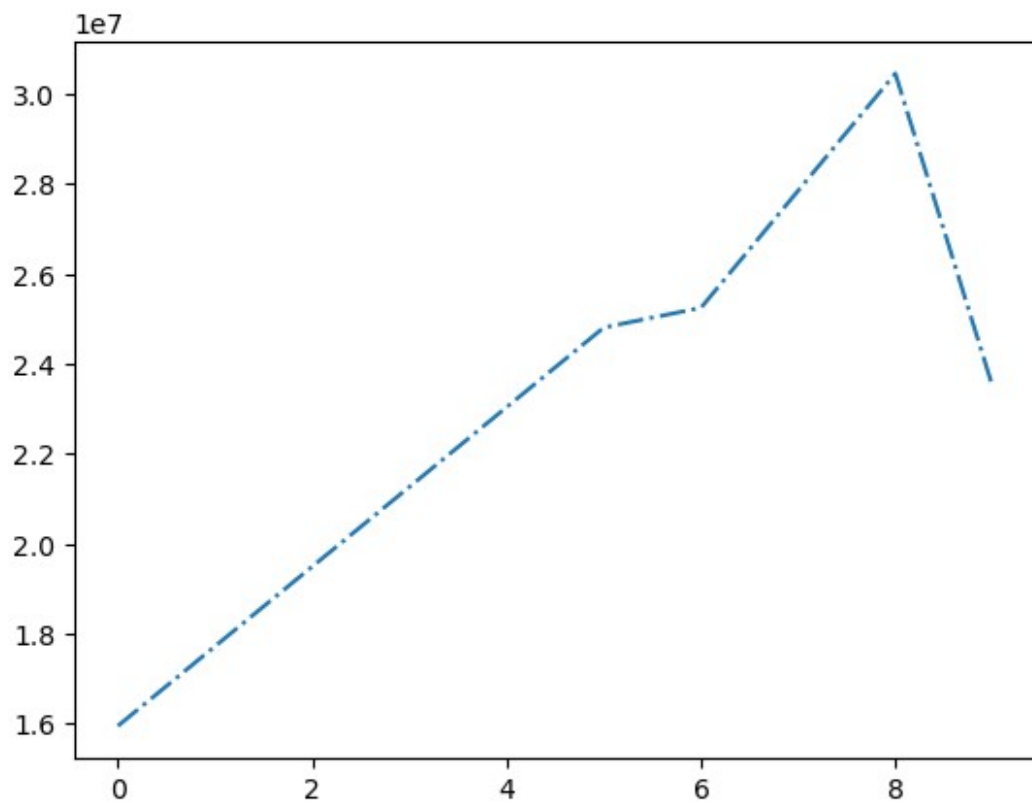
```

```
[<matplotlib.lines.Line2D at 0x21f05c53470>]
```



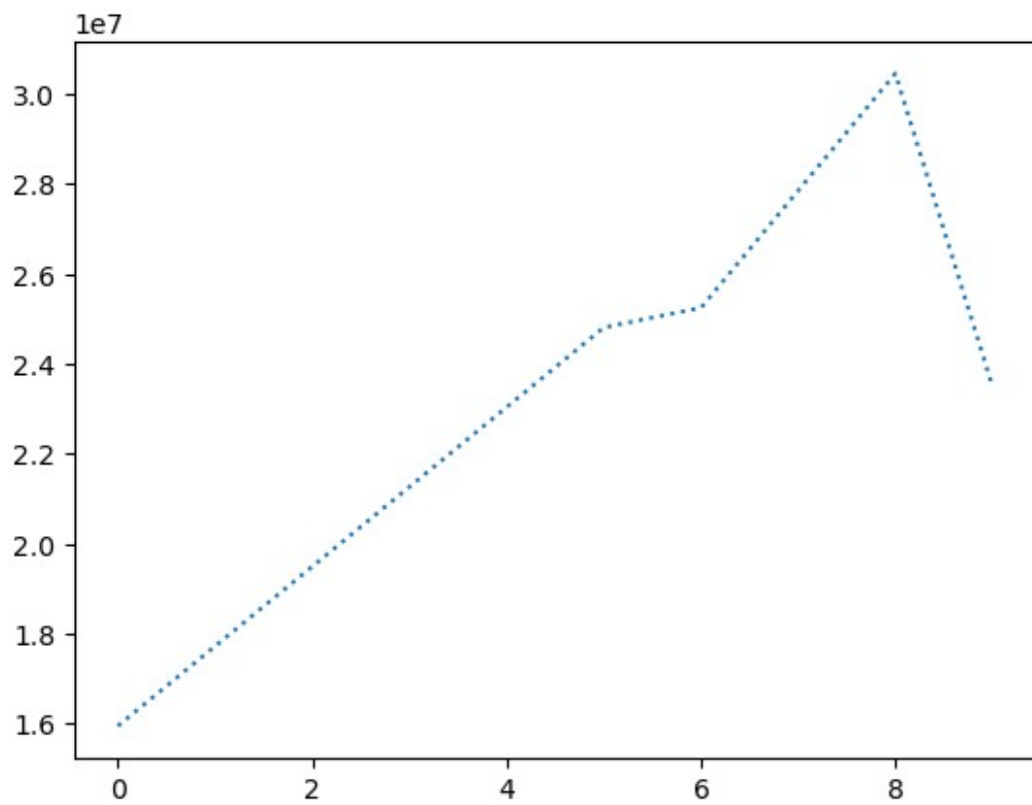
```
plt.plot(Salary[0],ls='-.')
```

```
[<matplotlib.lines.Line2D at 0x21f0540d010>]
```

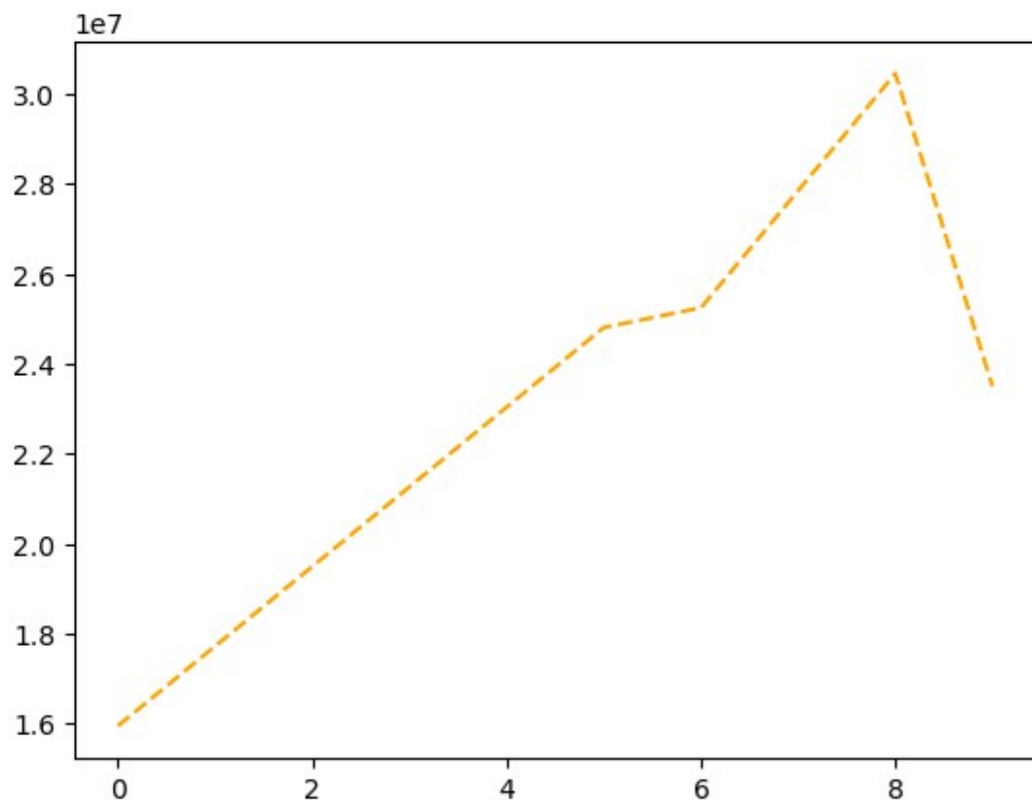


```
plt.plot(Salary[0],ls=':')  
[<matplotlib.lines.Line2D at 0x21f0546dcd0>]
```

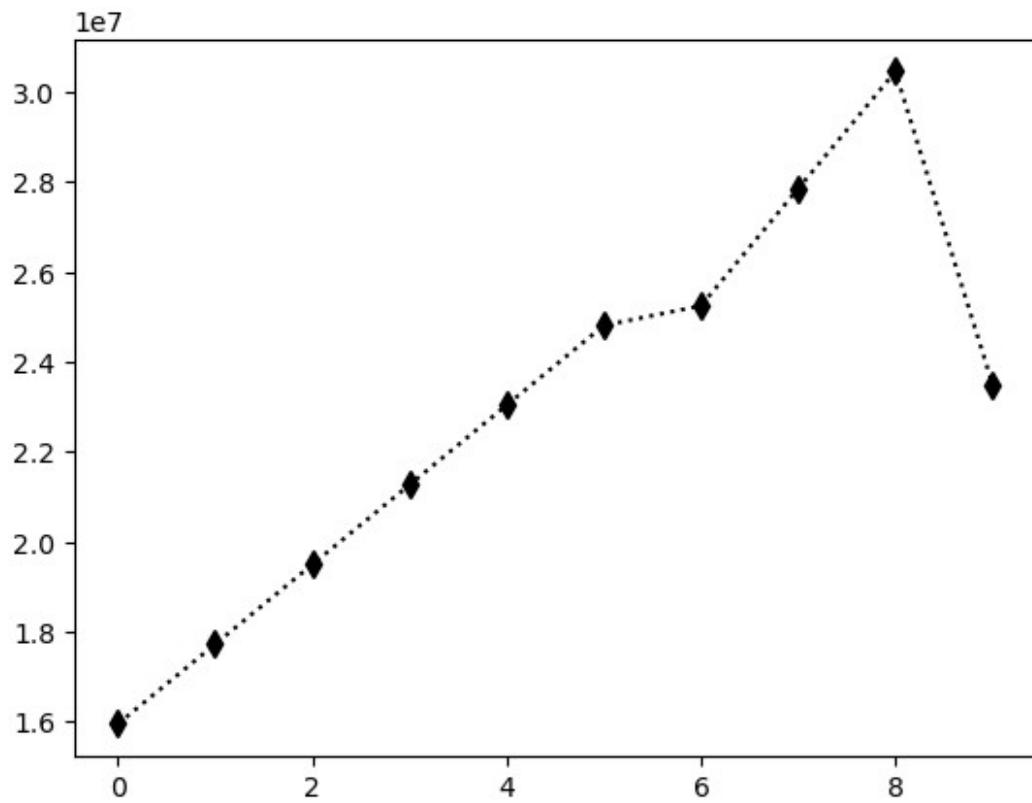




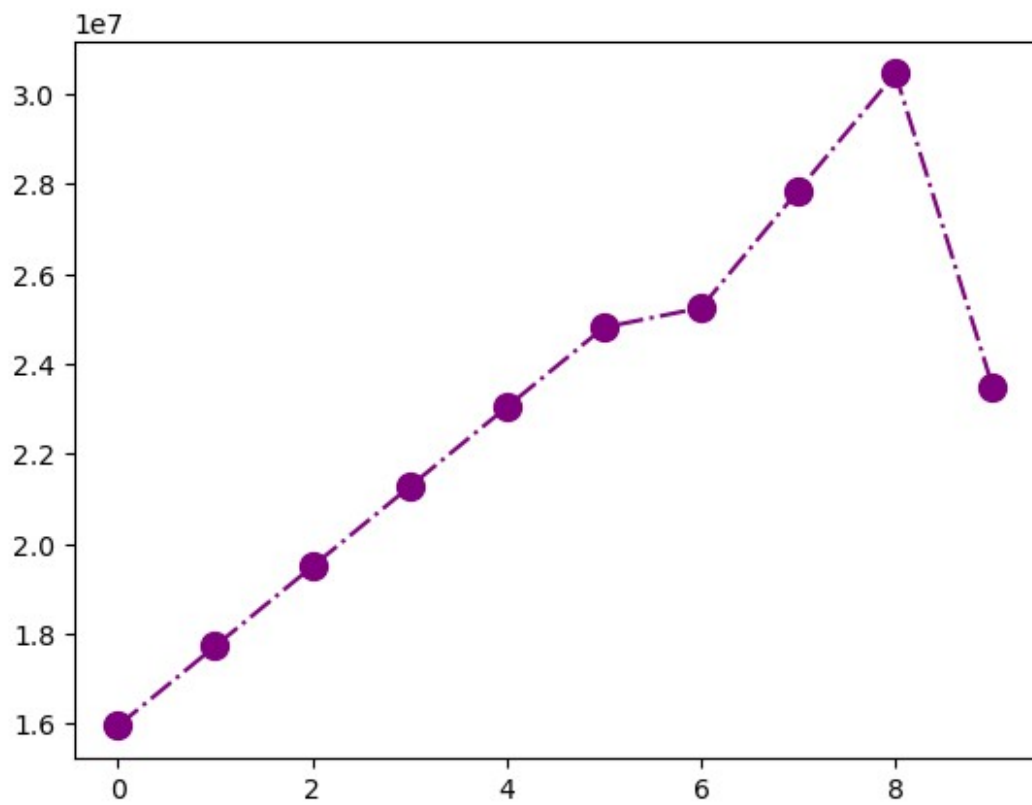
```
plt.plot(Salary[0],ls='--',color='orange')  
[<matplotlib.lines.Line2D at 0x21f054ceea0>]
```



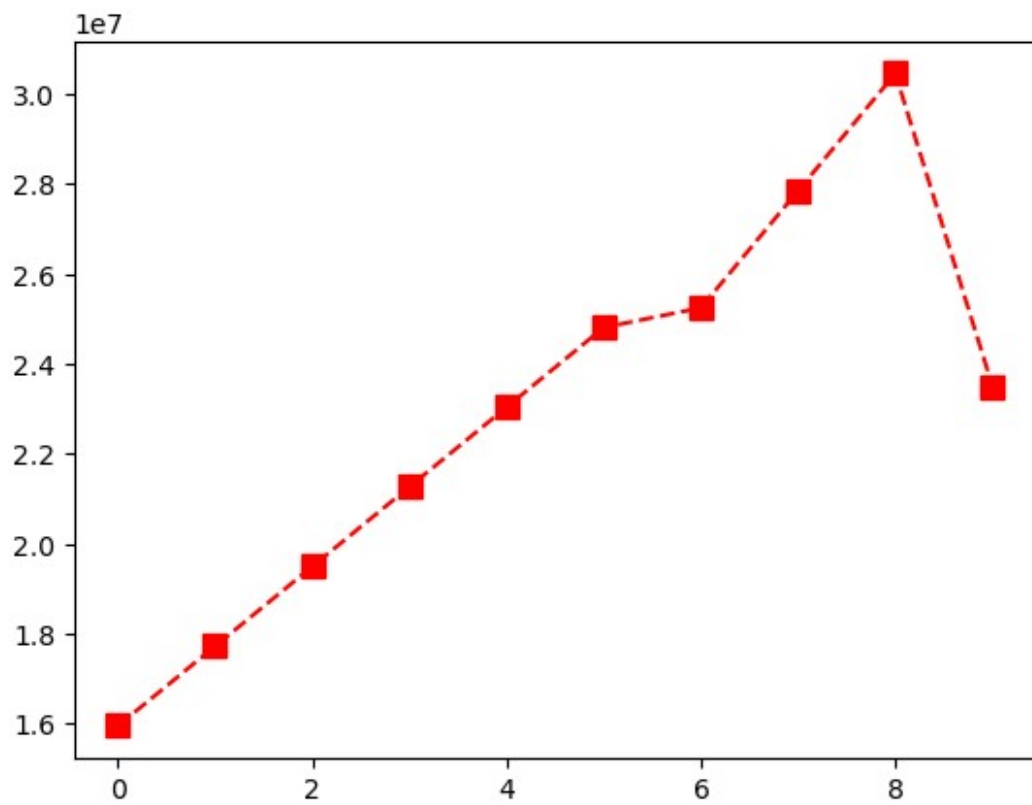
```
plt.plot(Salary[0],ls=':',color='black',ms=7,marker='d')  
[<matplotlib.lines.Line2D at 0x21f05d2b350>]
```



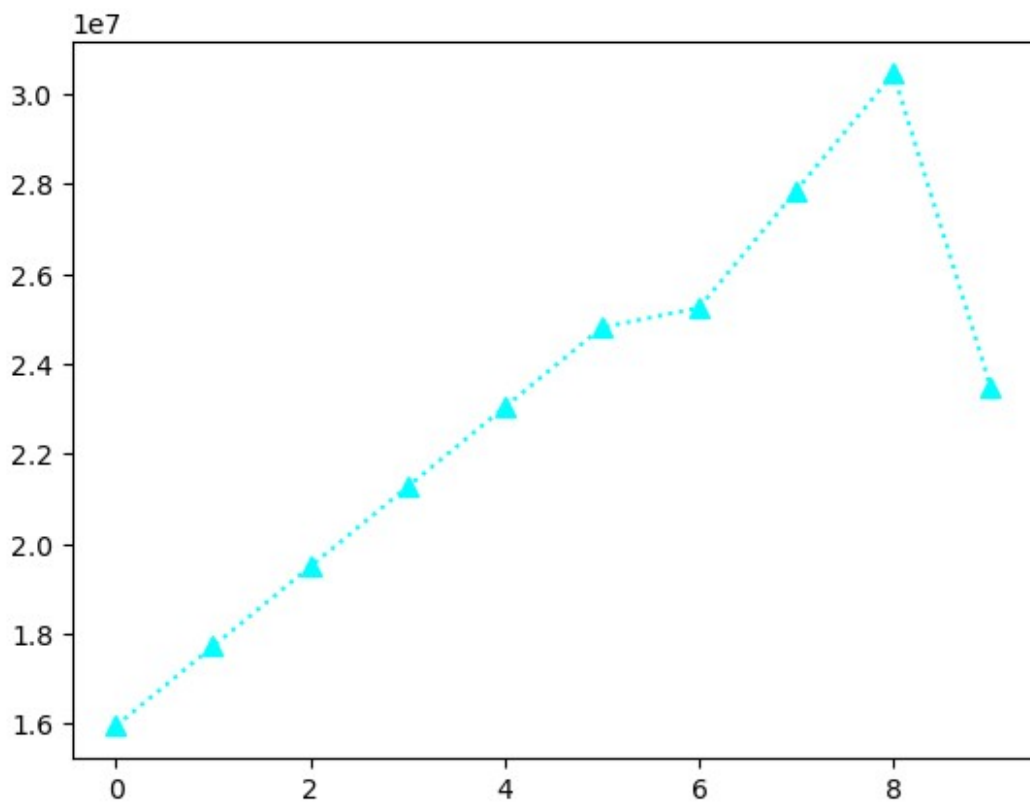
```
plt.plot(Salary[0],ls='-.',color='purple',ms=10,marker='o')  
[<matplotlib.lines.Line2D at 0x21f05dc0740>]
```



```
plt.plot(Salary[0],ls='--',color='red',ms=8,marker='s')  
[<matplotlib.lines.Line2D at 0x21f06f84b00>]
```



```
plt.plot(Salary[0],ls=':',color='cyan',marker='^',ms=7)
[<matplotlib.lines.Line2D at 0x21f06fc9c10>]
```



Sdict *#sdict means season dictionary*

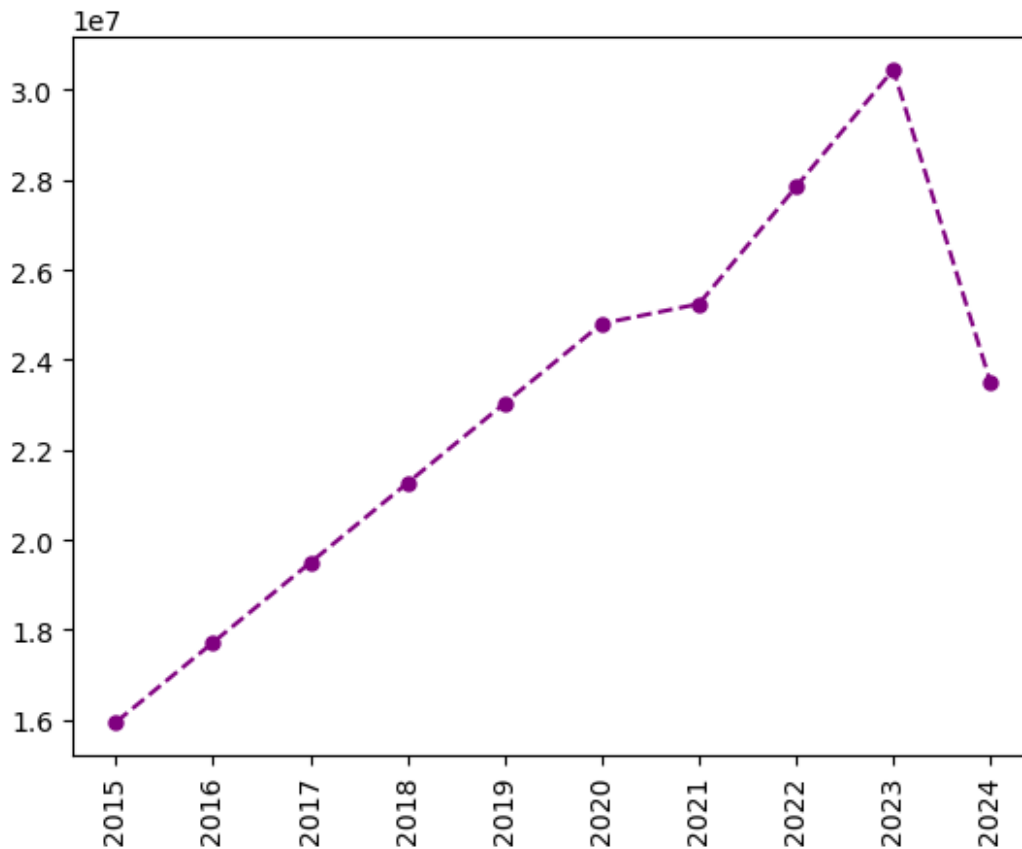
```
{'2015': 0,  
'2016': 1,  
'2017': 2,  
'2018': 3,  
'2019': 4,  
'2020': 5,  
'2021': 6,  
'2022': 7,  
'2023': 8,  
'2024': 9}
```

Pdict

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

```
plt.plot(Salary[0],ls='--',color='purple',marker='o',ms=5)
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show
```

```
<function matplotlib.pyplot.show(close=None, block=None)>
```

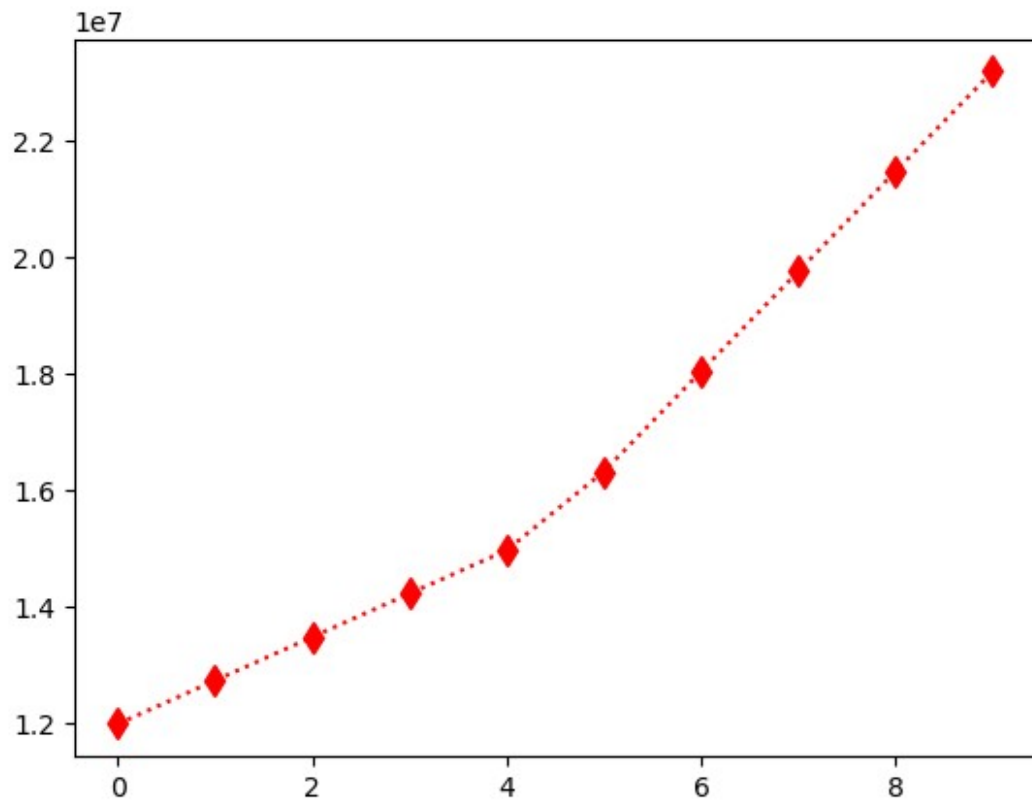


```
Salary[1]
```

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

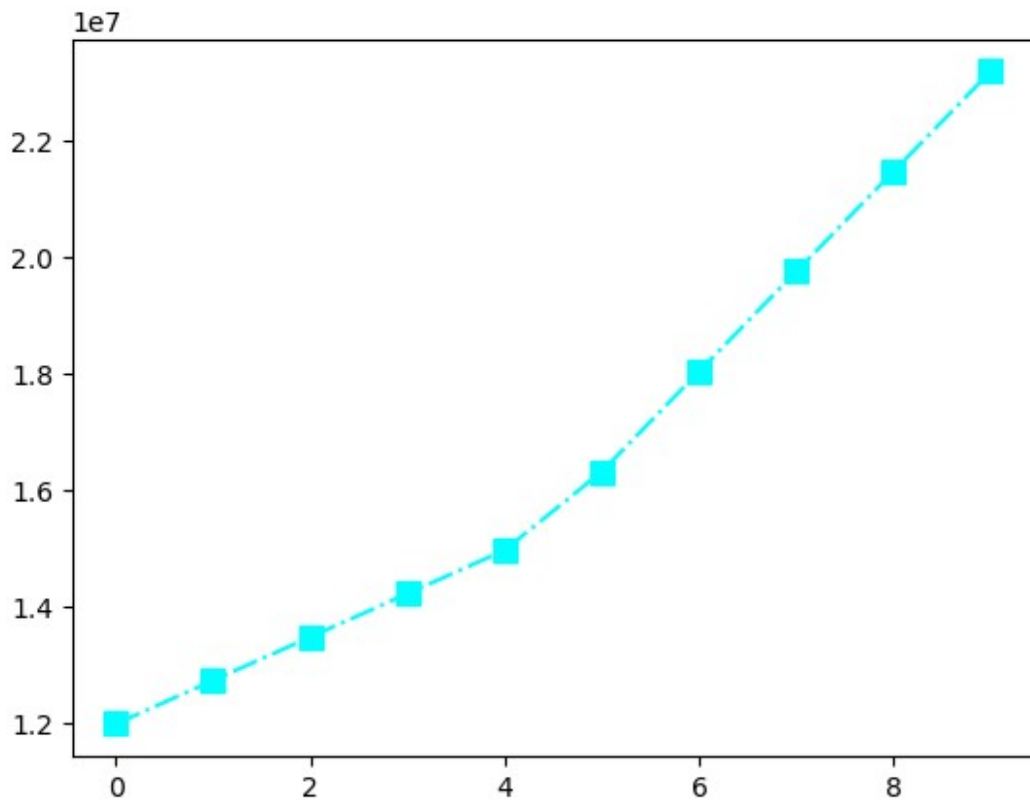
```
plt.plot(Salary[1],ls=':',color='red',ms=8,marker='d')
plt.show
```

```
<function matplotlib.pyplot.show(close=None, block=None)>
```

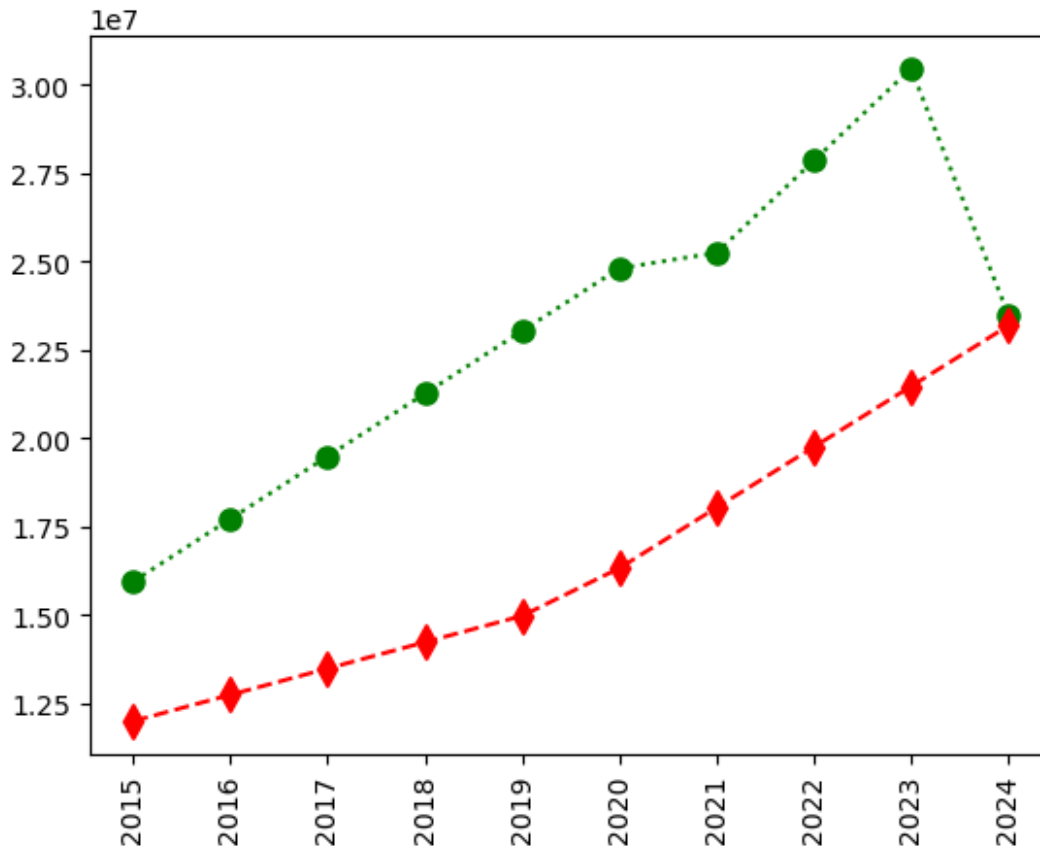


```
plt.plot(Salary[1],ls='-.',color='cyan',marker='s',ms=9)
plt.show
<function matplotlib.pyplot.show(close=None, block=None)>
```





```
plt.plot(Salary[0],ls=':',color='green',marker='o',ms=8,label='Player'[0])
plt.plot(Salary[1],ls='--',color='red',marker='d',ms=9,label='Player'[1])
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show()
```

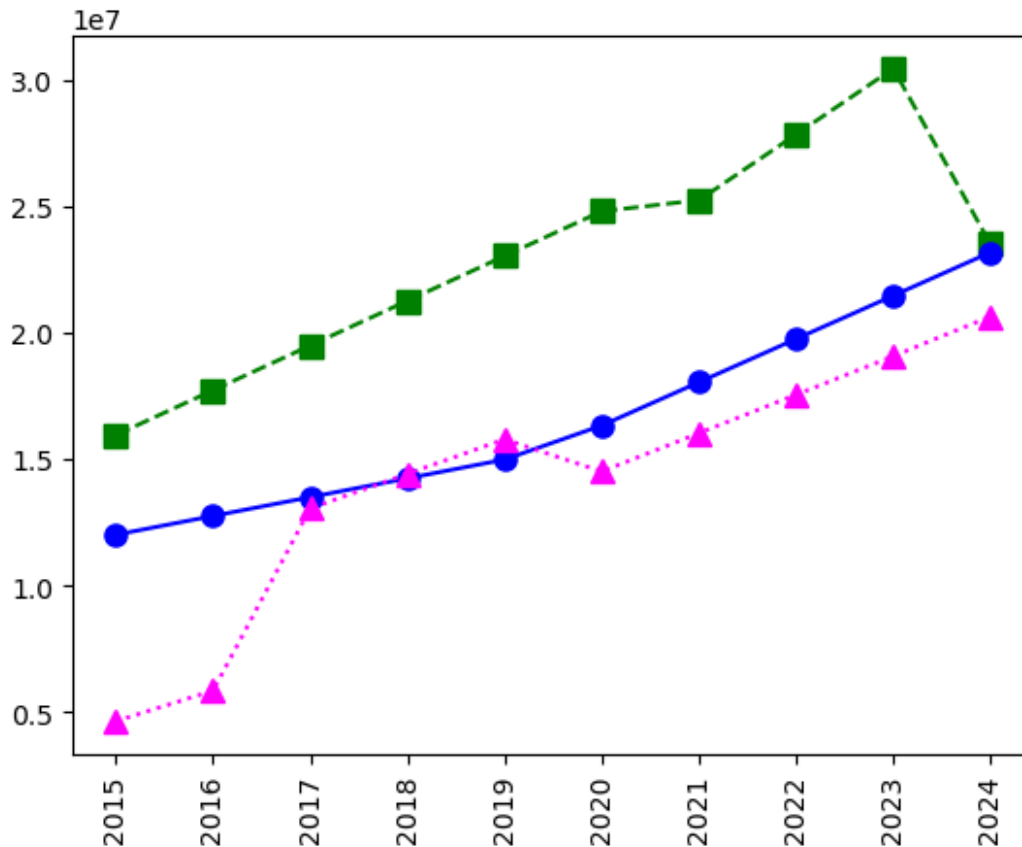


Games

```
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]])
```

```
plt.plot(Salary[0],c='Green',ls='--',marker='s',ms=8,label='player'[0])
plt.plot(Salary[1],c='blue',ls='-',marker='o',ms=8,label='player'[1])
plt.plot(Salary[2],c='magenta',ls=':',marker='^',ms=8,label='player'[2])
plt.xticks(list(range(0,10)),Seasons,rotation='vertical')
plt.show

<function matplotlib.pyplot.show(close=None, block=None)>
```



```
plt.plot(Salary[0],c='Green', ls='--', marker='s', ms=8,
label='player'[0])

plt.plot(Salary[1],c='Blue', ls='-', marker='o', ms=8,
label='player'[1])

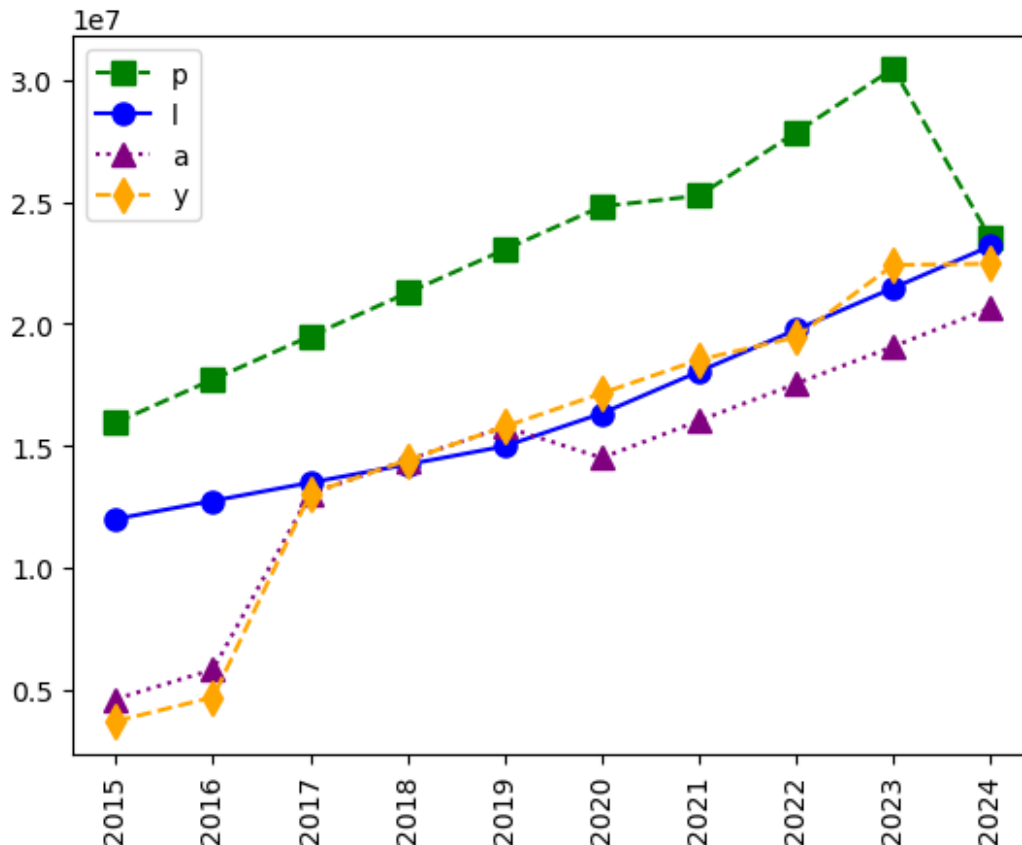
plt.plot(Salary[2],c='purple', ls=':', marker='^', ms=8,
label='player'[2])

plt.plot(Salary[3],c='orange', ls='--', marker='d', ms=9,
label='player'[3])

plt.legend()

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

plt.show()
```

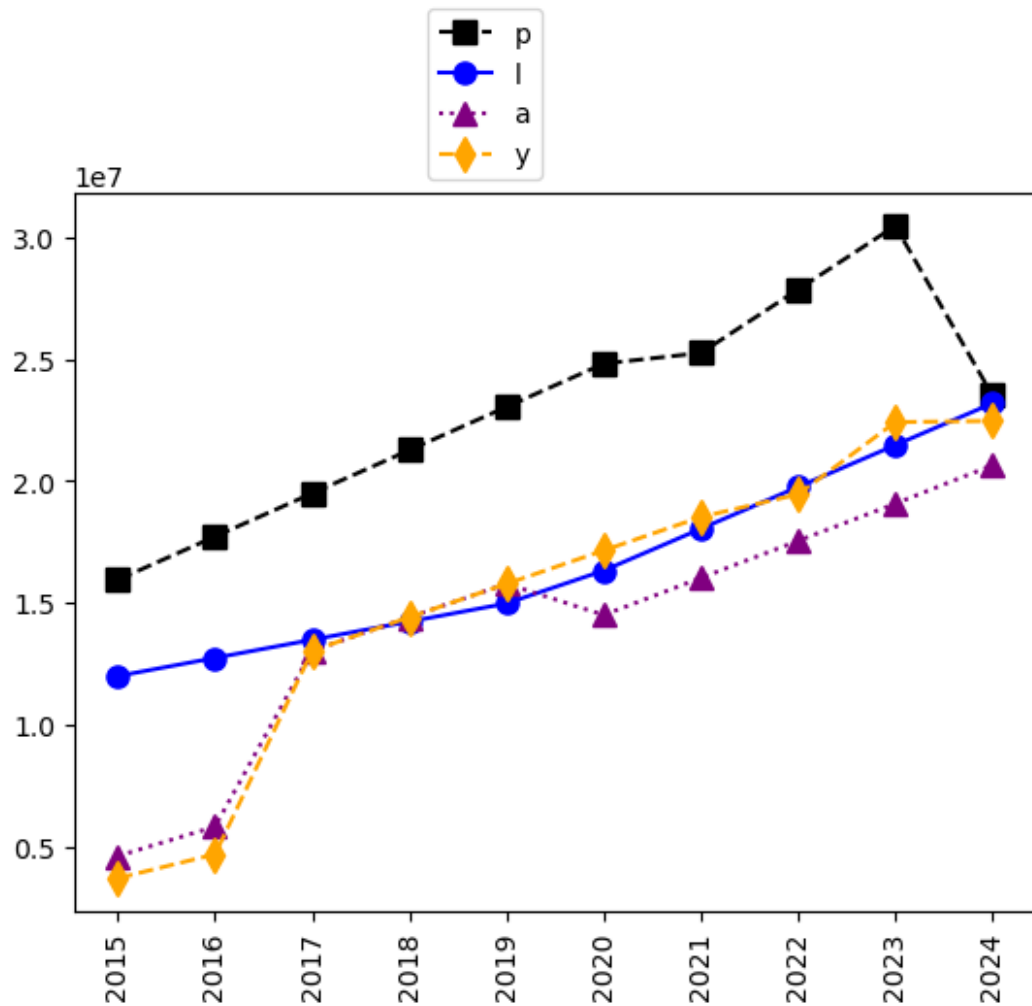


```
plt.plot(Salary[0],ls='--',ms=9,c='black',marker='s',label='player'[0])
plt.plot(Salary[1],c='Blue',ls='-',marker='o',ms=8,
label='player'[1])

plt.plot(Salary[2],c='purple',ls=':',marker='^',ms=8,
label='player'[2])

plt.plot(Salary[3],c='orange',ls='--',marker='d',ms=9,
label='player'[3])

plt.legend(loc='lower right',bbox_to_anchor=(0.5,1))#boundary box to
anchor.
plt.xticks(list(range(0,10)),Seasons,rotation="vertical")
plt.show()
```



```
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()

```

