```
import pandas as pd
```

```
dt={"name":["jyothi","chandu","swomya","harsha","lakshmi","menaka","aishwarya","anusha","bharathi","chandrika","keerthana","nayana","nisha","poornima","harish","manoj","karthik","abhi","adithya","akash","darshan","ga
    "age":[18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18,18],
    "semister":["6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6th","6
    "average marks":[87,88,83,76,56,77,65,78,69,83,72,84,89,76,86,86,78,65,82,73,65,57,46,83,78,67,69,79,86,57,45,67,87,65,46,89,76,56,87]}
```

```
print(dt)
```

```
{'name': ['jyothi', 'chandu', 'swomya', 'harsha', 'lakshmi', 'menaka', 'aishwarya', 'anusha', 'bharathi', 'chandrika', 'keerthana', 'nayana', 'nisha', 'poornima', 'harish', 'manoj', 'karthik', 'abhi', 'adithya',
```

```
df=pd.DataFrame(dt)
```

```
print(df)
```

```
             name  age semister  average marks
0          jyothi   18      6th             87
1          chandu   18      6th             88
2          swomya   18      6th             83
3          harsha   18      6th             76
4         lakshmi   18      6th             56
5          menaka   18      6th             77
6       aishwarya   18      6th             65
7          anusha   18      6th             78
8        bharathi   18      6th             69
9       chandrika   18      6th             83
10      keerthana   18      6th             72
11         nayana   18      6th             84
12          nisha   18      6th             89
13       poornima   18      6th             76
14         harish   18      6th             86
15          manoj   18      6th             86
16        karthik   18      6th             78
17           abhi   18      6th             65
18        adithya   18      6th             82
19          akash   18      6th             73
20        darshan   18      6th             65
21       gayathri   18      6th             57
22        halappa   18      6th             46
23      manjunath   18      6th             83
24        sumanth   18      6th             78
25          vijay   18      6th             67
26        koushik   18      6th             69
27        manojss   18      6th             79
28        manojsh   18      6th             86
29          kiran   18      6th             57
30    shakunthala   18      6th             45
31        nirmala   18      6th             67
32        amrutha   18      6th             87
33     keerthanas   18      6th             65
34         varsha   18      6th             46
35        pradeep   18      6th             89
36          rohan   18      6th             76
37  gurubasavaraj   18      6th             56
38      gurumurty   18      6th             87
```

```
df=pd.read_csv("Data.csv")
```

```
print(df)
```

```
             name  age semester  average marks
0         jyothi    18      6th             87
1          chandu   18      6th             88
2          swomya   18      6th             83
3          harsha   18      6th             76
4         lakshmi   18      6th             56
5          menaka   18      6th             77
6       aishwarya   18      6th             65
7          anusha   18      6th             78
8        bharathi   18      6th             69
9       chandrika   18      6th             83
10      keerthana   18      6th             72
11         nayana   18      6th             84
12          nisha   18      6th             89
13       poornima   18      6th             76
14         harish   18      6th             86
15          manoj   18      6th             86
16        karthik   18      6th             78
17           abhi   18      6th             65
18        adithya   18      6th             82
19          akash   18      6th             73
20        darshan   18      6th             65
21       gayathri   18      6th             57
22        halappa   18      6th             46
23      manjunath   18      6th             83
24        sumanth   18      6th             78
25          vijay   18      6th             67
26        koushik   18      6th             69
27        manojss   18      6th             79
28        manojsh   18      6th             86
29          kiran   18      6th             57
30    shakunthala   18      6th             45
31        nirmala   18      6th             67
32        amrutha   18      6th             87
33     keerthanas   18      6th             65
34         varsha   18      6th             46
35        pradeep   18      6th             89
36          rohan   18      6th             76
37  gurubasavaraj   18      6th             56
38      gurumurty   18      6th             87
```

```
print(df.info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 39 entries, 0 to 38
Data columns (total 4 columns):
 #   Column         Non-Null Count  Dtype 
---  ------         --------------  ----- 
 0   name           39 non-null     object
 1   age            39 non-null     int64 
 2   semester       39 non-null     object
 3   average marks  39 non-null     int64 
dtypes: int64(2), object(2)
memory usage: 1.3+ KB
None
```

```
df.index
```

```
RangeIndex(start=0, stop=39, step=1)
```

```
df.columns
```

```
Index(['name', 'age', 'semester', 'average marks'], dtype='object')
```

```
print(df["name"])
```

```
0           jyothi
1            chandu
```

```
2           swomya
3           harsha
4          lakshmi
5           menaka
6         aishwarya
7           anusha
8          bharathi
9         chandrika
10        keerthana
11           nayana
12            nisha
13         poornima
14           harish
15            manoj
16          karthik
17             abhi
18          adithya
19            akash
20          darshan
21         gayathri
22          halappa
23        manjunath
24          sumanth
25            vijay
26          koushik
27          manojss
28          manojsh
29            kiran
30      shakunthala
31          nirmala
32          amrutha
33       keerthanas
34           varsha
35          pradeep
36            rohan
37     gurubasavaraj
38         gurumurty
Name: name, dtype: object
```

```
print(df["average marks"])
```

```
0     87
1     88
2     83
3     76
4     56
5     77
6     65
7     78
8     69
9     83
10    72
11    84
12    89
13    76
14    86
15    86
16    78
17    65
18    82
19    73
20    65
21    57
22    46
23    83
24    78
25    67
26    69
27    79
28    86
29    57
30    45
31    67
32    87
33    65
34    46
35    89
36    76
37    56
38    87
Name: average marks, dtype: int64
```

```
print(df["name"].unique())
```

```
['jyothi ' 'chandu' 'swomya' 'harsha' 'lakshmi' 'menaka' 'aishwarya'
 'anusha' 'bharathi' 'chandrika' 'keerthana' 'nayana' 'nisha' 'poornima'
 'harish' 'manoj' 'karthik' 'abhi' 'adithya' 'akash' 'darshan' 'gayathri'
 'halappa' 'manjunath' 'sumanth' 'vijay' 'koushik' 'manojss' 'manojsh'
 'kiran' 'shakunthala' 'nirmala' 'amrutha' 'keerthanas' 'varsha' 'pradeep'
 'rohan' 'gurubasavaraj' 'gurumurty']
```

```
print(df["average marks"].value_counts())
```

```
average marks
65    4
87    3
83    3
76    3
78    3
86    3
56    2
69    2
67    2
46    2
89    2
57    2
73    1
79    1
84    1
82    1
88    1
72    1
77    1
45    1
Name: count, dtype: int64
```

```
print(df["average marks"].sort_values(ascending=True))
```

```
30    45
22    46
34    46
4     56
37    56
29    57
21    57
33    65
6     65
20    65
17    65
25    67
31    67
26    69
8     69
10    72
19    73
13    76
```

```
3     76
36    76
5     77
7     78
24    78
16    78
27    79
18    82
9     83
23    83
2     83
11    84
14    86
28    86
15    86
0     87
32    87
38    87
1     88
12    89
35    89
Name: average marks, dtype: int64
```

```
df=pd.DataFrame(dt)
```

```
df
```

	name	age	semister	average marks
0	jyothi	18	6th	87
1	chandu	18	6th	88
2	swomya	18	6th	83
3	harsha	18	6th	76
4	lakshmi	18	6th	56
5	menaka	18	6th	77
6	aishwarya	18	6th	65
7	anusha	18	6th	78
8	bharathi	18	6th	69
9	chandrika	18	6th	83
10	keerthana	18	6th	72
11	nayana	18	6th	84
12	nisha	18	6th	89
13	poornima	18	6th	76
14	harish	18	6th	86
15	manoj	18	6th	86
16	karthik	18	6th	78
17	abhi	18	6th	65
18	adithya	18	6th	82
19	akash	18	6th	73
20	darshan	18	6th	65
21	gayathri	18	6th	57
22	halappa	18	6th	46
23	manjunath	18	6th	83
24	sumanth	18	6th	78
25	vijay	18	6th	67
26	koushik	18	6th	69
27	manojss	18	6th	79
28	manojsh	18	6th	86
29	kiran	18	6th	57
30	shakunthala	18	6th	45
31	nirmala	18	6th	67
32	amrutha	18	6th	87
33	keerthanas	18	6th	65
34	varsha	18	6th	46
35	pradeep	18	6th	89
36	rohan	18	6th	76
37	gurubasavaraj	18	6th	56
38	gurumurty	18	6th	87

Next steps: Generate code with df | View recommended plots | New interactive sheet

```
import matplotlib.pyplot as plt
```

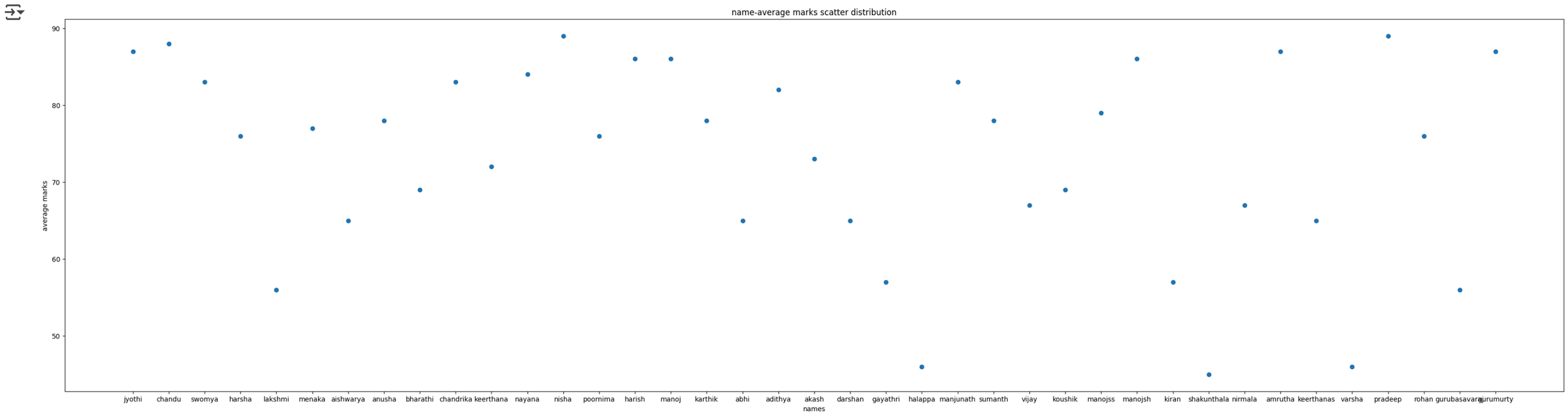
```
df=pd.DataFrame(dt)
```

```
print(df)
```

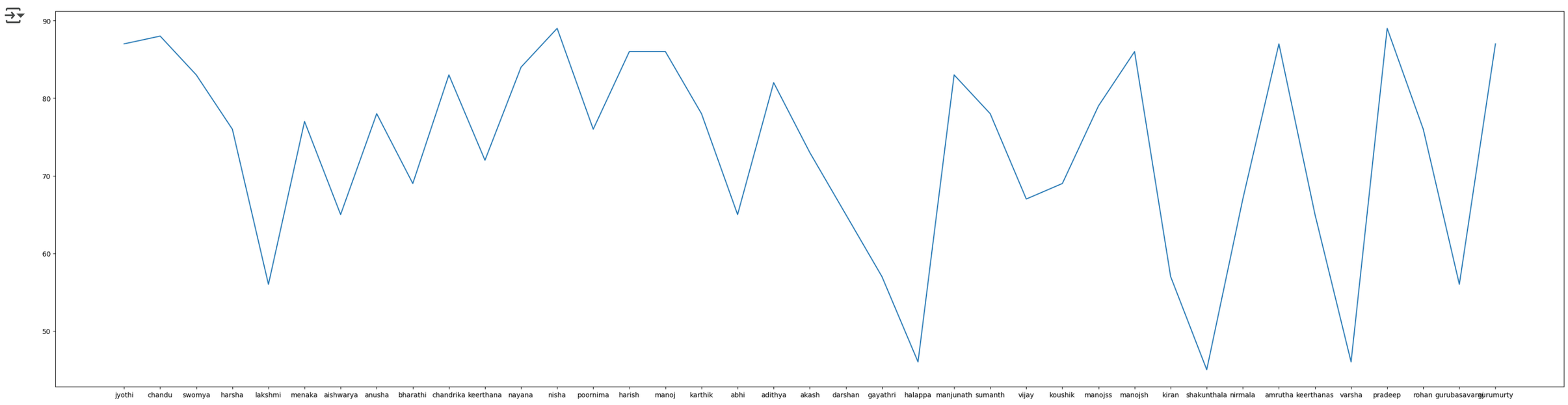
```
            name  age semister  average marks
0          jyothi   18      6th             87
1          chandu   18      6th             88
2          swomya   18      6th             83
3          harsha   18      6th             76
4         lakshmi   18      6th             56
5          menaka   18      6th             77
6       aishwarya   18      6th             65
7          anusha   18      6th             78
8        bharathi   18      6th             69
9       chandrika   18      6th             83
10      keerthana   18      6th             72
11         nayana   18      6th             84
12          nisha   18      6th             89
13       poornima   18      6th             76
14         harish   18      6th             86
15          manoj   18      6th             86
16        karthik   18      6th             78
17           abhi   18      6th             65
18        adithya   18      6th             82
19          akash   18      6th             73
20        darshan   18      6th             65
21       gayathri   18      6th             57
22        halappa   18      6th             46
23      manjunath   18      6th             83
24        sumanth   18      6th             78
```

25	vijay	18	6th	67
26	koushik	18	6th	69
27	manojss	18	6th	79
28	manojsh	18	6th	86
29	kiran	18	6th	57
30	shakunthala	18	6th	45
31	nirmala	18	6th	67
32	amrutha	18	6th	87
33	keerthanas	18	6th	65
34	varsha	18	6th	46
35	pradeep	18	6th	89
36	rohan	18	6th	76
37	gurubasavaraj	18	6th	56
38	gurumurty	18	6th	87

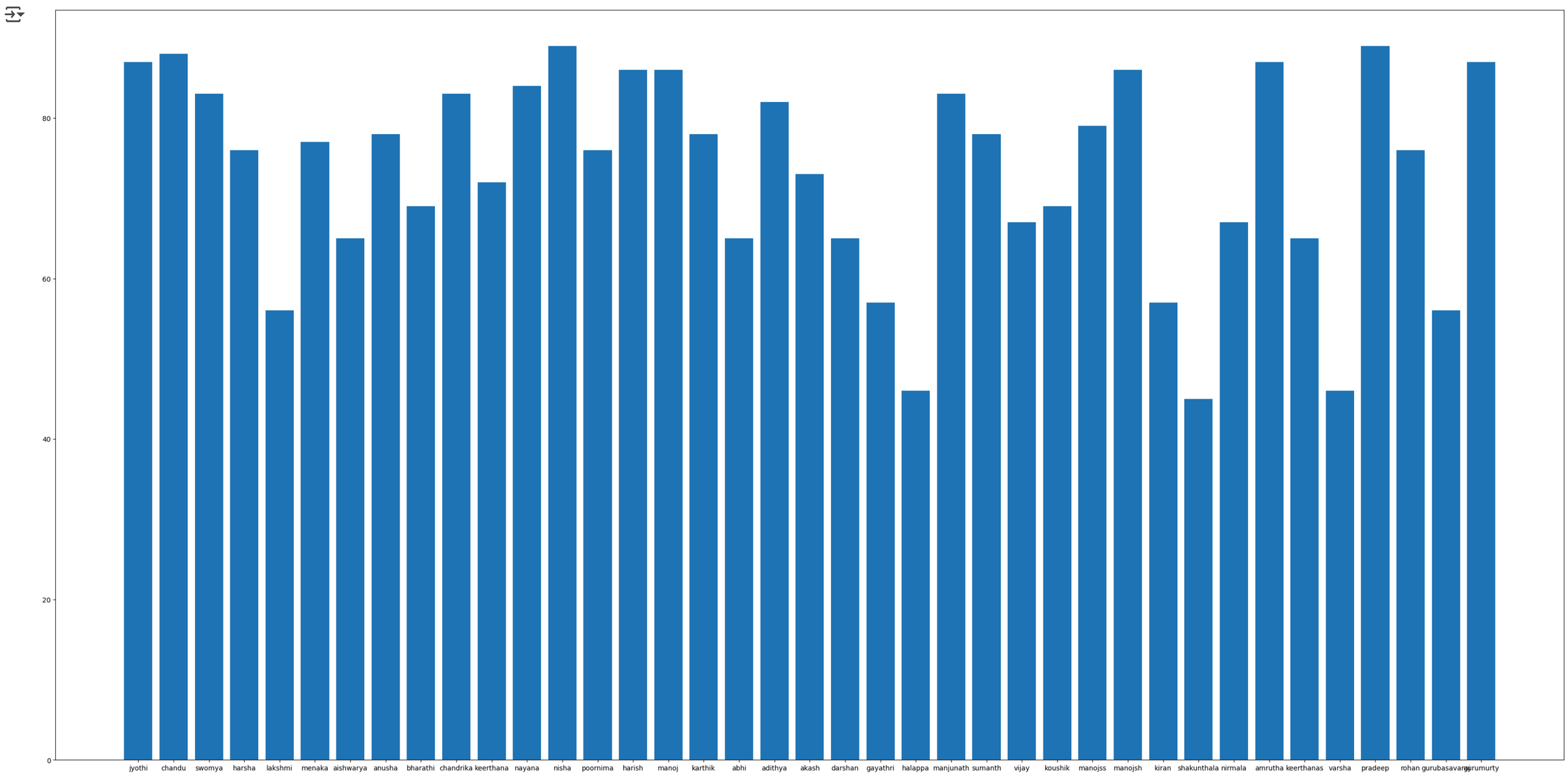
```
plt.figure(figsize=[40,10])
plt.title("name-average marks scatter distribution")
plt.xlabel("names")
plt.ylabel("average marks")
plt.scatter(x=df["name"],y=df["average marks"])
plt.show()
```




```
plt.figure(figsize=[40,10])
plt.plot(df["name"],df["average marks"])
plt.show()
```

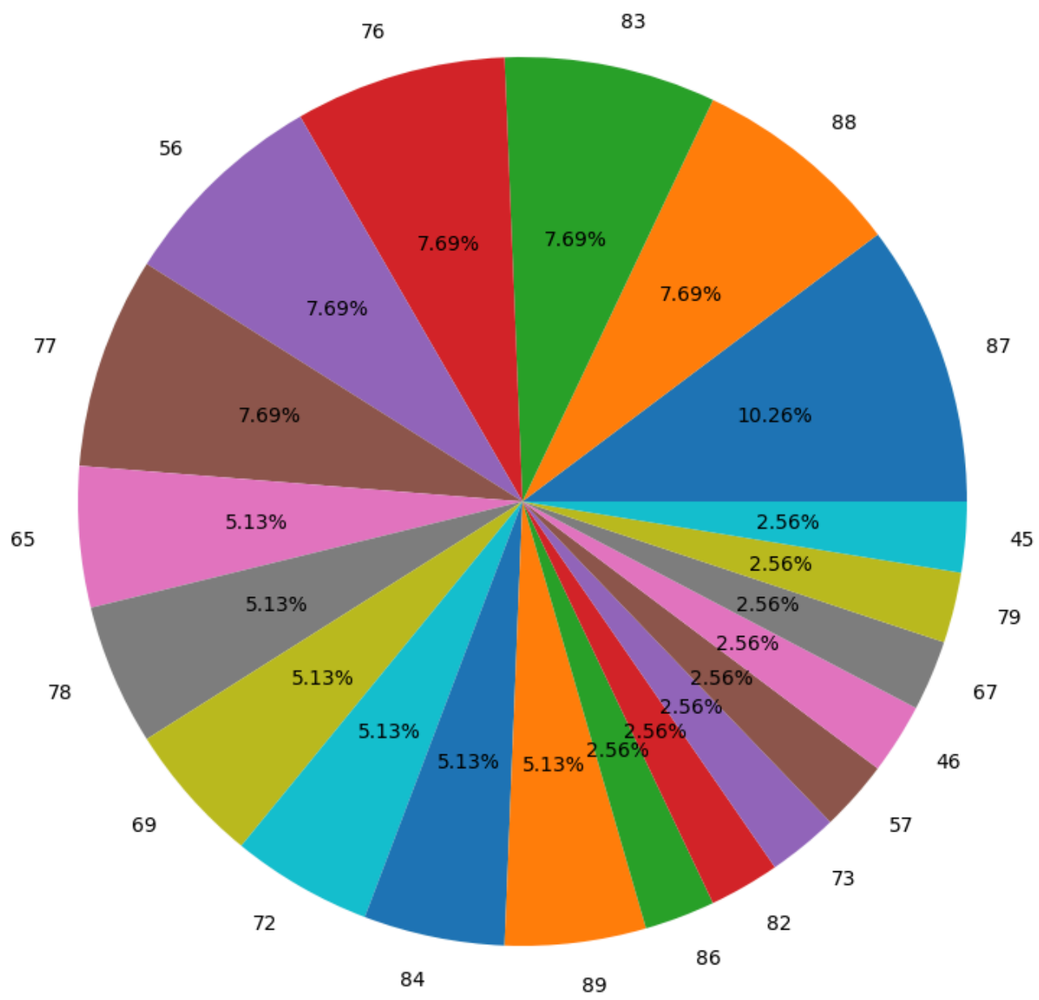



```
plt.figure(figsize=[40,20])
plt.bar(x=df["name"],height=df["average marks"])
plt.show()
```




```
plt.figure(figsize=[20,10])
plt.pie(x=df["average marks"].value_counts(),labels=df["average marks"].unique(),autopct="%1.2f%%")
```

```
plt.show()
```


76
83
88
56
7.69%
7.69%
7.69%
7.69%
87
77
7.69%
10.26%
5.13%
2.56%
45
65
2.56%
5.13%
2.56%
79
2.56%
5.13%
2.56%
78
2.56%
67
5.13%
2.56%
5.13%
2.56%
46
5.13%
5.13%
69
57
73
72
82
84
86
89