classtask-1

July 18, 2024

[15]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

[16]:
```
marks = pd.DataFrame ({'tamil':[50,60,60,70,80],'english':
 ↪[55,66,77,88,99],'maths':[60,90,66,88,67],'science':[88,99,66,77,55],
                        'social':[88,73,85,96,90]},
                       index=['caroline','sai venkat','dhivya','jai␣
 ↪ram','nithsh'])

marks
```

[16]:

	tamil	english	maths	science	social
caroline	50	55	60	88	88
sai venkat	60	66	90	99	73
dhivya	60	77	66	66	85
jai ram	70	88	88	77	96
nithsh	80	99	67	55	90

[17]:
```
def marks_grade(m):
    if m >= 91 and m<=100:
        return 'S'
    elif m >=81 and m<=90:
        return 'A'
    elif m >=71 and m<=80:
        return 'B'
    elif m >=61 and m<=70:
        return 'C'
    elif m >51 and m<=60:
        return 'D'
    elif m == 50:
        return 'E'
    elif m < 50:
        return
```

[18]:
```
marks.applymap(marks_grade)
```

```
C:\Users\ANGELIN\AppData\Local\Temp\ipykernel_9864\1879835015.py:1:
```

```
FutureWarning: DataFrame.applymap has been deprecated. Use DataFrame.map
instead.
  marks.applymap(marks_grade)
```

[18]:

	tamil	english	maths	science	social
caroline	E	D	D	A	A
sai venkat	D	C	A	S	B
dhivya	D	B	C	C	A
jai ram	C	A	A	B	S
nithsh	B	S	C	D	A

[19]:
```
marks.min()
```

[19]:
```
tamil      50
english    55
maths      60
science    55
social     73
dtype: int64
```

[20]:
```
marks.max()
```

[20]:
```
tamil      80
english    99
maths      90
science    99
social     96
dtype: int64
```

[21]:
```
marks.std()
```

[21]:
```
tamil      11.401754
english    17.392527
maths      13.791302
science    17.392527
social      8.502941
dtype: float64
```

[22]:
```
marks.median()
```

[22]:
```
tamil      60.0
english    77.0
maths      67.0
science    77.0
social     88.0
dtype: float64
```

[24]:
```
mobile=pd.DataFrame({'price':
 ↪[20000,18000,20000,16000,12000,12000,26000,16000,18000,13000],
                     'buyer':
 ↪['jayaram','sai','dhivya','rani','nithish','rajesh','lebin','hari','sanjay','pradeep']})

mobile
```

[24]:

	price	buyer
0	20000	jayaram
1	18000	sai
2	20000	dhivya
3	16000	rani
4	12000	nithish
5	12000	rajesh
6	26000	lebin
7	16000	hari
8	18000	sanjay
9	13000	pradeep

[25]:
```
grp=mobile.groupby('price')
```

[28]:
```
grp.get_group(16000)
```

[28]:

	price	buyer
3	16000	rani
7	16000	hari

[30]:
```
sort=mobile.sort_values('buyer')
sort
```

[30]:

	price	buyer
2	20000	dhivya
7	16000	hari
0	20000	jayaram
6	26000	lebin
4	12000	nithish
9	13000	pradeep
5	12000	rajesh
3	16000	rani
1	18000	sai
8	18000	sanjay

[31]:
```
sort=mobile.sort_values('price')
sort
```

[31]:

	price	buyer
4	12000	nithish

```
5  12000   rajesh
9  13000  pradeep
3  16000     rani
7  16000     hari
1  18000      sai
8  18000   sanjay
0  20000  jayaram
2  20000   dhivya
6  26000    lebin
```

[32]:
```
print(sort[::-1])
```

```
   price    buyer
6  26000    lebin
2  20000   dhivya
0  20000  jayaram
8  18000   sanjay
1  18000      sai
7  16000     hari
3  16000     rani
9  13000  pradeep
5  12000   rajesh
4  12000  nithish
```

[ ]:
```

```