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#Roll No.=548
#PRN=202201070044

```
import numpy as np
array3 = np.loadtxt("/content/testmarks1.csv", delimiter=',', skiprows=1)
print(array3)
Rollno=[]
EDS=[]
SON=[]
DT=[]
ET=[]
```

O/P=

```
[[801. 43.05 27.79 28.7 27.79]
[802. 43.47 28.52 28.98 27.89]
[803. 42.24 28.16 28.16 25.63]
[804. 39.24 26.16 26.16 26.16]
[805. 40.9 26.03 27.27 25.65]
[806. 39.47 26.31 26.31 25.21]
[807. 41.68 25.63 27.79 25.46]
[808. 42.19 27.61 28.13 26.21]
[809. 44.75 28.35 29.83 28.21]
[810. 46.95 28.88 31.3 28.53]]
```

```
for i in array3:
  EDS.append(float(i[1]))
  SON.append(float(i[2]))
  DT.append(float(i[3]))
  ET.append(float(i[4]))
print(EDS)
print(SON)
print(DT)
print(ET)
```

O/P=

```
[43.05, 43.47, 42.24, 39.24, 40.9, 39.47, 41.68, 42.19, 44.75, 46.95, 43.05, 43.47, 42.24,
39.24, 40.9, 39.47, 41.68, 42.19, 44.75, 46.95] [27.79, 28.52, 28.16, 26.16, 26.03, 26.31,
25.63, 27.61, 28.35, 28.88, 27.79, 28.52, 28.16, 26.16, 26.03, 26.31, 25.63, 27.61, 28.35,
28.88, 27.79, 28.52, 28.16, 26.16, 26.03, 26.31, 25.63, 27.61, 28.35, 28.88] [28.7, 28.98,
28.16, 26.16, 27.27, 26.31, 27.79, 28.13, 29.83, 31.3, 28.7, 28.98, 28.16, 26.16, 27.27, 26.31,
27.79, 28.13, 29.83, 31.3, 28.7, 28.98, 28.16, 26.16, 27.27, 26.31, 27.79, 28.13, 29.83, 31.3]
[27.79, 27.89, 25.63, 26.16, 25.65, 25.21, 25.46, 26.21, 28.21, 28.53, 27.79, 27.89, 25.63,
26.16, 25.65, 25.21, 25.46, 26.21, 28.21, 28.53, 27.79, 27.89, 25.63, 26.16, 25.65, 25.21,
25.46, 26.21, 28.21, 28.53]
```

#Student Roll no. who had scored Maximun marks in EDS

```
max_index = np.argmax(EDS)
max_roll_number = array3[max_index, 0]
max_mark = EDS[max_index]
print("Max EDS:", max_mark)
print("Roll Number of Max EDS:", max_roll_number)
```

O/P=

```
Max EDS: 46.95
Roll Number of Max EDS: 810.0
```

#Student Roll no. who had scored Minimun marks in EDS

```
min_index = np.argmin(EDS)
min_roll_number = array3[min_index, 0]
min_mark = EDS[min_index]
print("Min EDS:", min_mark)
print("Roll Number of Min EDS:", min_roll_number)
```

O/P=

```
Min EDS: 39.24 Roll Number of Min EDS: 804.0
```

```
EDSarr=np.array(EDS)
SONarr=np.array(SON)
DTarr=np.array(DT)
ETarr=np.array(ET)
```

```
#Standard Deviation Of EDS
```

```
std=np.std(EDSarr)
print("The std of EDSarr",std)
```

O/P=

```
The std of EDSarr 2.2181217279491228
```

```
#Median of EDS
```

```
med=np.median(EDSarr)
print("The median of EDSarr",med)
```

O/P=

```
The median of EDSarr 42.215
```

```
#Variance of EDS
```

```
var=np.var(EDSarr)
print("The var of EDSarr",var)
```

O/P=

```
The var of EDSarr 4.920064000000002
```

```
#Mean of EDS
```

```
mean=np.mean(EDSarr)
print("The mean of EDSarr ",mean)
```

O/P=

```
The mean of EDSarr 42.394000000000005
```

```
#Sorting of EDS array
```

```
sort=np.sort(EDSarr)
print("The sorted arr of EDSarr ",sort)
```

O/P=

```
The sorted arr of EDSarr [39.24 39.24 39.47 39.47 40.9 40.9 41.68 41.68 42.19 42.19 42.24 42.24
43.05 43.05 43.47 43.47 44.75 44.75 46.95 46.95]
```

```
#Searching Operation
```

```
search = np.where(SONarr == 26.16)
```

```
print("The search arr of SONarr ",search)
```

O/P=

```
The search arr of SONarr (array([ 3, 13, 23]),)
```