Assignment no.03
Tejashri Darade(213)

```
import numpy as np
a = np.loadtxt("/content/numpy assignment.csv",skiprows
=1,delimiter=',')
print(a)
print(a.dtype)
a = a.astype(int)
print(a.dtype)
print(a)
```

```
[[2.010e+02 5.000e+04 3.000e+01 1.500e+03 2.000e+00]
 [2.020e+02 7.700e+04 2.000e+01 3.000e+03 5.000e+00]
 [2.030e+02 1.000e+05 1.900e+01 4.000e+03 3.000e+00]
 [2.040e+02 8.900e+04 4.600e+01 2.505e+03 7.000e+00]
 [2.050e+02 8.700e+04 4.100e+01 6.000e+03 8.000e+00]
 [2.060e+02 1.500e+05 2.700e+01 3.300e+03 1.900e+01]
 [2.070e+02 4.500e+04 2.100e+01 6.700e+03 2.000e+01]
 [2.080e+02 6.000e+04 3.400e+01 1.000e+04 7.000e+00]
 [2.090e+02 9.400e+04 2.300e+01 5.500e+03 9.000e+00]
 [2.100e+02 1.600e+05 2.600e+01 8.000e+03 1.000e+01]]
float64
int64
[[   201  50000     30   1500      2]
 [   202  77000     20   3000      5]
 [   203 100000     19   4000      3]
 [   204  89000     46   2505      7]
 [   205  87000     41   6000      8]
 [   206 150000     27   3300     19]
 [   207  45000     21   6700     20]
 [   208  60000     34  10000      7]
 [   209  94000     23   5500      9]
 [   210 160000     26   8000     10]]
```

```
print(np.shape(a))
```

```
(10, 5)
```

```
#print fess of all visitors
print(a[::,1])
```

```
[ 50000  77000 100000  89000  87000 150000  45000  60000  94000 160000]
```

```
#print discount_price of all visitors
print(a[::,2])
```

```
[30 20 19 46 41 27 21 34 23 26]
```

```
#print sum of fees of all visitors
print(np.sum(a[::,1]))
```

```
912000
```

```
#print avg fee of all visitors
print(np.sum(a[::,1])/len(a[::,1]))
```

```
91200.0
```

```
#print max fee
print(np.max(a[::,1]))
```

```
160000
```

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```
#print min discount_price
print(np.min(a[::,3]))
```
```
1500
```

```
#print coupon_id whose fee is maximum
index = np.argmax(a[::,1])
print("coupon id:", a[index][0])
```
```
coupon id: 210
```

```
#print discount_price of visitor  whose fee is maximum
index = np.argmax(a[::,1])
print("visitor discount price whose fee is max:", a[index][3])
```
```
visitor discount price whose fee is max: 8000
```

```
#print coupon_od whose fees >= 50000
b = np.where(a[::,1] > 50000)
print("Index of Array whose fee>=50000",b)
for i in range(len(b)):
  print("coupon_id:",a[b[i],0])
```
```
Index of Array whose fee>=50000 (array([1, 2, 3, 4, 5, 7, 8, 9]),)
coupon_id: [202 203 204 205 206 208 209 210]
```

```
#print coupon_id whose fee > 80000 and discount_price > 20000
c1 = a[::,1] > 4000
print(c1)
c2 = a[::,3] > 2000
print(c2)
print(a[c1 & c2,0])
```
```
[ True  True  True  True  True  True  True  True  True  True]
[False  True  True  True  True  True  True  True  True  True]
[202 203 204 205 206 207 208 209 210]
```

```
#print fees in ascending
print(np.sort(a[::,1]))
```
```
[ 45000  50000  60000  77000  87000  89000  94000 100000 150000 160000]
```