

```
In [ ]: 1 #Data Analysis and Visualisation Practical 7
        2 #Name : Shad Jamil
        3 #Roll no. : CSC/21/45
```

```
In [1]: 1 import numpy as np
        2 import pandas as pd
        3 frame= pd.read_table('data_7.txt',sep=",")
        4 frame
```

Out[1]:

	Name	Birth_Month	Gender	Pass_Division
0	Mudit Chauhan	December	M	III
1	Seema Chopra	January	F	II
2	Rani Gupta	March	F	I
3	Aditya Narayan	October	M	I
4	Sanjeev Sahni	February	M	II
5	Prakash Kumar	December	M	III
6	Ritu Agarwal	September	F	I
7	Akshay Goel	August	M	I
8	Meeta Kulkarni	July	F	II
9	Preeti Ahuja	November	F	II
10	Sunil Das Gupta	April	M	III
11	Sonali Sapre	January	F	I
12	Rashmi Talwar	June	F	III
13	Ashish Dubey	May	M	II
14	Kiran Sharma	February	F	II
15	Sameer Bansal	October	M	I

a. Perform one hot encoding of the last two columns of categorical data using the `get_dummies()` function.

```
In [2]: 1 ohe1=pd.get_dummies(frame["Gender"])
        2 ohe2=pd.get_dummies(frame["Pass_Division"])
        3 print(ohe1, ohe2, sep="\n\n\n")
```

	F	M
0	0	1
1	1	0
2	1	0
3	0	1
4	0	1
5	0	1
6	1	0
7	0	1
8	1	0
9	1	0
10	0	1
11	1	0
12	1	0
13	0	1
14	1	0
15	0	1

	I	II	III
0	0	0	1
1	0	1	0
2	1	0	0
3	1	0	0
4	0	1	0
5	0	0	1
6	1	0	0
7	1	0	0
8	0	1	0
9	0	1	0
10	0	0	1
11	1	0	0
12	0	0	1
13	0	1	0
14	0	1	0
15	1	0	0

b) Sort this data frame on the "Birth Month" column (i.e. January to December). Hint: Convert Month to Categorical.

```
In [4]: 1 frame["Birth_Month"]=pd.Categorical(frame["Birth_Month"],categories=["Janu
2 frame.sort_values(by="Birth_Month")
```

Out[4]:

	Name	Birth_Month	Gender	Pass_Division
1	Seema Chopra	January	F	II
11	Sonali Sapre	January	F	I
4	Sanjeev Sahni	February	M	II
14	Kiran Sharma	February	F	II
2	Rani Gupta	March	F	I
10	Sunil Das Gupta	April	M	III
13	Ashish Dubey	May	M	II
12	Rashmi Talwar	June	F	III
8	Meeta Kulkarni	July	F	II
7	Akshay Goel	August	M	I
6	Ritu Agarwal	September	F	I
3	Aditya Narayan	October	M	I
15	Sameer Bansal	October	M	I
9	Preeti Ahuja	November	F	II
0	Mudit Chauhan	December	M	III
5	Prakash Kumar	December	M	III

```
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```