

Q1.Create a file "people.txt" with the following data:

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

```
from google.colab import drive
drive.mount('/content/drive')
import os
os.chdir('/content/drive/My Drive/DMQuestions/')

```

Mounted at /content/drive

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
df = pd.read_table('DMQ1dataset.txt', delim_whitespace = True, names=('Age', 'Agegroup', 'Height', 'Status', 'Yearsmarried'))
```

df

	Age	Agegroup	Height	Status	Yearsmarried
0	21	adult	6.0	single	-1
1	2	child	3.0	married	0
2	18	adult	5.7	married	20
3	221	elderly	5.0	widowed	2
4	34	child	-7.0	married	3

1. The age should be in the range 0-150.

```
#lambda expressions
#lambda arguments: expression
age_range = lambda r : r in range(151)
df['Age'].apply(age_range)
```

#151 excluded, it will continue till 150
#seriesly on the column of data it will a

```
0    True
1    True
2    True
3   False
4    True
Name: Age, dtype: bool
```

2.The age should be greater than years married.

```
age_limit = lambda x: x[0] > x[4]
df.apply(age_limit,axis=1)
```

```
0      True
1      True
2     False
3      True
4      True
dtype: bool
```

3.The status should be married or single or widowed.

```
def check_status(df):
    status_check = lambda r : r #in df['Status'].values
    print(df['Status'].apply(status_check))
```

```
check_status(df)
```

```
0      single
1     married
2     married
3     widowed
4     married
Name: Status, dtype: object
```

4.If age is less than 18 the age group should be child,if age is between 18 and 65 the age group should be adult,if age is more than 65 the age group should be elderly.

```
Agegroupcheck = lambda x : x[1]
df[['Age', 'Agegroup']].apply(Agegroupcheck, axis =1)
```

```
0      adult
1      child
2      adult
3     elderly
4      child
dtype: object
```

```
df1 = df[['Age', 'Agegroup']]
print(df1)
```

```
   Age Agegroup
0   21    adult
1    2    child
2   18    adult
3  221  elderly
4   34    child
```

