LAB-5

Q.1 (B)
Solution:

```
import numpy as np
import csv
import pandas as pd
f =open('/Home/anaconda3/data_records.txt', mode='r')
read =f.read()
print(read)
f.close()
print("Completed")
df1 =pd.read_csv('/Home/anaconda3/data_records.txt', header=None,
delimiter= "\t")
df=pd.DataFrame(df1)
df.head()
df[1].to_csv("abc.csv", index=False)
df2 =pd.read_csv('abc.csv', header=None, delimiter= " ")
df2.insert(0,"ID",df1[0])
df2.head()
df2.columns= ["ID", "Name", "Surname", "DOB", "Location", "Department"]
df2.head()
df2["Emp_name"]=df2["Name"]+[" "] +df2["Surname"]
df2.head()
df2.drop(["Name", "Surname"], axis=1,inplace=True)
df2.head()
titles= list(df2.columns)
titles
df2=df2.reindex(columns=titles)
df2.head()
titles= list(df2.columns)
titles
titles[1],titles[2],titles[3],titles[4]=titles[4],titles[1],titles[2],titl
es[3]
titles
df2=df2.reindex(columns=titles)
df2.head()
```

```
unique_values = pd. unique(df2["Location"])
unique_values
def foo(gr):
   print(gr, '\n')
df3=df2.groupby(['Location','Department'])['ID'].count()
df3
```

Out[20]:

Location	Department	
Chennai	CustomerCare	560
	Marketing	560
	Operations	560
	ProductSupport	560
	Production	560
	Sales	560
	Service	560
	Spares	560
	SupplyChain	560
Delhi	CustomerCare	560
	Marketing	560
	Operations	560
	ProductSupport	560
	Production	560
	Sales	560
	Service	560
	Spares	560
	SupplyChain	560
Kanpur	CustomerCare	560
	Marketing	560
	Operations	560
	ProductSupport	560
	Production	560
	Sales	560
	Service	560
	Spares	560
	SupplyChain	560
Kolkata	CustomerCare	560
	Marketing	560
	Operations	560
		...
	Service	560
	Spares	560
	SupplyChain	560

Q.1 C

Solution:

```
import numpy as np
import csv
import pandas as pd
f =open('/Home/anaconda3/data_records.txt', mode='r')
read =f.read()
print(read)
f.close()
print("Completed")
df1 =pd.read_csv('/Home/anaconda3/data_records.txt', header=None,
delimiter= "\t")
df=pd.DataFrame(df1)
df.head()
df[1].to_csv("Name_Location.csv", index=False)
df2 =pd.read_csv('Name_Location.csv', header=None, delimiter= " ")
df2.insert(0,"ID",df1[0])
df2.head()
df2.columns= ["ID", "Name", "Surname", "DOB", "Location", "Department"]
df2.head()
df2["Emp_name"]=df2["Name"]+[" "] +df2["Surname"]
df2.head()
df2.drop(["Name", "Surname", "DOB", "ID", "Department"],
axis=1,inplace=True)
df2.head()
titles
df2=df2.reindex(columns=titles)
df2.head()
```

Out[17]:

	Emp_name	City
0	Rahul Ranjan	Kolkata
1	Shahid Gupta	Delhi
2	Meena Srivas	Lucknow
3	Santosh Singh	Chennai
4	Meena Singh	Kolkata
5	Santosh Srivas	Delhi
6	Meena Nath	Panjim
7	Meena Andrews	Kolkata
8	Ben Gupta	Chennai
9	Meena Andrews	Kolkata
10	Manoj Kumar	Kanpur
11	Santosh Singh	Panjim
12	Shahid Kumar	Panjim
13	Priya Gupta	Kanpur
14	Meena Gupta	Panjim
15	Meena Malik	Chennai
16	Santosh Andrews	Kanpur
17	Manoj Nath	Panjim
18	Manoj Srivas	Kanpur
19	Arun Singh	Mumbai

Q.2 Given the file result.txt, determine the sum of each individual entry. Write the result as a 2-column csv file.

Solution:

```
import numpy as np
import csv
import pandas as pd
df4 =pd.read_csv('/Home/anaconda3/result.txt', header=None, delimiter= "
")
df4.columns=["No"]
df4.head()
```

```
df4.groupby('No').sum()
Dict4={}
for i in df4['No']:
   Dict4[i]=0
Dict4
for i in df4['No']:
   Dict4[i]=Dict4[i]+1
Dict4
Dict4.items()
[key * val for key, val in Dict4.items()]
for key, val in Dict4.items():
   Dict4[key]=key*val
Dict4
Dict4.keys()
A=[]
B=[]
for key, val in Dict4.items():
   A.append(key)
   B.append(val)
pd6=pd.DataFrame(list(zip(A, B)),columns =['No', 'Sum'])
pd6.to_csv("MySum.csv",index=None)
```

Output:

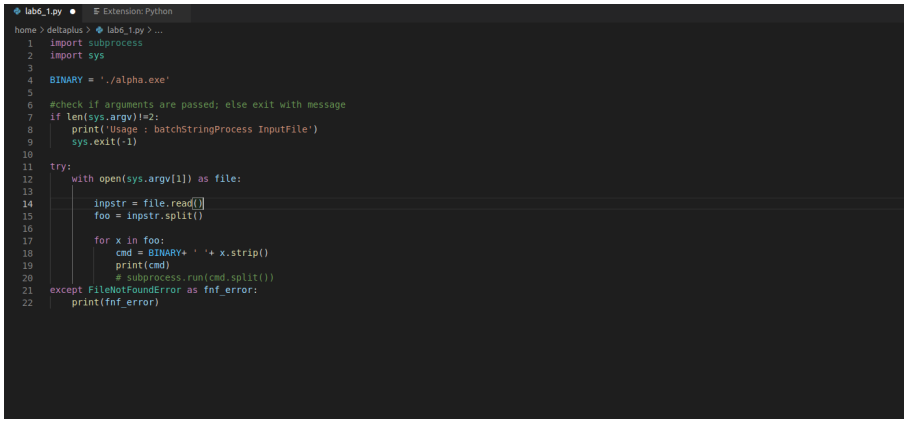
	No	Sum
0	1	1029
1	2	1974
2	3	2940
3	4	3820
4	5	5045
5	6	5880
6	7	7140
7	8	8128
8	9	9036
9	10	10060
10	11	11286
11	12	12012
12	13	13169

13	14	14210
14	15	14940
15	16	16208
16	17	16609
17	18	18540
18	19	19627
19	20	19740
20	21	20076
21	22	22440
22	23	23460
23	24	24144
24	25	24075
25	26	26572
26	27	28134
27	28	29316
28	29	29957
29	30	28830
...	...	...
970	971	935073
971	972	962280
972	973	979811
973	974	974000
974	975	916500

LAB-6

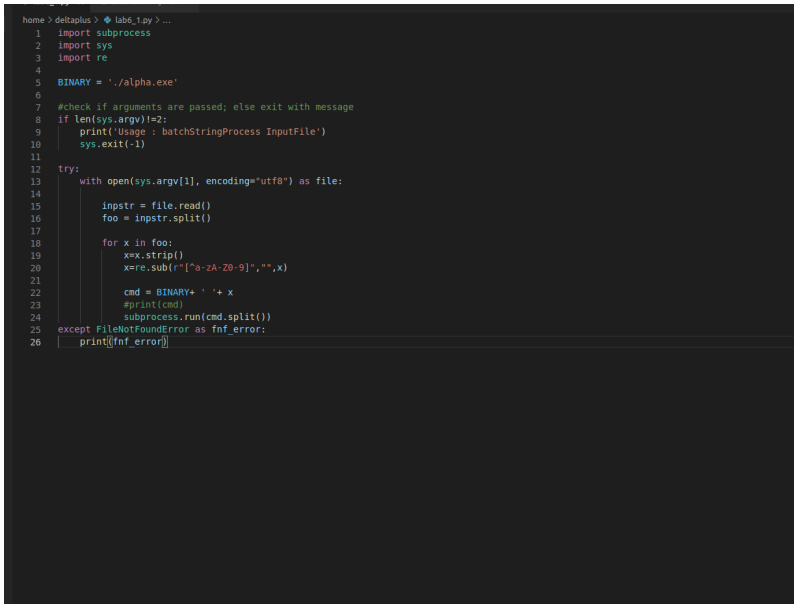
Q.1

```c
#include<stdio.h>
#include<string.h>

int main(int argc, char* argv[]) {
if (argc!=2) {
printf("Usage: StringProcess string\n");
return(-1);
}
printf("%s %d\n",argv[1],strlen(argv[1]));
return 0;
}
```



Q.2

```c
#include<stdio.h>
#include<string.h>

int main(int argc, char* argv[]) {
if (argc!=2) {
printf("Usage: StringProcess string\n");
return(-1);
}
printf("%s %d\n",argv[1],strlen(argv[1]));
return 0;
}
```



home > deltaplus > lab6_1.py > ...

```python
import subprocess
import sys
import re

BINARY = './alpha.exe'

#check if arguments are passed; else exit with message
if len(sys.argv)!=2:
    print('Usage : batchStringProcess InputFile')
    sys.exit(-1)

try:
    with open(sys.argv[1], encoding="utf8") as file:

        inpstr = file.read()
        foo = inpstr.split()

        for x in foo:
            x=x.strip()
            x=re.sub(r"[^a-zA-Z0-9]","",x)

            cmd = BINARY+ ' '+ x
            #print(cmd)
            subprocess.run(cmd.split())
except FileNotFoundError as fnf_error:
    print(fnf_error)
```