Practical Exam

Date: 08/01/2021 Name: D.Saravanan

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#!/usr/bin/env python3
# File: program.py
# Name: D.Saravanan
# Date: 08/01/2020

import numpy as np
import pandas as pd
import matplotlib as mpl
mpl.use('Agg')
import matplotlib.pyplot as plt
plt.style.use('seaborn-darkgrid')

data = pd.read_csv('cdr.txt', sep=',')

data.columns = ['Caller_id', 'Calling_no', 'Called_no', 'Start_time', 'End_time', 'Type', 'Cost', '
    Status']

vdata = data[data['Type'] == "VOICE"]
sdata = data[data['Type'] == "SMS"]

total_cost = data.groupby(['Calling_no', 'Called_no']).agg({'Cost': ['sum']}).reset_index()
vtotal_cost = vdata.groupby(['Calling_no', 'Called_no']).agg({'Cost': ['sum']}).reset_index()
stotal_cost = sdata.groupby(['Calling_no', 'Called_no']).agg({'Cost': ['sum']}).reset_index()

print(total_cost)
print(vtotal_cost)
print(stotal_cost)
```

```
   Calling_no   Called_no       Cost
                                sum
0  8131166797  8755332784   8.145601
1  8131166797  9952679227   6.065823
2  9952679227  6712274352  11.300723
3  9952679227  8131166797  20.434968
   Calling_no   Called_no      Cost
                                sum
0  8131166797  8755332784  3.254321
1  8131166797  9952679227  3.502549
2  9952679227  6712274352  5.746026
3  9952679227  8131166797  8.968473
   Calling_no   Called_no       Cost
                                sum
0  8131166797  8755332784   4.891280
1  8131166797  9952679227   2.563274
2  9952679227  6712274352   5.554698
3  9952679227  8131166797  11.466495
```

```
#!/usr/bin/env Rscript

library(dplyr)
library(tidyr)

data = read.csv('cdr.csv', sep=',')

total_cost = group_by(Calling_no, Called_no)
print(total_cost)
```


(dsci) g62231tx:~/Exam$ ./program.py
Calling_no Called_no Cost
sum
0 8131166797 8755332784 8.145601
1 8131166797 9952679227 6.065823
2 9952679227 6712274352 11.300723
3 9952679227 8131166797 20.434968
Calling_no Called_no Cost
sum
0 8131166797 8755332784 3.254321
1 8131166797 9952679227 3.502549
2 9952679227 6712274352 5.746026
3 9952679227 8131166797 8.968473
Calling_no Called_no Cost
sum
0 8131166797 8755332784 4.891280
1 8131166797 9952679227 2.563274
2 9952679227 6712274352 5.554698
3 9952679227 8131166797 11.466495
(dsci) g62231tx:~/Exam$