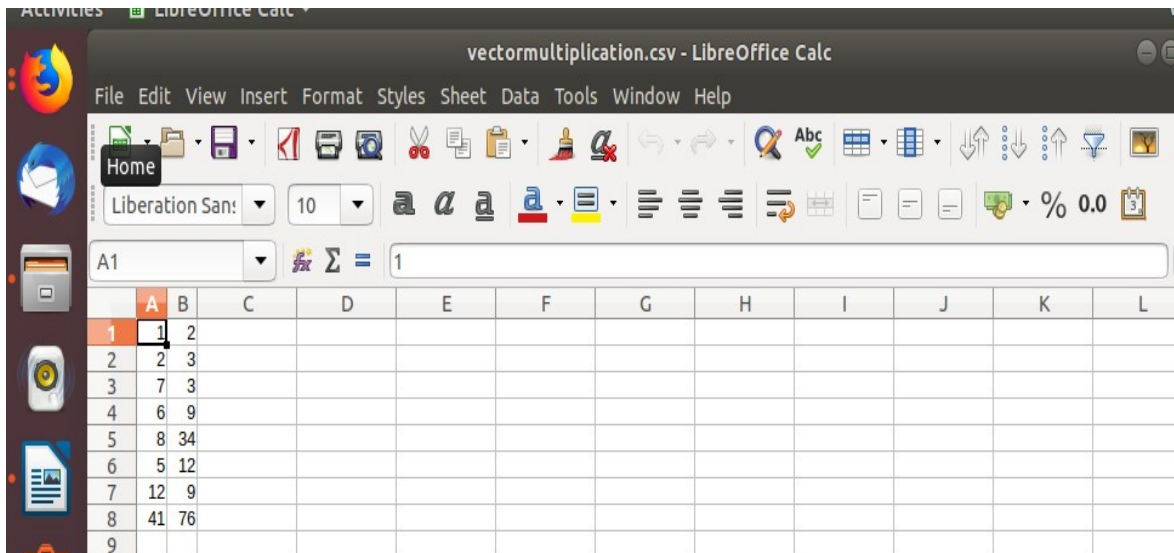


Assignment-5

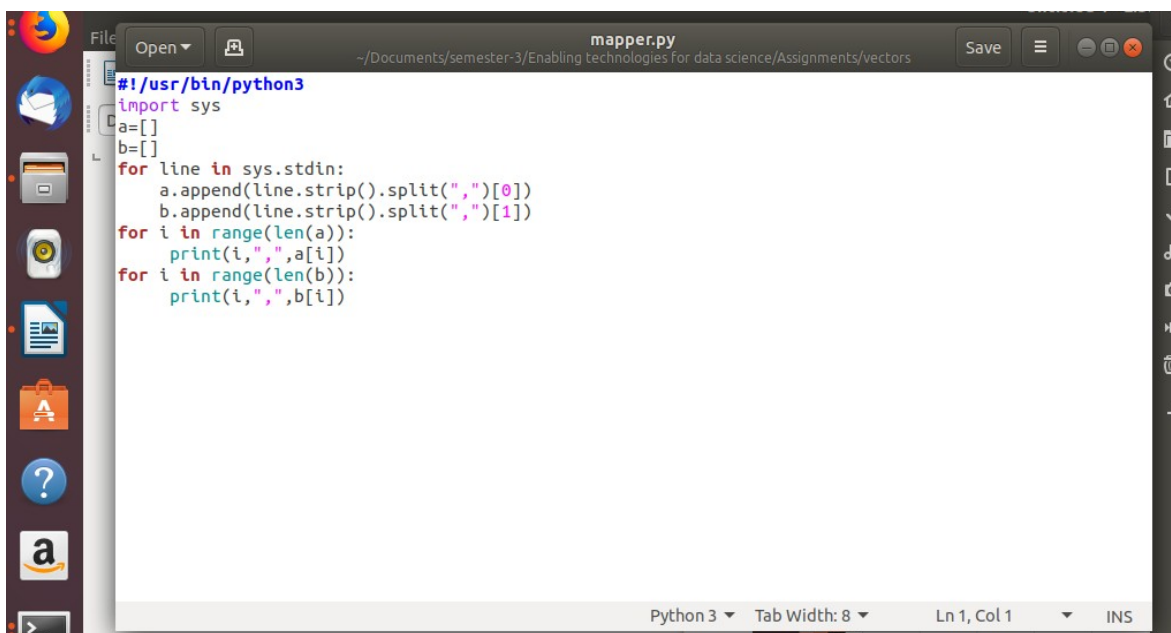
vector multiplication

DATASET



	A	B	C	D	E	F	G	H	I	J	K	L
1	1	2										
2	2	3										
3	7	3										
4	6	9										
5	8	34										
6	5	12										
7	12	9										
8	41	76										
9												

Mapper code:



```
#!/usr/bin/python3
import sys
a=[]
b=[]
for line in sys.stdin:
    a.append(line.strip().split(",")[0])
    b.append(line.strip().split(",")[1])
for i in range(len(a)):
    print(i,"",a[i])
for i in range(len(b)):
    print(i,"",b[i])
```

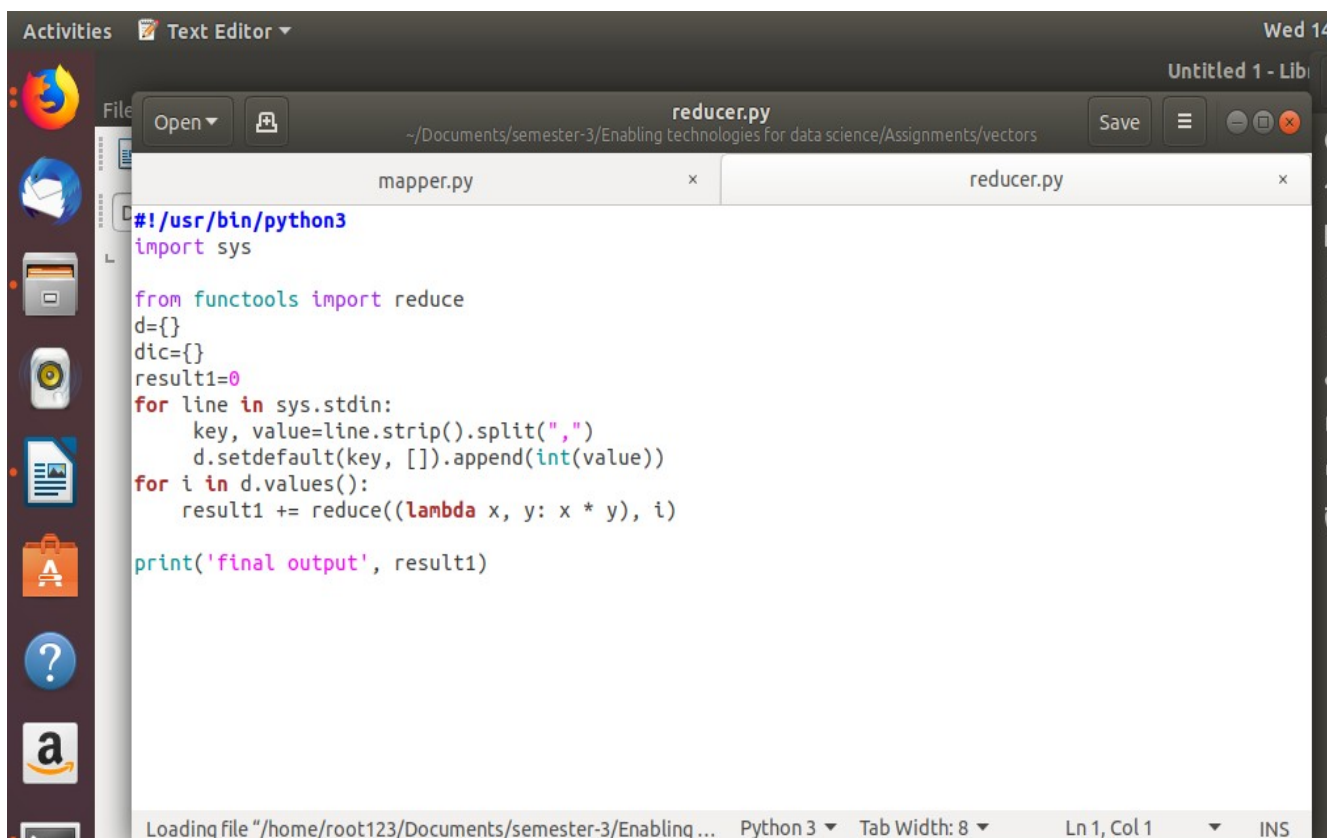
Mapper output:



A terminal window on a Linux system. The prompt is root123@root123-Lenovo-ideapad-330-15IKB:~\$. The command executed is `hadoop fs -cat /vec/vectormultiplication.csv | '/home/root123/Desktop/mapper.py'`. The output shows a list of pairs of integers, each on a new line, separated by a comma and a space. The pairs are: 0, 1; 1, 2; 2, 7; 3, 6; 4, 8; 5, 5; 6, 12; 7, 41; 0, 2; 1, 3; 2, 3; 3, 9; 4, 34; 5, 12; 6, 9; 7, 76.

```
root123@root123-Lenovo-ideapad-330-15IKB:~$ hadoop fs -cat /vec/vectormultiplication.csv | '/home/root123/Desktop/mapper.py'
0, 1
1, 2
2, 7
3, 6
4, 8
5, 5
6, 12
7, 41
0, 2
1, 3
2, 3
3, 9
4, 34
5, 12
6, 9
7, 76
```

Reducer code:



A text editor window titled 'Untitled 1 - Lib' showing the code for 'reducer.py'. The code is a Python script that reads input from stdin, processes it, and prints the final output. The code is as follows:

```
#!/usr/bin/python3
import sys

from functools import reduce
d={}
dic={}
result1=0
for line in sys.stdin:
    key, value=line.strip().split(",")
    d.setdefault(key, []).append(int(value))
for i in d.values():
    result1 += reduce((lambda x, y: x * y), i)

print('final output', result1)
```

The status bar at the bottom indicates the file path: `~/home/root123/Documents/semester-3/Enabling ...`, the interpreter is `Python 3`, the tab width is `8`, and the cursor is at `Ln 1, Col 1`.

Reducer output:

3639

```
root123@root123-Lenovo-ideapad-330-151KB:~$ hadoop fs -cat /vec/vectormultiplication.csv | sort | '/home/root123/Desktop/mapper.py' | '/home/root123/Desktop/reducer.py'
```

final output 3639

```
root123@root123-Lenovo-ideapad-330-151KB:~$
```