Aim : Matrix Multiplication using MapReduce.

Step 1 : Open terminal > Create two text files of matrix m1.txt and m2.txt.

```
[cloudera@quickstart ~]$ cd ~/Desktop
[cloudera@quickstart Desktop]$ mkdir matrix_mul
[cloudera@quickstart Desktop]$ cd matrix_mul
[cloudera@quickstart matrix_mul]$ gedit m1.txt
```

m1

1 2 3
4 5 6

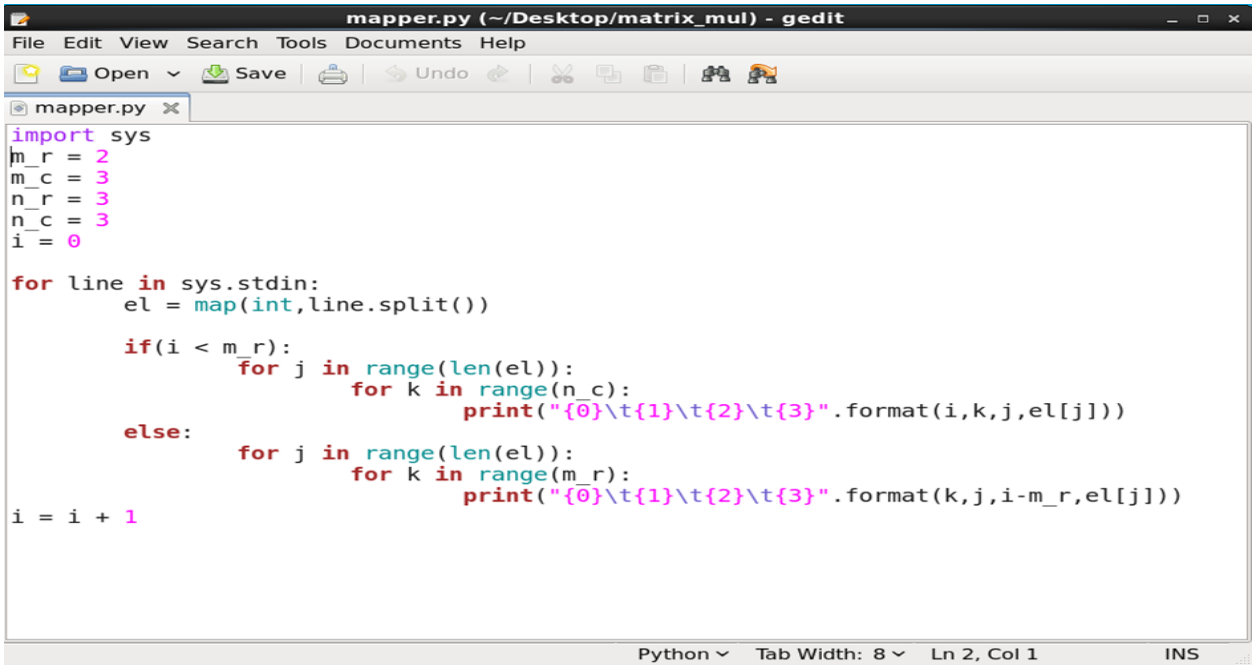
```
[cloudera@quickstart matrix_mul]$ gedit m2.txt
```

m2

4 5 6
7 8 9
1 2 6

Step 2 : Create Mapper file mapper.py

```
[cloudera@quickstart matrix_mul]$ gedit mapper.py
```



[cloudera@quickstart matrix_mul]$ cat m1.txt m2.txt | python

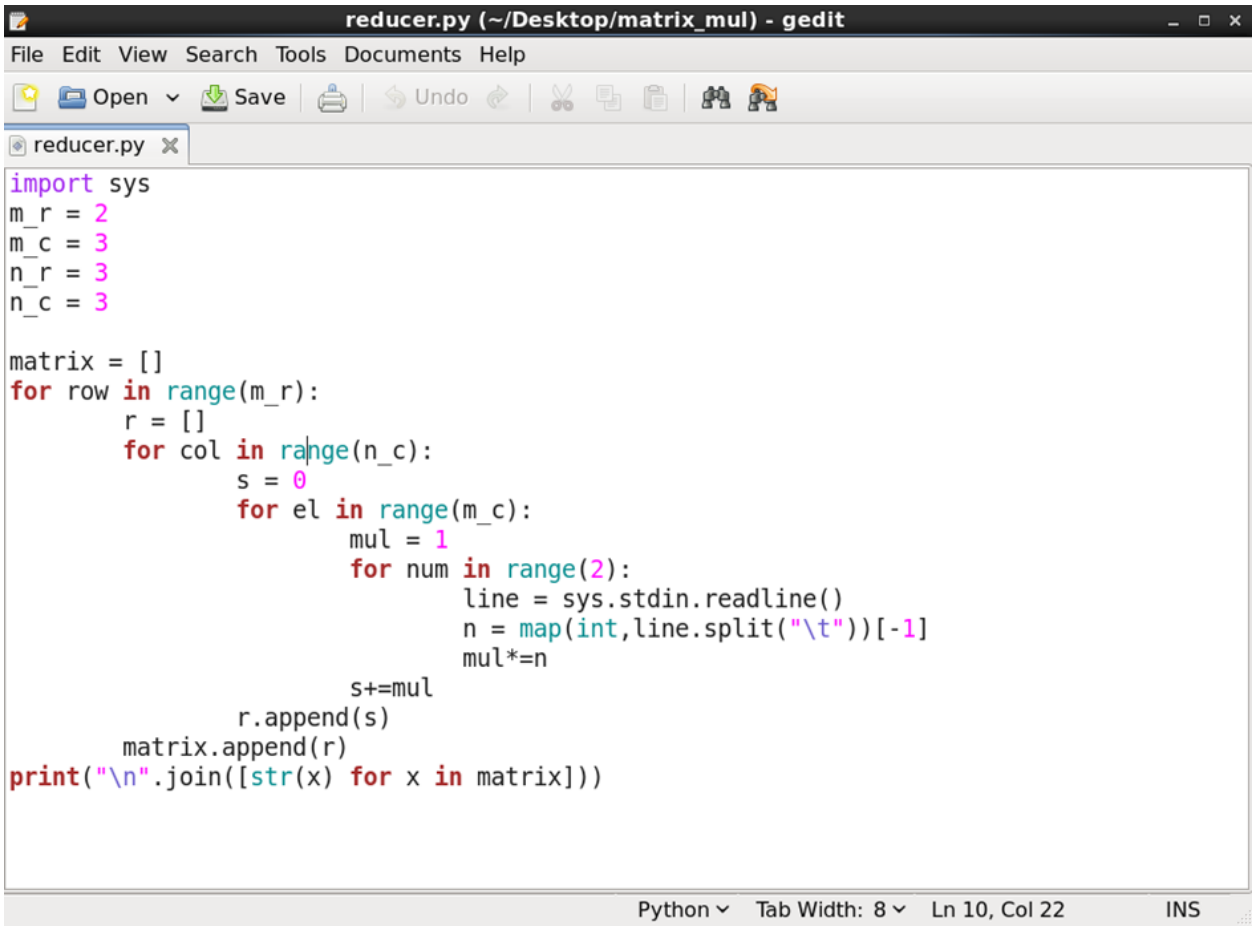
mapper.py Mapper Output :

0 0 0 1
0 1 0 1
0 2 0 1
0 0 1 2
0 1 1 2
0 2 1 2
0 0 2 3
0 1 2 3
0 2 2 3
0 0 0 4
0 1 0 4
0 2 0 4
0 0 1 5
0 1 1 5
0 2 1 5
0 0 2 6
0 1 2 6
0 2 2 6
0 0 0 4
0 1 0 4
0 2 0 4
0 0 1 5
0 1 1 5
0 2 1 5
0 0 2 6
0 1 2 6
0 2 2 6
0 0 0 7
0 1 0 7
0 2 0 7
0 0 1 8
0 1 1 8
0 2 1 8
0 0 2 9
0 1 2 9
0 2 2 9
0 0 0 1
0 1 0 1
0 2 0 1
0 0 1 2

0	1	1	2
0	2	1	2
0	0	2	6
0	1	2	6
0	2	2	6

Step 3 : Create Reducer file reducer.py

[cloudera@quickstart matrix_mul]$ gedit reducer.py



Step 4 : to get matrix multiplication :

[cloudera@quickstart matrix_mul]$ cat m1.txt m2.txt | python mapper.py | python reducer.py

Output :

[7, 37, 91]
[61, 127, 217]