

## ASSIGNMENT – IV

### TITLE :

Create a MapReduce Program to Determine Student Grades.

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**CLASS :** TY-B

### PROGRAM :

#### INPUT :

```
Pranav 85
Ajay 72
Omkar 90
Rohan 78
Suraj 88
Sandip 95
Rohit 65
Ravan 59
Karan 70
Amit 62
```

#### MAPPER :

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

```
for line in sys.stdin:
    line = line.strip()
    if not line:
        continue
    try:
        name, marks = line.split()
        print(f'{name}\t{marks}')
    except ValueError:
        continue
```

#### REDUCER :

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

```
def get_grade(marks):
    marks = int(marks)
    if marks >= 90:
        return "A+"
    elif marks >= 80:
        return "A"
    elif marks >= 70:
        return "B"
```

```
elif marks >= 60:
    return "C"
elif marks >= 50:
    return "D"
else:
    return "F"

for line in sys.stdin:
    line = line.strip()
    if not line:
        continue
    name, marks = line.split("\t")
    grade = get_grade(marks)
    print(f'{name}\tGrade: {grade}')
```

## OUTPUT :

File information - part-00000 ×

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Block information -- Block 0 ▾

Block ID: 1073741846

Block Pool ID: BP-972600113-172.16.9.238-1759832939983

Generation Stamp: 1022

Size: 152

Availability:

- ailcomp20

File contents

```
Ajay Grade: B
Amit Grade: C
Karan   Grade: B
Omkar   Grade: A+
Pranav   Grade: A
Ravan   Grade: D
Rohan   Grade: B
Rohit   Grade: C
Sandip   Grade: A+
Suraj   Grade: A
```

Close