

4a.

CODE-

```
cse16@localhost:~  
BEGIN {  
    print "Employee Name | Salary"  
    print "-----"  
    total_pay = 0  
    count = 0  
}  
  
{  
    if ($2 > 6000 && $3 > 4) {  
        print $1, "|", $2*$3  
        total_pay += $2*$3  
        count++  
    }  
}  
  
END {  
    if (count > 0) {  
        avg_pay = total_pay / count  
        print "-----"  
        print "Total number of employees satisfying the criteria:", count  
        print "Total pay of these employees:", total_pay  
        print "Average pay of these employees:", avg_pay  
    } else {  
        print "No employees satisfying the criteria."  
    }  
}
```

OUTPUT-

```
[cse16@localhost ~]$ gawk -f emp.awk emp.dat  
Employee Name | Salary  
-----  
JOE | 40000  
BEN | 49000  
AMY | 39000  
-----  
Total number of employees satisfying the criteria: 3  
Total pay of these employees: 128000  
Average pay of these employees: 42666.7
```

4b.

CODE-

```
BEGIN {  
    print "NAME SUB-1 SUB-2 SUB-3 SUB-4 SUB-5 SUB-6 STATUS"  
    print "-----"  
}  
  
{  
    name = $1  
    marks1 = $2  
    marks2 = $3  
    marks3 = $4  
    marks4 = $5  
    marks5 = $6  
    marks6 = $7  
  
    status = "PASS" # assume pass initially  
    if (marks1 < 45 || marks2 < 45 || marks3 < 45 || marks4 < 45 || marks5 < 45 || marks6 < 45) {  
        status = "FAIL"  
    }  
  
    print name, marks1, marks2, marks3, marks4, marks5, marks6, status  
}  
  
END {  
    print "-----"  
}
```

OUTPUT-

NAME	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5	SUB-6	STATUS
FAIL							
BEN	40	55	66	77	55	77	FAIL
TOM	60	67	84	92	90	60	PASS
RAM	90	95	84	87	56	70	PASS
JIM	60	70	65	78	90	87	PASS