Name – Bramha Nimbalkar

Roll no – 7

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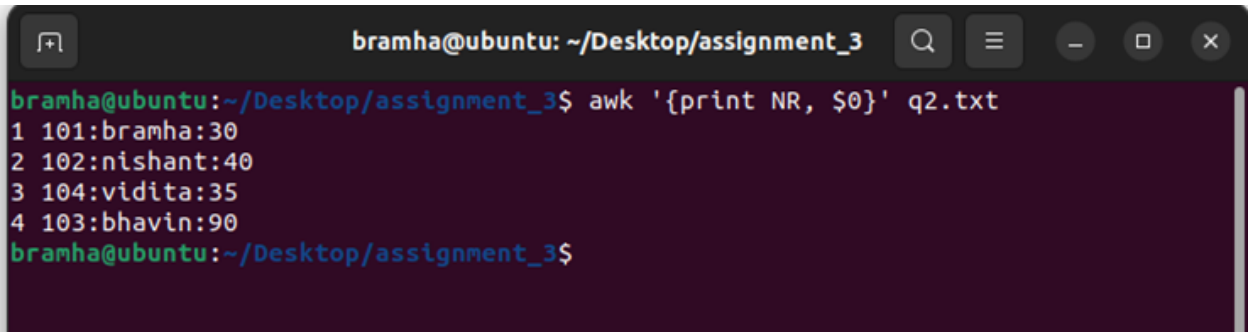
ASSIGNMENT 3

1. Write an awk command to print the lines and line numberin the given input file.



2. Write an awk command to print first field and second field only if third field value is >=50 in the given input file. (input field separator is “:” and output field separator is “,”)

Code-

```
BEGIN {
   FS = ":"
   OFS = ","
}
```

```
$3 >= 50 {
    print $1, $2
}
```

Text -

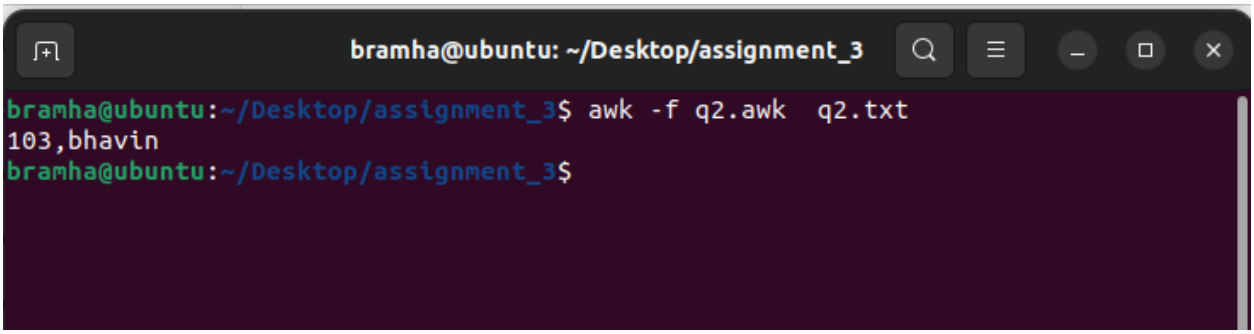
101:bramha:30

102:nishant:40

104:vidita:35

103:bhavin:90

Output-



3. Consider the marks.txt is a file that contains one record per line(comma separate fields) of the student data in the form of studentid, student name, Telugu marks, English marks, Maths Marks, Science marks, Social Marks. Write an awk script to generate result for every students in the form of studentid, studentname, Total Marks and result. Result is PASS if marks is >=30 in TELUGU and English, and if marks>=40 in other subjects. Result is fail otherwise.

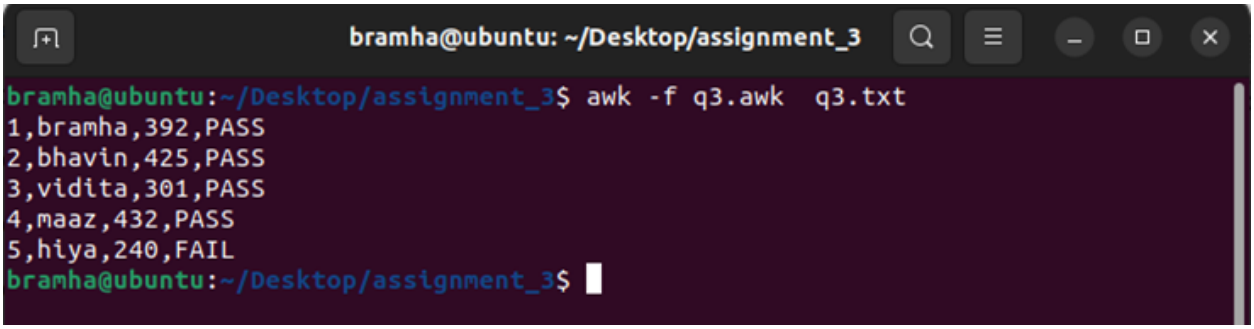
Code –

```
BEGIN {
   FS = ","
   OFS = ","

}

{
   stuID = $1
   stuName = $2
   telMarks = $3
   engMarks = $4
   mathMarks = $5
   sciMarks = $6
   socMarks = $7

   Marks = telMarks + engMarks + mathMarks + sciMarks + socMarks

   if (telMarks >= 30 && engMarks >= 30 && mathMarks >= 40 && sciMarks >=
40 && socMarks >= 40) {
      result = "PASS"
   } else {
      result = "FAIL"
   }

   print stuID, stuName, Marks, result
}
```

Text -

```
1,bramha,85,72,65,92,78
2,bhavin,78,89,94,88,76
3,vidita,60,45,78,50,68
4,maaz,92,85,72,89,94
5,hiya,45,60,55,42,38
```

Output -



4. Write an awk program to print the fields 1 and 4 of a file that is passed as command line argument. The file contains lines of information that is separated by “,” as delimeter. The awk program must print at the end the average of all 4th field data.

Code -

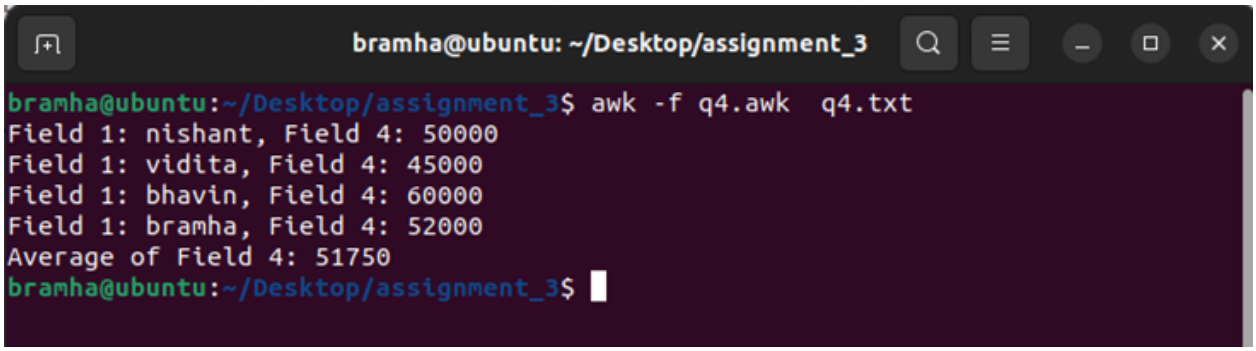
```
BEGIN {
   FS = ","
   total = 0
   count = 0
}

{

   if (NF >= 4) {
      print "Field 1: " $1 ", Field 4: " $4
      total += $4
      count++
   }
}

END {
   if (count > 0) {

      average = total / count
      print "Average of Field 4:", average
```

```
    } else {
        print "No valid lines found in the input file."
    }
}
```

Text -

```
nishant,28,Male,50000
vidita,24,Female,45000
bhavin,35,Male,60000
bramha,29,Female,52000
```

Output -



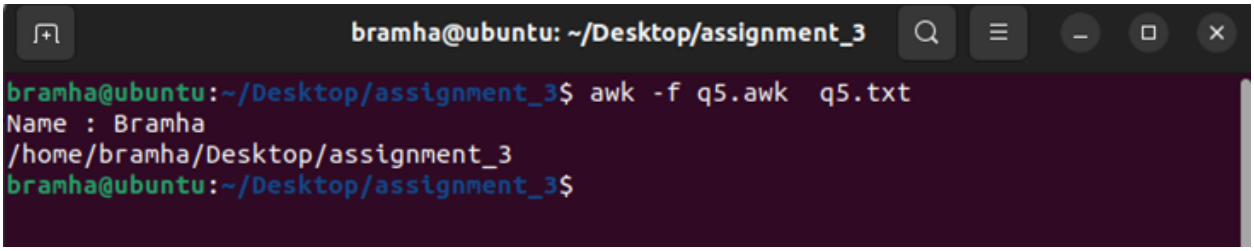
5. Write an awk program to demonstrate user defined functions and system command.

Code -

```
function printName(name) {
    return name;
}

BEGIN {


    name = printName("Bramha");
    print "Name :", name;
```

```
    system("pwd");
}
```

Output -



6. Write an awk script to count the number of lines in a file that do not contain vowels.

Code -

```
BEGIN {

    count = 0
}
{

    line = tolower($0)

    if (line !~ /[aeiou]/) {
        count++
    }
```

```
}


END {
    print "Number of lines:", count
}
```

Text -

hll

wrtgh

ael

Output –

7. Write an awk script to find the number of characters, words and lines in a file.

```
BEGIN {
    char = 0
    word = 0
    line = 0
}
```

```
{

    char += length($0)
    word += NF
    line++
}

END {
    print "Characters:", char
    print "Words:", word
    print "Lines:", line
}
```

Text -

hello there

my name is bramha

im good

Output -