Examen

2020/2021

OPERATING SYSTEMS I
DEGREE IN COMPUTER SCIENCE - COURSE 2 SEMESTER 1 - GROUP I
Exam of practices 3 and 4
December 20, 2021

Full name: _____
Duration: 1 hour.

1. (7 pt) Let the text below be the content of a file called marks.txt, which is a comma-separated file with 5 columns. The first column is the student name, columns second to fourth are exam marks, and the fifth column is a TRUE/FALSE field that indicates whether the student is evaluable or not.

```
Michael Graham,5.5,6.7,8.6,TRUE
Rachel Smith,2.5,8.2,7.5, TRUE
John Garcia,1.2,,,FALSE
Carol Brown,3.1,3.6,6.2, TRUE
Angie Miller,3.4,0.6,, FALSE
Greg Williams,3.7,4.2,7.3, TRUE
```

Write a bash script that contains an awk program to process a file with the same format as the above, so that the output is a numbered list of all evaluable students whose average mark is greater than or equal to a minimum. The name of the input file and the minimum mark are passed as parameters to the bash script. The awk program should print the total number of students that meet the criteria, and their average mark. Below you may find the expected output of some example calls:

```
$ exam-script.sh marks.txt 5.0
1 Michael Graham 6.9
2 Rachel Smith 6.1
3 Greg Williams 5.1
3 records total (average: 6.0)

$ exam-script.sh marks.txt 4.0
1 Michael Graham 6.9
2 Rachel Smith 6.1
3 Carol Brown 4.3
4 Greg Williams 5.1
```

4 records total (average: 5.6)

$ exam-script.sh marks.txt 9.0
0 records total
```

The first output column is 4 characters wide, the second column is 18 characters wide, and the third column is 4 characters wide (1 decimal digit).

Note: Every aspect of the script will be evaluated, including output format and error handling such as right number of parameters, existence of the input file, etc.
```