Lab. 5 Structure Arrays; Input/Output to Text Files

Do the exercises below in the Octave IDE. Make sure the files and the programs are in the same working directory.

1. Input a Structure Array

Read to a structure arrays, **students**, the data that is stored in file "students.txt" available in the web site.

2. Process a Structure Array of Substrings

For the structure array of the previous question write functions to answer the following question:

a) How many students have a positive grade

```
function n = n_positives(students)
```

b) Obtain the number and names of the students with grades better than 15. Return a structure with these two fields

```
function best = best_students(sub, str, overlap)
```

c) Obtain a histogram of the grades, in a matrix where the first column has all values between 0 and 20, and the second the number of students with the grades in the range denoted in the first column.

```
function h = histogram(students)
```

3. Writing a Structure Array

For the structure array of the previous questions write a function that prints in to the **filename** the sub-array with all the students with a name starting by the given **letter** (beware of lower and upper cases):

```
function n = print(students, letter, filename)
```