D1. Definition of the problem to be solved

Students grades

The school needs different statistics for students in the current year.

D2. Rigorous specification, with:

* Adding student
DATA: a student (nr.matricol, name, address, birthdate) from the input file
Example of student:
1|Daniel Pop|Tabacari street|04-05-1995

* Adding grades
DATA: a grade (nr. Matricol, m grades) from the input file
Example of grade:
1
Biology=5
Math=10
Computer science=10

RESULTS: the vector with the students is updated with the new added students and their grades and final mark from the input files.
The client will provide the file with students and the file with their grades, and after he runs the program, he will get several output files with different statistics.
If the user wants to add a new expense or update old expense, he needs to edit the input files and run the program again

The statistics the client will receive:
- a file with students with their overall average, sorted descending by overall average
- a file with students that did not pass the year and subjects they failed
- a file with the best students at every subject, a entry will be like: name subject, first place name
- a file with students sorted by their age
- a file with students that passed all their exams, descending by their overall average

Input or output variable	type {simple, vector, file}	meaning	complexity {simple, average, complex}
Students.dat	Internal file	Hold the students	average(7)
students_grades.dat	Internal file	Hold the students grades	complex(10)
students_desc.txt	External file	All the students by descending	average(10)
students_nonpassing.txt	External file	All students that did not pass the year.	average(10)
students_best.txt	External file	All the best students organized by subject	complex(15)
students_age.txt	External file	All students sorted by age	simple(7)
students_all_exams.txt	External file	All students that passed their exams	simple(7)

FP = 7 + 10 +10 +10 + 15 + 7 + 7 = 66