Task

In a school, the students are grouped in teams in order to work on projects. There is one teacher in each team.

There is information for all the students, namely: name and surname, class, role which the student prefers to carry out in the team, email.

The following information is available for each team: name, description, date of set up, a list of students and their status (in use, not active, not archived). The information about the teams can be changed only if their status is “in use”. Each team works on one project.

The following information is kept/recorded for each teacher: name, surname and lists of the groups they teach, email. One teacher can consult more than one group.

The following information is available for the school: name, town/city, address, a list of the teachers, a list of the groups, a list of the students.

To design structures with data which present the model of the school, the teams, the teachers, the students and the liaisons among them.

To implement methods for addition, edition and deletion of a teacher, a team and a student. The functions for deletion of a student/teacher have to correctly reflect the change in the corresponding team, in case the student/teacher takes part in it;

The lists can be presented through datasets or list structures;

To implement a method for the printing of information for a particular teacher, team and student. For each teacher, the following information can be accessed: name, surname, a list of the groups they teach and a list of the students in each of these groups. The information which will be printed concerning the teams and the students is at the discretion of the team;

The programme can allow for preparing reports (at least three) based on a specific criterion.

For example:

* + A list of the students who participate in a particular team;
  + A list of the teachers who do not have an allocated team;
  + A number of archive folders;
  + Other

There must be an option for the information about the school, the students, the teachers and the teams to be stored in electronic format (files). When starting the programme, there should be an option for the information to be read by the electronic format/medium and to be loaded in the computer memory.

Additional requirements:

Complying with the convention of naming the identifiers;

The selection of the possible actions/operations must be done through a menu;

The data stored by means of the keyboard must be checked for correctness (must be verified);

The functions must be exported in separate headers/ cpp files;

There must be a clear distinction among the functions which are used for data entry, data output and the ones which process data. The latter must not use the standard input/output;

To design tests of the main functions that process data;

On the finally you should ready with:

* GitHub Repository
* Documentation

A document describing the project, in which there are block diagrams and tables containing a description of the main functions and their parameters;

A document describing the strategy for the testing of the application and its functions;

* A presentation.