Complaint Management System

Consider a Complaint Management System for a university. A teacher can file a complaint if there is any problem, or if any service/equipment is required. The teacher shall forward her request to a particular supporting department such as IT, accounts or admin.

Each department has many employees, and exactly one manager. The manager shall review the request and shall assign the job to one or more employee. The date for each assignment is recorded.

When the job gets completed, the employees update the system. The system notifies the manager; who then declares the job done (may be after a review).

Next the system notifies the teacher, who then records her feedback. If the teacher is satisfied, the complaint is closed. Otherwise, it remains visible to the manager, as an open issue.

A complaint goes through different states during this cycle: new, assigned, resolved or closed. The teacher or manager can view its status any time.

The system also generates some reports as well. The campus director for example, can view a summary of the complaints filed within a given period of time. For each department, the system shall show the number of complaints received, along with their status (closed, open, etc).

The director then can ask for details about a specific complaint, including complaint date, status and description, the teacher who initiated the request, the relevant manager and employees, and the date of job assignment.

Besides the afore-mentioned users, there is an administrator who manages important information such as adding or removing employees, managers and teachers.

You are required to implement this system using either C++ or Java.

Provide data persistence using files; do not use any DBMS.

Use three-tier architecture as discussed in the class. The data shall be loaded into the objects before any display.
Similarly objects need to be populated before any writing to the files.

Submit a class diagram. However, you need not to show all the data members or functions.

Also submit a report generated by the tool CCCC as discussed in the class.