

CSE 563: Software Requirements and Specifications

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Assignment 01: *Drafting functional and non-functional requirements for a software system that you know or developed.*

Description:

I developed software that solves the problem of allocating faculties to classrooms for manual proctoring and invigilation. The aim of the project is to notify the faculty about the proctoring, invigilation duties, and also details about the exam. The faculty can log in and can check the exam timings and the schedule. It helps the faculty in getting notified prior to the exam. If any changes are made in the schedule, through this application they can check the details. It makes it easier for faculty members to be updated frequently. The faculty members can view the University policies, procedures, rules, and regulations for the conduction of examinations. The assisting faculty members are also assigned to help the chief invigilator. It becomes very tough for the faculty if they don't know about their invigilation duties before the examination. And if any of the faculty is not available for the exam, it should be informed prior to the exam itself. To overcome all these problems, this application helps in notifying the faculty and we can make sure if the faculty is available for the examination or not. And we also assign assisting faculty to help the chief invigilator. As a whole, this is a very useful application for notifying faculty members about their invigilation duty allotment in an efficient way.

Functional Requirements:

1. **Authentication ‘&’ identification of a user when he/she tries to log into the system:**
This is like a quick login page to authenticate the user data and allow them to use the application.
note: this requirement satisfies the condition of authentication **and identification of the user (whether the user is a faculty/admin)*
2. **Central portal for Admin to allot respective rooms to available faculty:** A central portal is an interface that brings in all the functionalities and responsibilities to one place so that the admin has full control of the application, to control, edit and update all the data and do necessary transactions. He is the one that is responsible for managing the application.
3. **All allotment of invigilators and scheduling is maintained properly:** A structured way of allocating the faculty to the proctoring rooms, so that no faculty gets the work as soon

as they finish one exam, ensuring that they get some cooldown time for the next manual proctoring.

4. **Only the admin can allot faculty to proctoring rooms and schedule exams:** The admin will be the only person to handle the complete application. So he takes care of who are all the faculty that are available for the allotment process.
5. **Faculty can edit their details using their credentials:** Details such as notifying the admin about their availability, schedules, and also to communicate. All these updations are done in the faculty portal only.

Non-Functional Requirements:

1. **Notifications should be sent with a latency of no greater than 12 hours:** The application response time is considered when we evaluate the performance of the application but it is not considered in the requirement stage of development.
2. **Links for invigilation duties will be displayed and sent to faculty mail Id:** The links will be sent to the faculty through an email system, the method of sending the notification can be a non-functional requirement at the initial phase of requirement analysis.
3. **Faculty use the Login user id and respective password appropriately:** Mismatch of username and password, or wrong entry of these details, at the first step is not a must and should requirement, will be considered in the later stages of the system.
4. **Each request should be processed within 10 seconds:** When a faculty sends a message to the admin regarding some situation, the response time to update in the database is not a functional requirement
5. **Security Issues:** Multidisciplinary security issues like threats from hackers, implementation of encryption algorithms to text messages, and securing the application from DDoS attacks and all other threats are not functional requirements, but these can be considered based on the scope of implementation.