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# ID # 6906
# Submitted to
# Mam Asma

4/19/2020

# Fall 2020 Mid-Term Assignment

| Course Name | Max. Marks | Max Duration | Date | Instructor |
|---|---|---|---|---|
| Software Requirement Specification | 30 | 6 Days | 13/4/2020 | Aasma Khan |

- **Attempt all questions.**
- **Marks will be given as per the DEPTH of the answer, not LENGTH.**

**Question No: 01** **(15*1=15)**

**MCQs**

1. **Which of the following is correct for the types of requirements?**
   A. Reliability
   B. Availability
   C. Usability
   **D. All of the above**
2. **2. Select the developer-specific requirement?**
   A. Availability
   B. Portability
   C. Usability
   D. Maintainability
   **E. Both B & D**
3. **The following is not a step of requirement engineering?**
   **A. design**
   B. elicitation
   C. documentation
   D. analysis
4. **Symbolic representation of QFD is**…
   A. quality function development
   **B. quality function deployment**
   C. quality function design
   D. none of the mentioned
5. **What are the system requirement of the documents..?**
   **A. SRS**
   B. SDD
   C. SRD
   D. DDD
6. **The most important stakeholder is_____:**
   A. Middle-level stakeholder
   B. Entry level personnel
   **C. Users of the software**
   D. Managers

7. **Which of these steps is includes in the Requirement engineering process…**
   A. Requirement Gathering
   B. Feasibility study
   C. Validation
   **D. Both A & B**
8. **In the elicitation process, the developers discuss with the client and end users and know their expectations for the software.**
   A. Organizing requirements
   **B. Requirement gathering**
   C. Negotiation & discussion
   D. Documentation
9. **The process to gather the software requirements from the client, analyze and document them is known as…..**
   A. Software system analyst
   B. User interface requirements
   C. Requirement elicitation process
   **D. Requirement engineering process**
10. **The interviews held between two persons across the table is**..
   A. Written
   B. Non-structured
   **C. One-to-one**
   D. Group

11. **The computer-based system can have a profound effect on the design that is chosen and also the implementation approach will be applied.**
   **A. Behavioural elements**
   B. Flow-oriented elements
   C. Scenario-based elements
   D. Class-based elements

12. **Information systems is concerned with..**

A. Systems where software is used as a controller in some broader hardware system
**B. Processing information which is held in some database.**
C. Combination of A and B
D. None

13. **Embedded systems is concerned with..**

**A. Systems where software is used as a controller in some broader hardware system**
B. Processing information which is held in some database.
C. Combination of A and B
D. None

14. **Command and control systems is concerned with..**

A. Systems where software is used as a controller in some broader hardware system
B. Processing information which is held in some database.
**C. Combination of A and B**
D. None

**15. The requirements document describes:**

A. The services and functions which the system should provide

B. The constraints under which the system must operate

C. Overall properties of the system i.e.. constraints on the system's emergent properties

**D. All of the above**

**Question No: 02** **(5)**

State what the project you have selected for your SRS document is required to do and the constraints under which it is required to operate

# Ans:

## INTRODUCTION :

The project e-Administration of computer labs is an automatic system for lab management. It eases the tasks of the administrator, instructors, head of the department of varied departments, technical staff and students.

The main Objective of this project is to supply the answer for a corporation which involve computing facilities like Computers, Printers, LCDs, Digital Boards, ACs etc. on a 24×7 basis to carry out academic experiments for all the branches with all the equipment in good working conditions and also with all the necessary software installed and configured. This software also helps the administrator and instructor(s) to take care of proper documentation of the computing systems.

This software is a web-based application and can be hosted on the Internet. It also provides a clean and user-friendly interface to the users.

## Purpose:

The purpose of this project is to supply the answer for a corporation to assist in monitoring working condition of computing facilities like Computers, Printers, LCDs, Digital Boards, ACs etc. on a 24×7 basis.

## Need/Motivation:

Our University has 6 computer labs. Each lab is managed by an instructor. It is difficult for the administrator and newly hired instructor to understand the whole information (such as variety of computers, software installed in each system, vendors etc.) of each individual lab. It is also difficult for an administrator to integrate the entire information of all labs in university . Our software solves these problems.

## LITERATURE SURVEY:

The e-Administration of Computer Labs may be a new plan to speed up the method of managing Computer Labs in an academic institute. The existing systems are time-consuming and there are many difficulties faced by the administrator to urge information about each lab within the organization. Presently in labs, most of the tasks are carried on manually like lodging complaints, extra lab requests etc. There are many difficulties faced by instructors, HODs of varied departments for completing any lab related activities.

This software provides a solution to these problems. It provides an interactive interface and helps users in a corporation to urge information immediately at that instant of your time . The different users of the system are the administrator, the heads of varied department, technical staff and lab instructor. These users are assigned with different privileges supported the extent of administration.

This system helps the technical staff, instructor, and head of varied departments to register a selected complaint and to look at the status of their complaint. Here the trainer gets SMS on expiry of specific software. The head of the department can send the additional lab request and may also view complaints related to the respective department. This software establishes a smooth communication between different users and user admin.

## Objectives:

- ϖ Helps supervisor and instructor track detailed laboratory information.
- ϖ Helps in smooth communication between various users.
- ϖ Properly prepare available resources.
- ϖ Accelerate Tasks to beat lab related problems.
- ϖ Assists technical staff / teaching staff to file complaints.
- ϖ Work to appeal to specific technical staff counting on the sort of problem.
- ϖ Helps HODs in various departments apply for a lab extension to the manager.

**Question No: 03** **(10)**

With respect to the project you have selected for your SRS document, write a two to three (2-3) page paper in which you:

1. Create a Software Requirement Specification (SRS) that includes the following:

A. A detailed description of both user and system requirements. At least four (4) user requirements and four (4) system requirements should be provided.
B. A detailed description of both functional and non-functional requirements. At least four (4) functional requirements and four (4) non-functional requirements should be provided.

2. Develop a use case diagram to summarize the functional requirements of the system through the use of Microsoft Visio or its open source alternative.

## Ans:

**Types of users:**

- Administrator
- HOD of all Departments
- Student
- Faculty
- Staff

## User Requirements:

The composition or composition of all forms will be very clear and very user-friendly.

- When the user opens the software a welcome window will appear.
- In the login window the user can easily enter the desired password and password.
- Then it will give you a login message.
- From each window the user can easily navigate to any existing windows it will be a complete and related communication.
- For all windows & Mac there is help and support option is readily available to the user.
- There will be a proper set of GUI display, which will give a better look and feel.
- In screen format the background color is very bright and the graphics and font style will love be well-organized and well organized.
- If the user will print any error statement, he or she will provide the correct indication of the error report.
- In each window there will be an alert, confirm the message box etc. display the message.
- The user will be able to search for any data from the records by using the appropriate directory shown in window & Mac.

- At the opening of the software there will be a menu window where complete table content software will be available where the user can move to any window they want & Mac.
- This will provide better security data because the menu window will still display by login (administrator or regular user).
- The user can easily store their data in the database and track purchase records ,vendor and inventory etc.
- This software will be easy to understand and user friendly

## System Requirements:

- Hardware Requirements
- Pentium IV or higher, (PIV-300GHz recommended)
- 256 MB RAM
- 1 Gb hard free drive space

## Software Requirements:

- PHP (front end)
- HTML
- JavaScript
- MS Word 97 or later
- Web Browser:, Google Chrome ,Microsoft Internet Explorer, Mozilla or later
- MySQL Server (back-end)
- Operating System: Windows 7 / Windows8/ Windows 10

# Part (B)

## REQUIREMENTS

## Functional Requirements:

- Some of Functional Requirements Are Following..
- It should provide schedule/timetable with none of clashes among faculties, day, time and room that has got to be visible to all or any .
- It should generate a report about the registered complaint to the admin and response report back to the user who has submitted his queries.
- Secure registration and profile management facilities for various users.
- It should provide details like e-learning facilities, server room details, software installation procedures etc. to students.
- It should generate alerts via SMS.

## Non- Functional Requirements:

Some of Non-functional requirements are following….

### 1: Safety Requirements:

If there's extensive damage to a good portion of the database thanks to catastrophic failure, like a disk crash, the recovery method restores a past copy of the database that was protected to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the protected log, up to the time of failure.

### 2: Security Requirements:

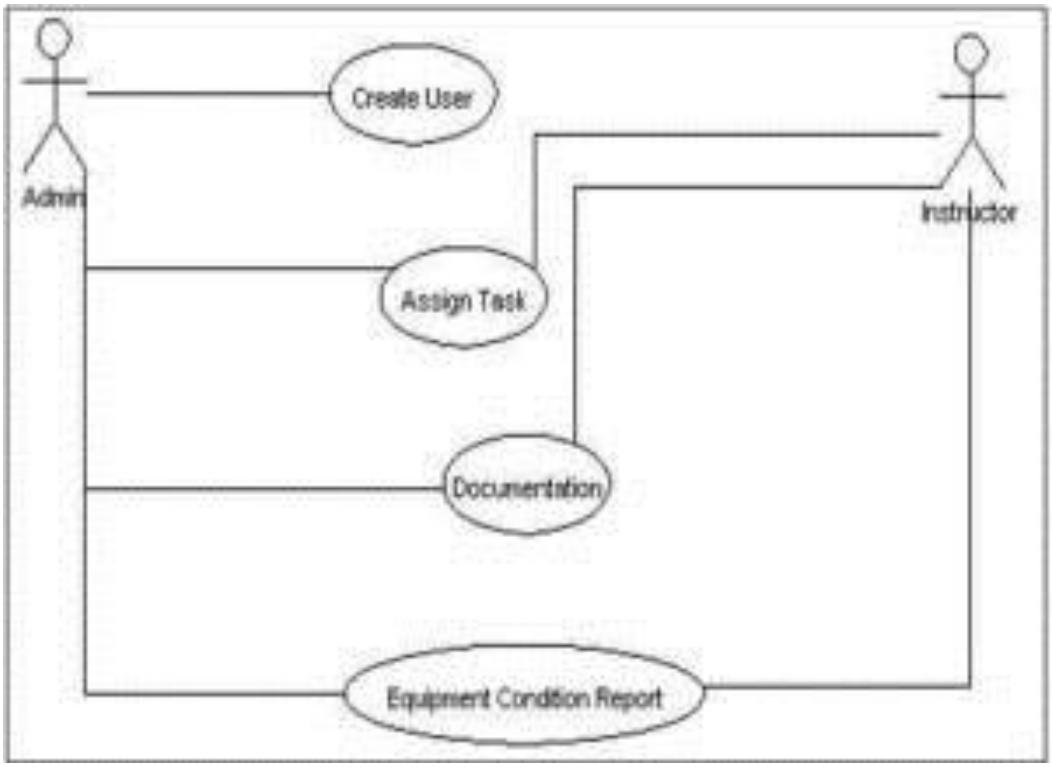
Security systems need database storage a bit like many other applications. However, the special requirements of the safety market mean that vendors must choose their database partner carefully.

### 3: Software Quality Attributes:

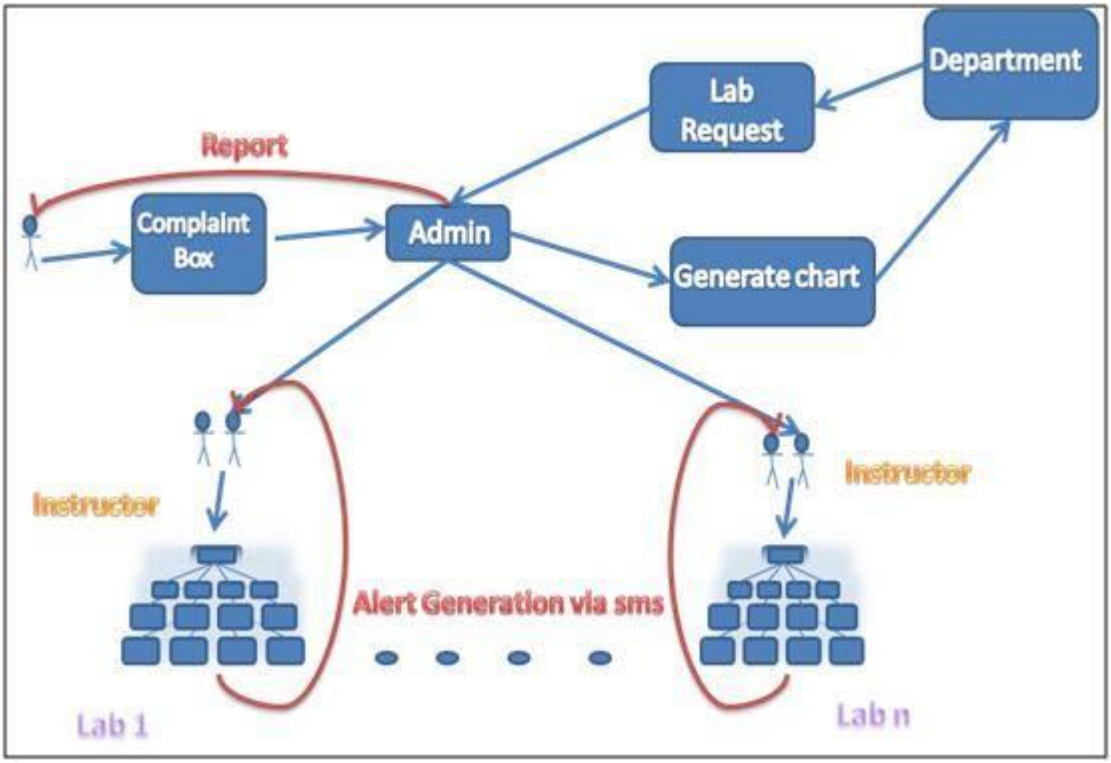
- **AVAILABILITY**: Since we are hosting our project on the server it'll be available all the time.
- **CORRECTNESS**: The system should generate an appropriate report about different activities of the lab and will keep track of all records.
- **MAINTAINABILITY**: The system should maintain correct schedules of labs and therefore the documentation of all the lab equipment.
- **USABILITY:** The system should satisfy the utmost number of users needs.

## Q#3 (C) **Develop a use case diagram to summarize the functional requirements of the system through the use of Microsoft Visio or its open source alternative?**

Admin Creates a user, checks report and assigns a task to the user. These functions are used to keep track of various activities in labs




**The Main Working  for this project as shown in figure.**


Department
Lab Request
Report
Complaint Box
Admin
Generate chart
Instructor
Instructor
Alert Generation via sms
Lab 1
Lab n

**THE END**