**Name:** Mareena Fernandes
**Roll No.:** 8669
**Class:** TE IT
**Batch:** B

# SEPM Assignment 1

**1. Identify the functional and non-functional requirement for the Online Examination System.**
Ans:

A. The functional requirements for the online examination system are as follows:

i. Candidate module:
   a) The candidate will logon to the online portal and take his examination. He can also check his previous examinations marks and his details.
   b) The candidate will get result immediately after the completion of the examination depending on the kind of examination taking place or will be notified of scores when available.
   c) The features available to candidate are: view marks, view reading material, modify profile details to a limited extent, change password, view available tests.

ii. Examiner Module:
   a) The database is prepared & loaded into the software.
   b) Selection for examination can be done language wise by the examiner.
   c) The examiner can monitor student's activity during examination period.
   d) The test documents are available for correction after exam.
   e) Features available to examiner: View and modify test results, add or change test documents.

iii. Administrator Module:
   a) The administrator collects all the results after successful completion of the examination and sends to the headquarters as and when required.
   b) Features available to administrator are: create or delete accounts, change visibility of type of content for users, access account information, insert or edit information on the portal announcements page.

B. The non-functional requirements are as follows:

i. Performance:
   a) The database should be able to hold a certain number of records depending on estimate of students appearing for tests on the portal.
   b) It should allow multiple users to give test and allow monitoring at same time.

ii. Backup:
   The system must appropriately have redundancies and backup student data in case of failure since exam data is sensitive and important.

iii. Security:
   a) System must be protected against accidental or malicious access, or modification or destruction of sensitive data.
   b) Data communication must be encrypted as required. Proper authentication of user by roles.

**2. Identify any two-requirement gathering technique for online examination system.**

Ans:

Two requirement gathering techniques for online examination system are:

i. Brainstorming:
   a) The appropriate authorities must conduct brainstorming session to analyze the kind of examination they want to carry out and identify what kind of software and hardware along with expertise is required to carry out the examination on the scale required.
   b) They must discuss roles in the system, maximum load capacity, security management techniques, implementation time and implementation methods.

ii. Interface analysis:
   a) The online examination system must facilitate quick and easy to use interface which must be tested for unforeseen exceptions or implementations bugs.
   b) A group must list out all the possible interactions on the portal interface and thoroughly test all possible input output scenarios and determine limitations and required fixes if any.

**3. Explain any two requirement engineering tasks to specify requirements of Online Examination System.**

Ans:

i. Requirement Elicitation:

a) It is related to the various ways used to gain knowledge about the project domain and requirements.
b) It is perhaps the most difficult, most error-prone and most communication intensive software development.
c) It can be successful only through an effective customer-developer partnership.
d) It is needed to know what the users really need. Some requirement elicitation methods are brainstorming, interface analysis, focus groups, document analysis, use case approach, etc.
e) The developers need to determine the details of the systems such as roles, maximum capacity, security management techniques, implementation time and implementation methods.

ii. Requirement specification:

a) This activity is used to produce formal software requirement models.
b) All the requirements including the functional as well as the non-functional requirements and the constraints are specified by these models in totality.
c) During specification, more knowledge about the problem may be required which can again trigger the elicitation process.
d) The models used at this stage include ER diagrams, data flow diagrams (DFDs), function decomposition diagrams (FDDs), data dictionaries, etc.
e) The developers need to develop detailed database models for the system.
f) They need to list out all the modules to be implemented how they communicate with each other and what kind of restrictions or limitations each of them carries.