



BIRZEIT UNIVERSITY

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF Computer Science

COMP433

Software Engineering COMP433

Tutorial 3

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1. Consider the following two sets of Requirements.

Requirement Set-1:

- : The system shall provide a service for users (students) to register and create an account.
- : Users shall be able to submit queries
- : The system shall adhere to the guidelines set by the ministry of higher education
- : Users should be able to listen to music when using the website
- : The system shall allow only the registered users to use the services of the website.

Requirement Set-2:

R1.0: Registered users shall be able to submit a new application to study at the university during normal working hours, adhering to the education submission procedures.

R2.0: The system shall create an application template and opens it in a new web page when users press new application button, from the “create new application” web page. The template should have the following data fields: Full Name, DoB, address, telephone numbers, Tawjihi Grade, and three Subjects to be studied in the order of preference.

R3.0: The system shall fill the template automatically and detect and extract, intelligently, user details, as per the template, using advanced detection technologies, e.g. biometric.

R4.0: The system shall check all the applications’ data fields are complete and valid before submission and within a reasonable time. The system shall check number data fields contain only number values and text data fields contain at least some text values.

a) What do you consider the type of each of the above two sets of requirements?
user requirements, system requirements (both)?

Why? Justify your Answer.

- **Answer:**

- 1- **Set-1 is user requirements because it talks about different services that the system offers but it does not talk about details.**
- 2- **Set-2 is system requirements because it talks about details and implementation.**

b) Identify domain requirements in each of the above sets of requirements. Why? Justify your Answer.

- **Answer:**

The system must adhere to the instructions laid down by the Ministry of Higher Education, as this is clear in (Ser-1) as the programmer must be aware of the principles and instructions of this ministry.

c) You are asked to validate the above two sets of above requirements on the following characteristics, identify the ones that do not validate. Why? Justify your Answer.

- **Answer:**

- 1- **Correctness: set1-4 Incorrect not useful**
- 2- **Unambiguous: set1-2, set2-R4.0**
- 3- **Completeness: set1-2**
- 4- **Consistency: There is no conflicts**
- 5- **Traceability: All requirements are not numbered**
- 6- **Realistic/Feasibility: set2-R3.0**

2. If you were a project manger responsible to develop a system for improving the efficiency of a complex integrated manufacturing and ordering system. The environment is very complex and has multilevel hierarchies of end-users. The manufacturing part is complex, has large number of stakeholders, who work in a large area, highly fragmented and could not provide valuable input individually to influence the efficiency of the overall of the manufacturing process. The ordering system is simpler and has limited (or smaller number of) stakeholders, who could provide direct input.

Which requirement discovery technique (or techniques) would you think would be most suitable or efficient for engineering the requirements? Justify your answer.

- **Answer:**

Since The request system is simpler and has a limited number (or fewer) of stakeholders, who can provide input directly I suggest using the interviewing method.

but for manufacturing system (it is complex, has large number of stakeholders, who work in a large area) I suggests using the Ethnography method then use case method to test all possible services in the system