



National University of Computer & Emerging Sciences, Karachi

Midterm – I solution (Spring-2023)

2nd March 2023, 08:30 AM – 09:30 AM



Course Code: CS3009	Course Name: Software Engineering
Instructor Name: Hajra Ahmed, Dr. Syed Muazzam Ali Shah, Noureen Fatima	
Student Roll No:	Section No:

Questions 1:

a) *Functional requirement:*

- The club member should have a member card.
- The customer shall be provided a special discount as per follow-up policy.
- The customer shall pay fees to the club every month.
- The system should send reminder letters to members asking them to renew their memberships one month before their memberships expire.
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Non-Functional requirement:

- Reliable
- Robust
- High performance
- Secure/Safe
- Should utilize memory/storage effectively.

b) *When members join the health club, they pay a fee for a **certain length of time**.*

c) **Business requirement changes or emerging changes, or technical changes.**

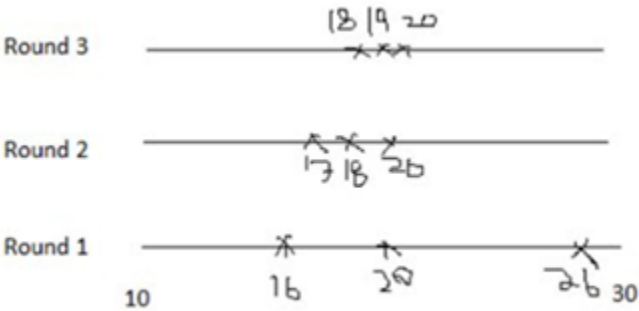
Questions 2:

- a) The Capability Maturity Model (CMM) is a framework for assessing the maturity of an organization's software development processes. It consists of five levels of maturity, ranging from an initial ad-hoc process to a fully optimized, continuous improvement process. based on the description of their working environment and the products they produce, it is likely that they are operating at Level 3: Defined of the Capability Maturity Model, given their structured working environment and their focus on producing high-quality innovative products.
- b) By writing tests first, developers can also catch potential problems early in the development cycle, before they become more difficult and costly to fix. This approach also helps developers think through the requirements and design of the code before implementation, leading to better overall code quality and maintainability. In summary, the TDD approach helps to validate requirements by providing a clear and structured process for ensuring that

the code meets those requirements and by catching potential problems early in the development cycle.

Questions 3:

a)



b)

	Salas	Aliya	Ahmed	Best	Worst	Average
Create UI	3	4	7	3	7	5
Create groups	3	6	8	3	8	6
Send message	6	2	7	2	7	5
Receive message	3	3	2	2	3	3
Add member in group	5	1	5	1	5	3

	20	16	29			
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