

Final Assessment Test – April 2025

Course: ISWE202L - Requirements Engineering and Management

Class NBR(s): 3386/3389/3390/3391

Slot: E2+TE2

Max. Marks: 100

Time: Three Hours

- KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE
- DON'T WRITE ANYTHING ON THE QUESTION PAPER

Answer ALL Questions

(10 X 10 = 100 Marks)

1. Suggest appropriate process models for the following systems and list the advantages and disadvantages with appropriate illustrations.

- A new banking application that allows users to manage their accounts, view transaction history, transfer funds, and check balances.
- A healthcare management system for a hospital that needs to handle patient records, appointments, billing, medical history, prescriptions, and more.

2. List and map the problem domain and features for the given **Fitness Tracking Mobile App** system. Illustrate the feature attributes for the features identified.

Development of a fitness tracking mobile app aims at helping individuals track their exercise routines, monitor their progress, set health goals, and stay motivated.

The first step is to understand the needs of the target users, which may include fitness enthusiasts, beginners, and people looking to improve their health. After conducting surveys, interviews, and research, the following requirements were given by the users, such as workout tracking, personalized recommendations, health goal setting, diet and nutrition tracking, progress visualization integration with wearables, motivation with reminders and user-friendly interface.

3. Deploy the five-step problem analysis. Identify the problems and suggest appropriate solution for the given Online Ticket Reservation System.

An online ticket reservation system aims to streamline the process of booking tickets for various services, such as transportation or entertainment events, by allowing users to make reservations remotely via the internet. This system enhances convenience by enabling users to check availability, select preferred options, and secure bookings without the need for physical presence at a ticketing location. The objective is to develop an online ticket reservation system that addresses these issues by providing a user-friendly platform for customers to reserve tickets, manage bookings, and access related services efficiently and securely. The system should also facilitate administrative tasks for service providers, such as managing schedules, availability, and customer information, thereby improving overall operational efficiency.

4. Depict the interviewing template as a user and as an analyst for the Online Ticket Reservation System given in Question.No.3.
5. As a part of the requirements workshop apply the brainstorming technique to generate and reduce ideas and show any three features which can be accommodated in the base line requirement for the Fitness Tracking Mobile App given in Question.No.2
6. Illustrate the structural and behavioural aspects of collaboration to show the use case realization for the Online Ticket Reservation System.
7. Depict the primary and supporting activities of a product manager. Provide the product plan and show the product position statement for a primary user in the following Online voting system.

The implementation of online voting systems aims to enhance electoral accessibility and convenience. However, these systems face significant security challenges that can compromise election integrity. Notable issues include vulnerabilities to cyber-attacks, the absence of voter-verified paper records, and difficulties in conducting reliable audits. Addressing these challenges is crucial to ensure the security and reliability of online voting platforms.
8. Identify key use cases and plot the detailed use case documentation for any two key usecase of the Online Ticket Reservation System.
- 9.a) Develop testcases from the key use cases given in Question No.8 for Online Ticket Reservation System.

OR

- 9.b) Outline the functional and non-functional requirements for the Online Ticket Reservation System. Show the supplementary specification document for the non-functional requirement identified.
- 10.a) Illustrate the importance of traceability. Discuss the traceability matrix identified for needs and features identified for the Fitness Tracking Mobile App in Question.No.2.

OR

- 10.b) Tabulate the various techniques for risk mitigation involved in requirements gathering. Apply extreme programming principles to mitigate risks identified in Online Ticket Reservation System.