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Daffodil International University

Faculty of Science & Information Technology
Department of Computer Science & Engineering
Midterm Examination, Fall 2025
Course Code: CSE413, Course Title: Mobile Application Design
Level: 4 Term: 2 Batch: 62

Time: 01:30 Hrs **Marks: 25**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.		You are leading the development of TaskPro, a cross-platform mobile app for managing tasks and reminders. The app will be published on both Google Play and Apple App Store, each with its own submission and tooling requirements. It integrates third-party calendar APIs and cloud push notifications. The design team aims to maintain a csonsistent user experience across platforms while respecting each platform's design guidelines.		
	a)	**Identify** two core components of the mobile ecosystem that are indirectly mentioned in the scenario. **Explain** how each component can affect the development, testing, and deployment of TaskPro.	**[3]**	**CO1**
	b)	**Explain** one benefit of maintaining cross-platform design consistency and one benefit of following platform-specific design guidelines in TaskPro.	**[2]**	
2.		You are developing a mobile note-taking app named "QuickNotes" that must work both offline and online. Each note contains an id, title, and content. When offline, notes should be stored locally using ObjectBox, and when online, they should be synchronized with a remote server through a REST API (https://api.quicknotes.com/notes). The app must also follow the Human Interface Guidelines (HIG) to ensure that the user interface is consistent, clear, and intuitive on iOS platforms.		**CO3**
	a)	**Implement** CRUD (Create, Read, Update, Delete) operations for both ObjectBox and the REST API.	**[8]**	
	b)	According to Apple's Human Interface Guidelines (HIG), **what** key design principles should be followed for QuickNotes to provide a seamless and user-friendly experience? **Discuss** at least three principles with examples of how they could be applied in the app.	**[4]**	
3.		You are designing a Food Delivery Application named **"QuickBite"** that includes three main sections: **Explore**, **Orders**, and **Profile**.		**CO2**
	a)	As a UI/UX designer, which fidelity level would you choose for the initial wireframe of this app, and why? **How** could this evolve into a functional prototype, and **what** key interface elements would you include in the **"Explore"** screen?	**[4]**	
	b)	For navigating among the three main sections of the application, **propose** a suitable navigation structure that aligns with Flutter's design conventions. **Justify** your choice and **write** the Flutter code snippet that implements your chosen navigation approach.	**[4]**	