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Whats is a movil device architecture?

Mobile application architecture is essential for developing efficient, scalable, and maintainable applications. Below are the most important aspects:

Definition of Mobile Architecture

Mobile architecture refers to the technical structure that guides the main structural elements of an application, including:

Application Capabilities: The key functionalities offered through the mobile interface.

Technical Components: Approaches such as native, web, or hybrid applications.

Logical Design Patterns: Models like MVC (Model-View-Controller), client-server, and offline-first strategies.

Integration: Connections with backends, APIs, and services.

Data Storage: Strategies for local databases and cache.

Non-Functional Requirements: Considerations on user experience, performance, and security.

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Layers of Mobile Application Architecture

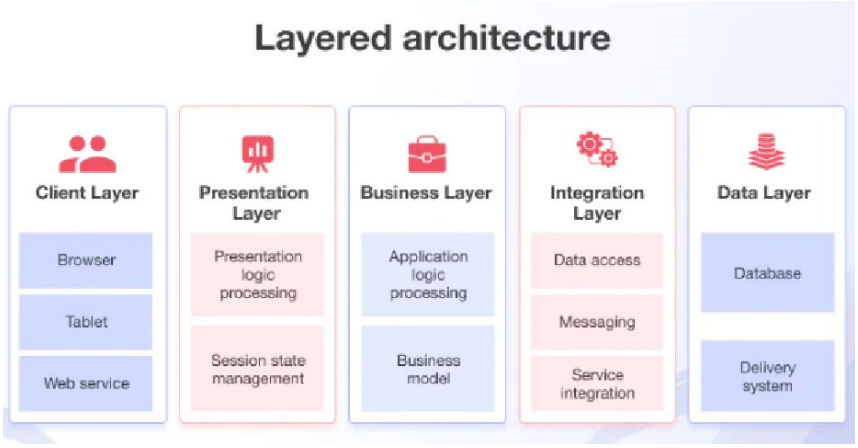
A typical mobile architecture is organized into several layers, each with specific responsibilities:

Presentation Layer: Manages the user interface and user interaction.

Business Logic Layer: Handles business rules and application logic.

Data Access Layer: Responsible for managing and accessing data, including local databases and remote services.

Integration Layer: Manages communication with external services and APIs.



Types of Mobile Applications

Native Applications: Specifically developed for a platform (iOS, Android) using the native languages and tools of each operating system.

Web Applications: Accessible through mobile web browsers, do not require installation, and are usually developed with standard web technologies.

Hybrid Applications: Combine elements of both native and web applications, allowing the use of web technologies within a native container.

Key Principles in Mobile Application Architecture

Modularity: Divide the application into independent modules to facilitate development and maintenance.

Scalability: Design the application to handle growth in user base and functionalities.

Security: Implement measures to protect user data and ensure application integrity.

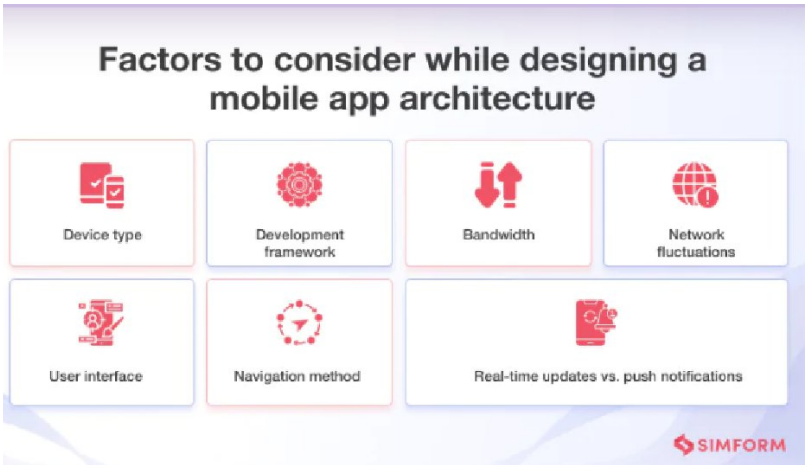
Performance: Optimize the application to ensure fast response times and efficient use of device resources.

Factors to Consider in Architecture Design

User Experience (UX): Create intuitive and attractive interfaces that enhance user satisfaction.

Connectivity: Properly handle variations in network connectivity, enabling offline functionalities when necessary.

Compatibility: Ensure the application works correctly on various devices and operating system versions.



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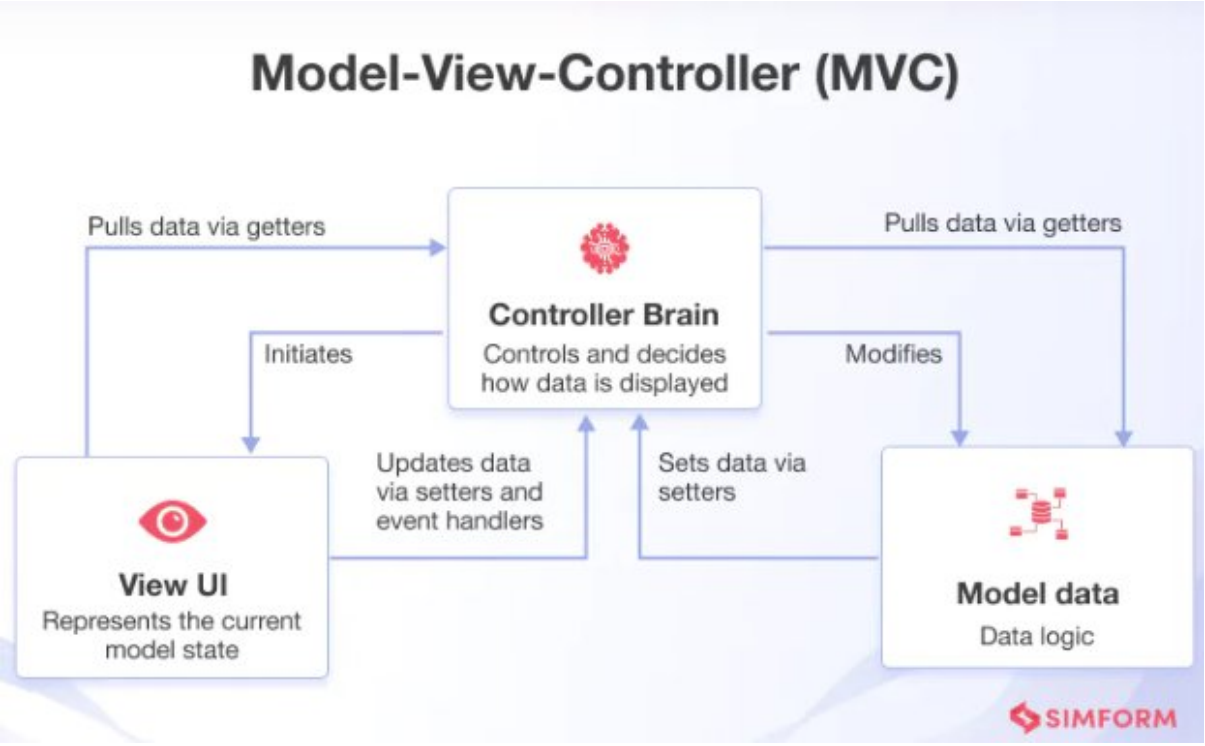
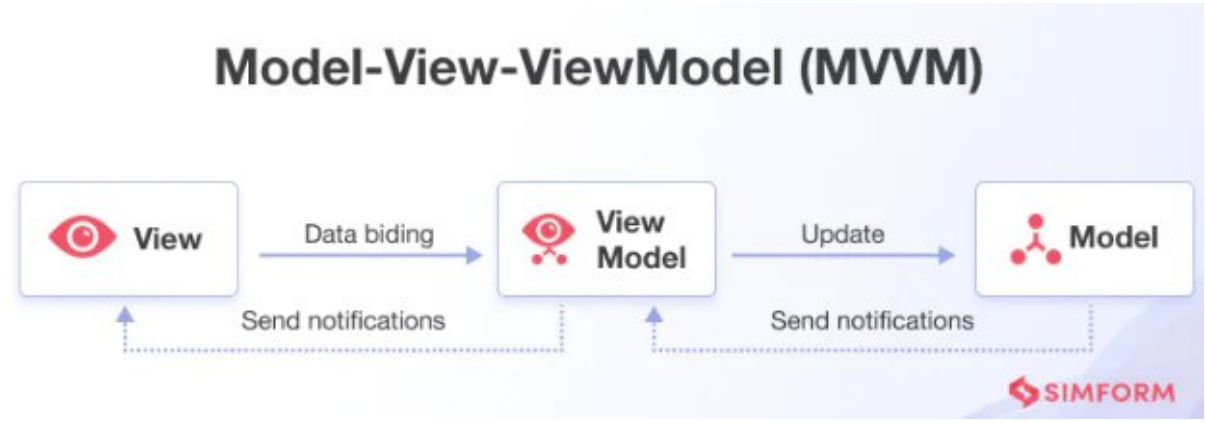
Common Design Patterns

MVC (Model-View-Controller): Separates the application into three interconnected components to manage business logic, user interface, and user inputs.



MVVM (Model-View-ViewModel): Similar to MVC but introduces the ViewModel to handle presentation logic and facilitate data binding.



MVP (Model-View-Presenter): Divides the application into model, view, and presenter, where the presenter acts as an intermediary between the view and the model.