

# Homework 1 - Fundamentals of Mobile Development (Mobile Architecture)

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Febrero 2024

The fundamentals of mobile development, especially in terms of architecture, involve how a mobile application is structured for its operation. Some of these points include:

- **Client-Server Architecture:** Applications follow a client-server architecture, where the user communicates with a server to obtain data or send data that the user requires, and it executes on the device.
- **Mobile Operating System:** Devices utilize operating systems, such as Android or iOS, each with its own features and functions.
- **Native Development vs. Cross-Platform Development:** "In apps, there are native applications that are exclusively designed for a particular operating system and are developed using a specific programming language. In contrast, cross-platform applications are created using a different programming language and can be used on multiple operating systems."
- **User Interface (UI) and User Experience (UX):** The user interface primarily refers to the visual design that the user sees, while the user experience encompasses the interaction with the application.
- **APIs (Application Programming Interfaces):** APIs allow developers to utilize services from other companies to create more reliable and easily manageable software. APIs can include functionalities such as maps, comments, etc., as well as database-related data without directly interacting with the databases. They also provide access to certain information from companies.
- **Data Persistence:** Applications constantly use data that needs to be stored, and there are various methods for this, including embedded databases, local files, or cloud services.
- **Application Life Cycle:** Understanding the life cycle of a mobile application is crucial. This encompasses everything from initialization to

suspension and closure of the application. Leveraging specific events in the life cycle allows for efficient resource management.

- **Testing and Debugging:** "The quality of the application is crucial; thorough testing should always be conducted to prevent faults and errors in the program, ensuring a positive user experience.
- **Updates and Maintenance:** Applications must undergo constant updates and maintenance, whether to add new content or to enhance aspects of both design and security.