

DEPARTMENT OF INTERNET OF THINGS

MOBILE APPLICATION DEVELOPMENT FOR IOT

OBJECTIVE: The objective of the Mobile Application Development for IoT Lab is to equip students with the skills to design, develop, and deploy mobile applications that interact with IoT devices. This involves understanding IoT architectures, integrating hardware with mobile platforms, and utilizing APIs and protocols for seamless communication.

The objectives encompass a comprehensive understanding of Android app development, starting with configuring Android Studio, SDK Manager, and AVD emulators to establish a development environment. Learners will delve into designing intuitive user interfaces using Android UI components and Material Design principles. They will also explore integrating libraries, utilizing APIs, and managing messaging systems effectively. A focus on hybrid app development platforms will broaden their skill set, enabling cross-platform capabilities. Finally, learners will acquire the knowledge required for app release processes, including signing, testing, and optimizing, culminating in publishing fully functional and market-ready applications on the Google Play Store.

PHOTOS:



LAB OUTCOMES:

1. Demonstrate the configuration of Android Software Development tools.
2. Design and develop Mobile Applications using Android and Kotlin.
3. Develop a complex android application by using APIs, Libraries, and message handling techniques.
4. Construct the mobile application using a hybrid framework or SDK release and publish an application on Google Play Store.

Lab Infrastructure

Attribute	Specifications
Lab Room Number	2218
Total Systems	90 (all functional)

System Specifications

- **Processor:** Intel i5 12th Gen 12400 @ 2.50 GHz
- **RAM:** 16GB DDR4, 3200 MHz
- **Storage:** 256GB SSD
- **System Type:** 64-bit operating system, x64-based processor
- **Operating Systems:** Windows 10 and Windows 11 Pro
- **OS Version:** 21H2, Edition-Windows

Peripheral Devices

- **Mouse:** Lenovo (90 units)
- **Keyboard:** Lenovo (90 units)
- **Monitor:** Lenovo ThinkVision

Additional Equipment

- **MAXHUB Smart Board:** Equipped with internet connection, audio system, and cordless microphone.

COORDINATORS:

The lab is coordinated by a dedicated team of faculty members who ensure the smooth conduct of lab sessions:

- **Mrs. B. Swetha**
- **Mr. A. Ramesh Khanna**