

UNIVERSITY OF MADRAS
BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)
SYLLABUS WITH EFFECT FROM 2020-2021

BCA-DSC20

CORE-XX: MOBILE APPLICATION DEVELOPMENT

III YEAR / VI SEM

OBJECTIVES:

- To make the student understand the basic concepts of mobile application development, be aware of Characteristics of mobile applications, User-interface design, basics of graphics and multimedia.
- To gain knowledge about testing and publishing of Android application

OUTCOMES:

- To explain the basics of mobile application development
- Develop Android application with User interface, networking and animation.
- Use simulator tools to test and publish the application.

UNIT - I

Mobile Application Development - Mobile Applications and Device Platforms - Alternatives for Building Mobile Apps -Comparing Native vs. Hybrid Applications -The Mobile Application Development Lifecycle-The Mobile Application Front-End-The Mobile Application Back-End-Key Mobile Application Services-What is Android-Android version history-Obtaining the Required Tools- Launching Your First Android Application-Exploring the IDE-Debugging Your Application-Publishing Your Application

UNIT - II

Understanding Activities-Linking Activities Using Intents-Fragments-Displaying Notifications-Understanding the Components of a Screen-Adapting to Display Orientation-Managing Changes to Screen Orientation- Utilizing the Action Bar-Creating the User Interface Programmatically Listening for UI Notifications

UNIT - III

Using Basic Views-Using Picker Views -Using List Views to Display Long Lists-Understanding Specialized Fragments - Using Image Views to Display Pictures -Using Menus with Views-Using WebView- Saving and Loading User Preferences-Persisting Data to Files-Creating and Using Databases.

UNIT - IV

Sharing Data in Android-Creating Your Own Content Providers -Using the Content Provider-SMS Messaging -Sending Email-Displaying Maps- Getting Location Data- Monitoring a Location.

UNIT - V

Consuming Web Services Using HTTP-Consuming JSON Services- Creating Your Own Services - Binding Activities to Services -Understanding Threading .

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TEXT BOOK:

1. Jerome DiMarzio, “*Beginning Android Programming with Android Studio*”, 4th Edition.

REFERENCE BOOKS:

1. Dawn Griffiths, David Griffiths, “*Head First Android Development: A Brain-Friendly Guide*”, 2017.
2. Neil Smyth , “*Android Studio 3.0 Development Essentials: Android*”, 8th Edition.
3. Pradeep Kothari, “*Android Application Development (With Kitkat Support)*”, Black Book 2014.

WEB REFERENCES:

- <https://developer.android.com/guide>
- https://en.wikipedia.org/wiki/Android_10
- [Develop App for Free](#)
- <https://flutter.dev/>
- <http://ai2.appinventor.mit.edu>
- https://en.wikipedia.org/wiki/Android_version_history
- <https://aws.amazon.com/mobile/mobile-application-development/> (Unit 1)
- https://en.wikipedia.org/wiki/Mobile_app_development