# Mobile Application Development

**Class: B.Sc.-III**

**DURATION: Three month**

## Department of Computer Science

1. Title: Mobile Application Development.
2. Year of implementation: 2020

**Structure of Value Added Course**

| Duration In Month | Theory Periods | Practical Periods | Total Periods | Credits | No. of Students in batch |
|---|---|---|---|---|---|
| 3 | 10 | 30 | 40 | 2 | 20 |

## Syllabus

**LearningObjectives:**

1.To understand the android application developmentlifecycle.

2. Tofamiliarize with Android's APIs for data storage, retrieval, userpreferences, files and contentproviders.

### Unit I: Working with MIT app inventor

What is mobile Application Programming, Architecture of Android, Android Life cycle, working with App Inventor Designer and Blocks Editor,Android applications structure, creating a project, working with android built in blocks, various controls, Layouts.

### Unit II: Handling data using android

Text controls, Button controls, Images Supporting Multiple Screen, Activities, application context, Intent Web View File, shared Preferences, Database (SQLite database) Creation of .apk files.

## Learning Outcomes:

At the end of this course, the students should be able to

1.Understandthe purpose different development tools forAndroid.

2. Designa graphical user interface and integrate applications with pre-existing third partylibraries.

## Reference books:

1. Beginning Android 4, Grant Allen, Apress Publication, 1st edition, 2012.
2. Professional Android 4 Application Development, Carmen Delessio ET AL, Pearson India, 4th edition, 2016.
3. Programming with Mobile Applications: Android, iOS, and Windows Phone10, Thomas Duffy, 1st Edition, 2013.

## Practical Syllabus

### Objectives:

1. To understand implementation of Android application.
2. Able to develop application using database.

### List of Experiments:(24) hr

1. Create an application that uses GUI Components, Fonts andColors.
2. Create an application that uses Layout Managers and Event Listeners.
3. Create a native calculatorapplication.
4. To implement an application that writes data to the SDcard.
5. Create an application that draws basic graphical primitives on thescreen.
6. To implement an application that implementsmultithreading.
7. To implement an application that creates an alert upon receiving amessage.
8. Develop an application that makes use ofdatabase.
9. Develop an application of Googlemap.
10. To implement an application that creates analarm.

## Reference books:

1. Beginning Android 4, Grant Allen, Apress Publication, 1st edition, 2012.
2. Professional Android 4 Application Development, Carmen Delessio ET AL, Pearson India, 4th edition, 2016.
3. Programming with Mobile Applications: Android, iOS, and Windows Phone10, Thomas Duffy, 1st Edition, 2013.

## Project/ Field Visits/ Industrial Visit (06 hr)

Every student should done a mini project and submit the report. The work will assessed at the time of practical examination.

## Learning Outcomes:

After completion of the practical, Student are able to:

1.Demonstrate and Understanding anatomy of an Android application.

2. To implement an Androidapplication using database.

## Reference books:

1. Beginning Android 4, Grant Allen, Apress Publication, 1st edition, 2012.
2. Professional Android 4 Application Development, Carmen Delessio ET AL, Pearson India, 4th edition, 2016
3. Programming with Mobile Applications: Android, iOS, and Windows Phone10, Thomas Duffy, 1st Edition, 2013.

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