

# CSE224:FUNDAMENTALS OF ANDROID

L:2 T:0 P:2 Credits:3

**Course Outcomes:** Through this course students should be able to

- CO1 :: outline the role of Kotlin in Apps development using Android based System
- CO2 :: discover to simplify and accelerate UI development in android studio environment
- CO3 :: practice Localization with global users, snackbar and device Log in real time apps
- CO4 :: observe communication and event passing between component
- CO5 :: illustrate the control of accessing and choosing device permission of apps
- CO6 :: develop menus and handle modal events

## Unit I

**Introduction of Kotlin :** Introduction to Kotlin, Variable and Data type, type Conversion, Operator, Flow Control -if statement, when, loop, defining Function, using recursive function, Array and types of arrays, String, OOPs Concept – class and object, nested class, constructor, Inheritance, Overriding, Interface, the activity and its life cycle, Installation and setup of android studio

## Unit II

**User Interfaces and View Components :** Linear Layout- horizontally or vertically property, Relative Layout- relate to parent, relate to child, Grid Layout- scroll list, grid view of rows & columns, Constraint Layout - start, end, top, Bottom dimension ratio properties, Widgets Button, Text View, Edit Text, Image View, Check Box, Radio Button, Spinner, List View

## Unit III

**Localize your app :** App localization, Log, Snackbar, Translate and localize your app, Available List of Language, Logcat , read logs, log view, logcat in multiple windows

## Unit IV

**Intents and Toast :** Intent Class, Implicit and explicit Intent, Toast event implementation, Action Bar, Passing Data with Intents, Common Intent Actions, Toast parameter, Icon of an Action Bar Item, color of the Action Bar, component of action bar

## Unit V

**Permissions and App chooser :** Request App Permissions, Handle the permissions request response, App chooser

## Unit VI

**Menus and Dialogs :** Option Menu, Context Menu, Popup Menu, Alert Dialog, Custom Alert Dialog

## List of Practicals / Experiments:

### Basic of Kotlin

- Create an application which will contain the basic concepts of Kotlin.

### Layouts

- Create an application which will contain different types of layouts like linear, relative etc.

### SnackBar

- Create an application based on snackbar

### Intents

- Create an application based on implicit intent and explicit intent.

### Toast

- Create an application which will display toast in the application.

### Menus

- Create an application which will contain different types of Menus like option, context etc.

**Dialogs**

- Create an application to implement different types of dialogs.

**Text Books:** 1. BEGINNING ANDROID PROGRAMMING WITH ANDROID STUDIO by J. F. DIMARZIO, WILEY

**References:** 1. ANDROID APPLICATION DEVELOPMENT ALL-IN-ONE FOR DUMMIES by BARRY BURD, WILEY