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| ANDROID COURSE | | | |
| Day/Session | Topic | Description | Task |
| 1 | Introduction | Introduction on Android – Need of Android – Features available – Advantages –  Android application over Java application – Prerequisite for Android application –  Overview – History of Android |  |
| 2 | Setting up the IDE | Installing Android IDE – Eclipse/Android Studio – Discussing about the environment variables - Installation of JDK and SDK– Setting up IDE for creating an application – various panel explanation. |  |
| 3 | Introduction to File System in Android | Creating a Hello World program – Introduction to Text Views – Creating an xml(Design) file, JavaScript (Process) and Manifest(Execute) and making changes – Running an Android application in Emulator | **Task1**:create a hello world program and flash it to Android mobile |
| 4 | Text views | Configuring your Mobile to run a sample application – Solving the issues while running the app in real time gadgets (ADB Integration) – Enabling Developer options in Gadgets - Driver Installation. | **Task2**: Create multiple Text views with multiple colors and multiple size and fonts |
| 5 | Layouts | UI tool explanation – Basic widgets for design – Overview of Views, Layouts, Buttons and other transitions – Views – Types of Views – Layouts – Types of layouts | **Task3** : Task involving layouts and nested Layouts |
| 6 | Widgets | Buttons – Radio buttons- Rating Bar- Progress bar –Time and date -List view - Grid view- Integration of Basic Widgets into Java – importing necessary libraries -Controlling the attributes during execution | **Task4**: Task involving text views and buttons.  **Task5**: Create a simple application With multiple Widgets |
| 7 | Intents & Activity | Creating multiple pages – Integrating and Navigating from one to the other (Intents) – Activity - Lifecycle of an Activity | **Task6:** Create a multi-page application and move from one page to other |
| 8 | Shared Preference & Camera/Gallery API | Shared Preference-necessity- usage areas-Implementation  Accessing image from Camera API and gallery- working with the mobile resource-transferring of control between activities | **Task7:** Create an application with a Login screen containing Username and Password  and then logging out of the app. enabling a new user login.  **Task8** **:**Setting an Image from gallery/Camera as profile display Pic for the above Task |
| 9 | Menu &Toast | Creating Menu – Adding items in Menu – Creating a string list – Creating any customized list view-Adding items in Action Bar-Customizing Action Bar- Notifications (Toast) | **Task9:** Create an Options menu with multiple items and toast the selected item’s name |
| 10 | Text to Speech and Speech to Text | Introduction to TTS engine-mechanism –implementation-Speech to text introduction –working –implementation | **Task10:** Performing various action using voice command |
| 11 | Google Apps | Working with Google maps – How to buy an API key for a Project – Working with multiple markers – Changing colors – Working with multiple map types (Hybrid, Terrain, Satellite) – Working with GPS location – Obtaining location – Locating the Latitude and Longitude in Maps | **Task11**:Obtain the current location and set the location in Google maps(Place the marker in current location) |
| 12 | List and Grid view | Introduction- mechanism –implementation of List and Grid view –Introducing different widgets | **Task12:** Implementing a grid / list view with multiple widget |
| 13 | Database | Working with Database – Types of database – SQLite – My SQL-basic PHP scripts for  CRUD operations in Database-WAMP Server Installation - Local server Concepts –  Database query Statements | **Task13**: Creating a Contact Manager using Database |
| 14 | Working with in built Sensor | Working with Inbuilt Sensors-Accelerometer-Gyroscope-Proximity sensor-Temperature SensorTouch Sensor-IR Sensor –Vision Sensor –Barometer –Humidity Sensor-Fingerprint sensor – Accessing data from Sensors – Adding the sensor data to List view – Check Sensor availability | **Task14:** working with various sensor to perform a particular task |
| 15 | Bluetooth | Working with Communication mediums – Bluetooth – Listing Paired devices – Pairing to a new device – Sending and receiving data from the device | **Task15:** Pair a new device using Bluetooth and send data through the same. |
| 16 | Wifi | Wi-Fi – Working with Wi-Fi – Connecting to the network with the help of SSID – Listing the available networks – Connecting to a new network – Sending and receiving data from the network | **Task16**: Connect to the existing network using Wi-Fi. Send and receive data to the network |
| 17 | Animations | Working with Various animations- create a basic animations in app-interfacing various module –together with proper animation | **Task 17:** Task6: Controlling the Animation using voice recognition |
| 18 | Working with already created app | Download a app from the internet –Enhance the look and feel of the app and enhancing the functionality-Solving the errors –making the app run with current settings-installing necessary libraries. | **Task 18:** Download a app from the internet and enhance its features. |
| 19&20 |  | **Task 19:** Create a an app for the given problem statement.(varies from team to team) –this will include at least three modules. |  |