

Detailed Curriculum

Name of Unit of Qualification	: Introduction To Android And Creating Applications And Activities
Duration	: 25 Hours
Topics	: Introduction To Android , creating applications and activities

Performance Criteria(OUTCOME) No.	Contents	Hrs.
OUTCOME-1: Acquiring Skills to Understand Android	<p>Introduction to android</p> <p>A Little Background. Android: An Open Platform for Mobile Development, Native Android Applications, Android SDK Features, Access to Hardware, Including Camera, GPS, and Accelerometer, Native Google Maps, Geocoding, and Location-Based Services, Background Services, SQLite Database for Data Storage and Retrieval, Shared Data and Interapplication Communication, Using Widgets, Live Folders, and Live Wallpaper to Enhance the Home Screen, Extensive Media Support and 2D/3D Graphics, Optimized Memory and Process Management, Introducing the Open Handset Alliance, Changing the Mobile Development Landscape, Introducing the Development Framework, What Comes in the Box, Understanding the Android Software Stack, The Dalvik Virtual Machine, Android Application Architecture, Android Libraries, Summary.</p> <p>GETTING STARTED</p> <p>Developing for Android, What You Need to Begin, Downloading and Installing the SDK, Developing with Eclipse, Using the Eclipse Plug-In, Creating Your First Android Application, Starting a New Android Project, Creating a Launch Configuration, Running and Debugging Your Android Applications, Understanding Hello World, Types of Android Applications, Foreground Applications, Background Services and Intent Receivers, Intermittent Applications, Widgets, Developing for Mobile Devices, Hardware-Imposed Design Considerations, Be Efficient, Expect Limited Capacity, Design for Small Screens, Expect Low Speeds, High Latency, Considering the Users' Environment, Developing for Android, Being Fast and Efficient, Being Responsive, Developing Secure Applications, Ensuring a Seamless User</p> <p>Experience, To-Do List Example, Android Development</p>	15

	Tools, The Android Virtual Device and SDK Manager, Android Virtual Devices, SDK Manager, The Android Emulator, Dalvik Debug Monitor Service (DDMS), The Android Debug Bridge (ADB), Summary.	
OUTCOME-2: Acquiring Skills to Create Applications and Activities	Creating applications and activities Introducing the Application Manifest, Using the Manifest Editor, The Android Application Life Cycle, Understanding Application Priority and Process States, Externalizing Resources, Creating Resources, Creating Simple Values Styles and Themes, Drawables, Layouts, Animations, Menus, Using Resources, Using Resources in Code, Referencing Resources within Resources, Using System Resources, Referring to Styles in the Current Theme, To-Do List Resources Example, Creating Resources for Different Languages and Hardware, Runtime Configuration Changes, Overriding the Application Life Cycle Events, A Closer Look at Android Activities, Creating an Activity, The Activity Life Cycle, Activity Stacks, Activity States, Monitoring State Changes, Understanding Activity Lifetimes, Android Activity Classes, Summary.	10

Name of Unit of Qualification : Creating User Interfaces And Intents, Broadcast Receivers, Adapters, And The Internet

Duration : **25 Hours**

Topics : Creating user interfaces, Intents, broadcast receivers, adapters, and the internet

Performance Criteria(OUTCOME) No.	Contents	Hrs.
OUTCOME-1: Core Skills to Create User Interface and Intents	Creating user interfaces Fundamental Android UI Design, Introducing Views, Creating Activity User Interfaces with Views, The Android Widget Toolbox, Introducing Layouts, Using Layouts, Optimizing Layouts, Creating New Views, Modifying Existing Views, Customizing Your To-Do List, Creating Compound Controls, Creating Custom Views, Creating a New Visual Interface, Handling User Interaction Events, Creating a Compass View Example, Creating and Using Menus, Introducing the Android Menu System, Defining an Activity Menu, Menu Item Options, Dynamically Updating Menu Items, Handling Menu Selections, Submenus and Context Menus, Creating Submenus, Using Context Menus, Defining Menus in XML, To-Do List Example Continued, Summary.	10

OUTCOME-2: Advance Skills to Understand Broadcast Receiver, Adapters and Internet	Intents, broadcast receivers, adapters, and the internet Introducing Intents, Using Intents to Launch Activities, Explicitly Starting New Activities, Implicit Intents and Late Runtime Binding, Returning Results from Activities, Native Android Actions, Using Intent Filters to Service Implicit Intents, How Android Resolves Intent Filters, Finding and Using the Launch Intent Within an Activity, Passing on Responsibility, Select a Contact Example, Using Intent Filters for Plug-Ins and Extensibility, Using Intents to Broadcast Events, Broadcasting Events with Intents, Listening for Broadcasts with Broadcast Receivers, Native Android Broadcast Actions, Introducing Pending Intents, Introducing Adapters, Introducing Some Native Adapters, Customizing the Array Adapter, Using Adapters for Data Binding, Customizing the To-Do List Array Adapter Using the Simple Cursor Adapter, Using Internet Resources, Connecting to an Internet Resource, Using Internet Resources, Introducing Dialogs, Introducing the Dialog Classes, The Alert Dialog Class, Specialist Input Dialogs, Using Activities as Dialogs, Managing and Displaying Dialogs, Summary.	15
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Name of Unit of Qualification : Files, saving state, and preferences, Databases and Project

Duration : **50 Hours**

Topics : Files, saving state, and preferences, Databases

Performance Criteria(OUTCOME) No.	Contents	Hrs.
OUTCOME-1: Acquiring The Skills To Create Files, Saving Files	Files, saving state, and preferences Saving Simple Application Data, Creating and Saving Preferences, Retrieving Shared Preferences, Introducing the Preference Activity and Preferences Framework, Defining a Preference Screen Layout in XML, Native Preference Controls, Using Intents to Import System Preference Screens, Introducing the Preference Activity, Finding and Using Preference Screen Shared Preferences, Introducing Shared Preference Change Listeners, Creating a Standard Preference Activity for the Earthquake Viewer, Saving Activity State, Saving and Restoring Instance State, Saving the To-Do List Activity State, Saving and Loading Files, Including Static Files as Resources, File Management Tools, Summary.	10
	Databases Introducing Android Databases, Introducing SQLite	10

OUTCOME-2: Acquiring The Skills To Manage Application With Database	Databases, Introducing Content Providers, Introducing SQLite, Cursors and Content Values, Working with SQLite Databases Introducing the SQLiteOpenHelper, Opening and Creating Databases without SQLiteOpenHelper Android Database Design Considerations, Querying a Database, Extracting Results from a Cursor, Adding, Updating, and Removing Rows, Inserting New Rows, Updating a Row, Deleting Rows, Saving Your To-Do List, Creating a New Content Provider, Exposing Access to the Data Source, Registering Your Provider.	
Project		30