Android Syllabus

- ## 1: Getting Started with Basics of Java

- Java - What, Where and Why?
- History and Features of Java
- Internals of Java Program
- Difference between JDK,JRE and JVM
- Internal Details of JVM
- Variable and Data Type
- Unicode System
- Naming Convention
- The Structure of Java Code
- How to Run your Java Programs
- Printing to the Output Window

- ## 2: OOPS Concepts

- Advantage of OOPs
- Object and Class
- Method Overloading
- Constructor
- Static variable, method and block
- this keyword Ø Inheritance (IS-A)

- Aggregation and Composition(HAS-A)
- Method Overriding
- Covariant Return Type
- super keyword
- Instance Initializer block
- final keyword
- Runtime Polymorphism
- static and Dynamic binding
- Abstract class and Interface
- Downcasting with instanceof operator
- Package and Access Modifiers
- Encapsulation
- Object Cloning
- Java Array
- Call By Value and Call By Reference
- Strictfp keyword
- Creating API Document

3: String Handling

- String: What and Why?
- Immutable String
- String Comparison
- String Concatenation
- Substring
- Methods of String class
- StringBuffer class
- StringBuilder class
- Creating Immutable class
- toString method
- StringTokenizer class
- Upper and LowerCase
- The compare Method
- The equals Method
- The replace Method
- Printing Formatted Strings

- ### 4 : Exception Handling

- Exception Handling: What and Why?
- try and catch block
- Multiple catch block
- Nested try
- finally block
- throw keyword
- Exception Propagation
- throws keyword
- Exception Handling with Method Overriding
- Custom Exception

- ### 5 : Multithreading

- Multithreading : What and Why?
- Life Cycle of a Thread Creating Thread
- Thread Scheduler
- Sleeping a thread
- Joining a thread
- Thread Priority
- Daemon Thread
- Thread Pooling
- Thread Group
- ShutdownHook
- Performing multiple task by multiple thread
- Garbage Collection
- Runnable class

- ### 6 : Control Flow

- If Statements in Java
- If Else Statements
- Boolean Values
- Switch Statements
- Java for Loops
- Java While Loops

- ### 7 : Arrays in Java

- Java Arrays
- Arrays and Loops
- Sorting Arrays
- Arrays and Strings
- Multi -Dimensional Arrays
- Array Lists

- ### 8: Java Methods

- Java Methods
- Calling your Java Methods
- Passing Values to Methods
- Multiple Method Parameters

- ### 9: Synchronization

- Synchronization : What and Why?
- Synchronized method
- Synchronized block
- Static synchronization
- Deadlock
- Inter-thread Communication
- Interrupting Thread

- ### 10: Java Form Controls

- Java Forms
- The Different Form Views in NetBeans/Eclipse
- Add a Text Box to a Java Form
- Add a Button to the Form
- Button Properties
- Java Form Events
- Java and Combo Boxes
- Java Check Boxes
- Radio Buttons
- Adding Menus to a Java Form

- Open File Dialogue Boxes
- Opening Files
- Save File Dialogue Boxes

· 11: Java and Databases

- Java and Databases
- Creating a Database with Java
- Adding Records to Table
- SQL Commands
- Connect to a Database with Java code
- Connecting to the Table

· 12: Databases and Java Forms

- Databases and Java Forms
- Database Scrolling Buttons
- Move Back Through the Database
- Move to the First and Last Records
- Update a Record
- Add a New Record
- Save a New Record
- Delete a Record from a Database

· 13: A Java Calculator Project (This is Done By Student Himself)

SQL Server/MySql/SQL

· 1: Work with Store Procedure & Data Base

- Learn Database Models
- Overview of SQL Server Management Studio
- Creating the Data Base
- Creating the table
- Select,Insert,Delete,Update in Data Base
- Writing simple and complex queries that retrieve data from the Database
- Creating the Store Procedure

- Types of Store Procedure (Input,Output)
- Types of Joins
- Sub-Queries
- Create and Managing View
- Create Function and Use with Procedure

• 2: Basic Android Studio

• 3 : Basics of Android

- What is Android
- History and Version
- Installing Softwares
- Setup Android Studio
- Hello Android example
- Internal Details
- Dalvik VM
- Software Stack
- Android Core Building Blocks
- Android Emulator
- AndroidManifest.xml
- R.java file
- Hide Title Bar
- Screen Orientation

• 4 : UI Widgets

- Working with Button
- Toast
- Custom Toast
- Button
- Toggle Button
- Switch Button
- Image Button
- CheckBox
- AlertDialog
- Spinner
- AutoCompleteTextView

- RatingBar
- DatePicker
- TimePicker
- ProgressBar
- Quick Contact Budge
- Analog Clock and Digital Clock
- Working with hardware Button
- File Download

5 : Activity, Intent & Fragment

- Activity Lifecycle
- Activity Example
- Implicit Intent
- Explicit Intent
- Fragment Lifecycle
- Fragment Example
- Dynamic Fragment

6 : Android Menu

- Option Menu
- Context Menu
- Popup Menu

7: Layout Manager

- Relative Layout
- Linear Layout
- Table Layout
- Grid Layout

7 : Adaptor

- Array Adaptor
- ArrayList Adaptor
- Base Adaptor

9 : View

- GridView
- WebView
- ScrollView
- SearchView
- TabHost
- DynamicListView
- ExpandedListView