



Maharaja Education Trust ®
MIT First Grade College

(Affiliated to University of Mysore)
Industrial Suburb, Manandavadi Road, Mysuru -570008

Department of Computer Science

Certification course on “Mobile Application Development and Software Engineering”

Syllabus

Day	Contents
1	Mobile Application Development <ul style="list-style-type: none">• Overview of Java• Introduction to Android• What is Android and its history• Android architecture (Kernel, Dalvik, Native layer, Application Layer etc)• Android SDK and Tools (How to setup, its contents and use)• Set up IDE's (Eclipse and Android Studio)• Creating Hello World App• Project: Debug, Deploy and Run Android App
2	<ul style="list-style-type: none">• Complete Overview with Anatomy of Android Hello World App• Model , View and Controller Architecture• What is an Activity and How to switch between Activity• Have a strong grip on the framework of Android App• Its all store in R.java resource file• Intent and Simple XML components• Overview of AndroidManifest.xml (controller of Android app)
3	<ul style="list-style-type: none">• Managing the Activity Life cycle• Intents and Activities• Two ways to create Android UI : XML vs Java approach• Attributes in XML UI Component• Using XML Layout and Text View• Simple I/O App Demo Using Edit Text & Button• Simple List View App Demo with Toast Notification Message
4	<ul style="list-style-type: none">• Adding and removing Action Bar• Accessing and Creating Folder from SDCard• Read and Write Files from SDCard• Introduction to Services• Creating a Service App in Android Studio• Understanding Lifecycle methods of Services

5	<ul style="list-style-type: none"> • Fragments • Overview of SQLite • Creating a Content Provider • Google Maps • APK Creation
6	<p style="text-align: center;">Software Engineering</p> <p>Introduction: Professional Software Development Attributes of good software, software engineering diversity, software engineering ethics. Software Process and Agile Software Development</p> <p>Software Process models: Waterfall, incremental development, reuses oriented, Process activities; The Rational Unified Process.</p>
7	<p>Requirement Engineering: Functional and non-functional requirements, The Software requirements document, Requirements specification, Requirements engineering processes, Requirement elicitation and analysis, Requirement validation, Requirement management.</p>
8	<p>What is object orientation? What is OO development? OO themes; Evidence for usefulness of OO development; OO modeling history, modeling as design Technique: Modeling; abstraction; the three models. Object and class concepts; Link and associations concepts; Generalization and inheritance;</p>
9	<p>State Modeling Events, States, Transitions and Conditions; State Diagram; State diagram behavior; Practical tips. Advanced State Modeling: Nested state diagram; Nested states; A sample state model, Relation of class and state models; practical. Interaction modeling: Use Case models, Sequence models, Activity models, Use case relationships.</p>
10	<p>Project Design and planning Process planning, Effort estimation, project scheduling and staffing, Software configuration Management plan, Quality plan, Risk Management, Project Monitoring plan Design: Design concepts, Function oriented design, detailed design, verification, Metrics.</p>

Chandru-M

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