Day 1 - Computer Fundamentals

Application Development

Types of Clients

  Rich Client

Thin Clients

RIA

Mobile Applications

Different Orientations

Procedure Oriented

Object Oriented

Component Oriented

Service Oriented

Different Types of Languages

Compiled

Scripting

Application Changes

Fast modifications

Common code with multiple Interfaces

Need of Integration with different applications

Day 2 - Programming Fundamentals

OOPS Concepts

Abstraction

Encapsulation

Inheritance

Polymorphism

Source code Vs Object Code

Naming Conventions

Best Practices

Day 3, Day 4 - OOP(Core Java)

+Eclipse

Java Fundamentals – Quick View

Using Array

OOP Concepts - Introduction

Constructor Methods, Accessor Methods

Instance methods Vs Static methods

Package (creating, importing, access control)

Inheritance in depth

Overloading and Overriding

Java Language Library(Wrapper class/ String /String Buffer Class)

Exception Handling

Abstract classes/ Interfaces in JDK 7 and JDK 8)

Generic classes/interfaces

Collection API (List, Set, Map)

ArrayList,

HashSet

HashMap

Iteration of Collection Objects (Iterators,for loop)

Threads

LifeCycle

Start/join/sleep

Day 5 - Web Programming (HTML, JS, XML, JSON)

+ add a small web app development using servlet/jsp

Server-Side Development

Web Technologies overview

HTML

HTML document structure

Input Forms using HTML5 and built in validations

HTML5 semantic elements

Introduction to CSS

JavaScript in web pages

Why to use JavaScript

Inline Java Script / Page Level Script / External Scripts

Built in functions

Day 6 - RDBMS/SQL

    What is RDBMS

    Database Server/Client

    CRUD of single table

    Relationship in tables

        one-one

        one-many

        many-many

    Fetching data from multiple tables

        Joins / Unions

Day 7 – ADE Eclipse, Github, Maven

Version Control Overview

    Introduction to Git

    Version Control Overview

    Distributed Version Control model and its advantages

    Working locally with Git

    Installing Git on Windows

    Configuring Git

    Initialization

    Clone

    Checking out

    Creating a local/remote repository, adding files, deleting files and committing changes

    Introduction to Maven

    project object model

    project Description

    Versioning and configuration management

    Project dependencies

    Manage application resources

    POM XML

    Maven installation and configuration

    Creating a new project with Maven 2

Day 8 – Testing Overview

Understand

importance of testing

Coverage

Testing Rich Client/Thin Client / Rest APIs

Junit

Write Test Cases and Execute

TestSuite

Postman

Testing CRUD operations

Understand HTTP Status Codes

Day 9 – Basic Infrastructure Server/Cluster/LB

What is N-Tier/3 Tier Architecture (Java Context)

Cluster

Deployment for Clustered applications

Micro Services

Micro Services Concerns and Deployment

Load Balancer

Fail Over

Day 10 – Cloud Overview AWS Demo

Day 11 –

DevOps Introduction

Application Development

Development / Testing / Production

**Understanding with a small demo**

**User Acceptance Testing** (**UAT**)

Agile

Jira

Day 12 – Integration Concepts

        Introduction to Integration

        Why Integration

        Concerns

            REST API

            Security

            Messaging

        B2B

            Loose Coupling

            Error Handling

       a small case study discussion like Makemytrip to discuss

            1. New/Changes in B2B

            2. Security

            3. Need to converting Data to different formats

            4. Filters

            5. FanOut

            6. FanIn