**Syllabus of Java MVC training**

For

**Center for Smart Governance (CSG)**

Second Floor, TTMC, BMTC Building,,  
Yeshwanthpur Circle, Bengaluru 560022.

**Submitted By**

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**Syllabus for 10 days of training**

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| **Day** | **Topics** |
| **Day 1 – Basics of Java** | * Introduction to Java * Java Platforms * Setting up environment * Language fundamentals – JDK,JRE,JVM * Data Types,Operators,loops,conditional statements * Arrays * Functions * Sample programs and assignment |
| **Day 2 – Object Oriented Programming** | * Introduction to Oops * Inheritance * Polymorphism * Data binding * Abstraction – Interface and Abstract class * String functions * Packages and wrapper classes * Sample programs and assignment |
| **Day 3 – Collection Framework** | * Introduction to Collection framework * List, Set,Queue – interfaces and implementation (ArrayList,Linked List,HashSet,TreeSet) * Map * Exception Handling * Sample programs and assignment |
| **Day 4 – File Management, Multi Thread programs,Lamdba functions** | * Multi thread programming * Executor framework * File management * Lambda functions * Streams * **Sample programs and assignment** |
| **Day 5 –**  **Basics of Web application development** | * Introduction to Web application development * Architecture of Web Application * Development life cycle * Introduction to HTML,CSS and Java Script * Introduction to Bootstrap * Sample programs and assignment * Week 1 test |
| **Day 6 –**  **JEE (Servlets,SQL,JSP,JDBC)** | * Introduction to JEE * JEE application Architecture * Introduction to Servlet, Life cycle * Introduction to JSP * Introduction to Basic SQL Commands * JDBC * Sample programs and assignment |
| **Day 7 –**  **Spring Framework,MVC and Maven** | * Introduction to Spring framework and Architecture * Programming on Dependency Injection and Inversion of Control * Create Maven Project * Introduction to Spring MVC * Programs on Spring MVC * Sample programs and assignment |
| **Day 8 –**  **Spring Database , Spring Boot** | * Introduction to JDBC template * Hibernate * Entity Framework * Introduction to Spring Boot * Application development using Spring Boot * REST API development using Spring Boot * Sample programs and assignment |
| **Day 9 –**  **MVC – End to end Usecase implementation** | * Introduction to full stack application development * Identify an use case * Design and development of back end and front end * Testing |
| **Day 10 –**  **MVC – Mini project** | * Trainees to develop a mini project for the given use case * Design and development of back end and front end * Testing * Demonstration * Test – Week 2 |

**Pre-requisites**

1. Trainees should have a good desktop or laptop (Min 4 GB RAM,I5 processor) with good internet connection
2. Knowledge of HTML/CSS or any one programming language
3. Softwares to be installed on trainees’ system – Eclipse, JDK 1.8, MySQL database,Postman
4. Projector, markers