

“Enterprise Java with Spring and Hibernate” Course Content

Day	Topics	Sub-Topics	Learning Outcomes	Trainer	Duration (hrs/min)
1	Introduction to Spring	The Spring lightweight container, the BeanFactory, Dependency injection, Test-driven development	The trainee will build a Java application using dependency injection as provided by the Spring framework such that it is loosely coupled and highly cohesive. The trainee will also write unit tests using mock objects.	Avinash Meetoo	3:00
	The Domain Logic Layer	Domain logic design patterns, Transaction Script, Domain model	The trainee will understand the characteristics of the different design patterns used to build the domain logic layer of a web application. The trainee will build the domain logic layer of an application using the domain model design pattern.	Avinash Meetoo	3:00
2	Aspect Oriented Programming	AOP, Crosscutting concerns, Advice, Pointcuts, Proxies	The trainee will evaluate the benefits of AOP and consequently build a Spring application using that technology in order to implementing elegant solutions for transaction management as well as to minimise the amount of code written.	Avinash Meetoo	3:00
	Effective Data Access	DaoSupport classes, JDBC templates, Data Access Object (DAO) pattern, Transaction management	The trainee will build a Spring application leveraging the fundamental data access capabilities of the framework such as JDBC templates and declarative transaction policies.	Avinash Meetoo	3:00
3	Persisting Objects with Hibernate	Object-Relational mapping, Persistent classes, Mapping rules	The trainee will build a Spring application which uses the Hibernate framework in order to persist data.	Avinash Meetoo	3:00
	Handling Complex Object Relationships	Hibernate session, States, Collections, Associations, Inheritance, Hibernate Query Language (HQL)	The trainee will build a Spring application with a complex graph of objects and use Hibernate to persist those objects as well as to execute queries using the Hibernate Query Language (HQL).	Avinash Meetoo	3:00
4	Using Spring MVC	Spring MVC architecture, the DispatcherServlet, Requests, Responses, Controllers	The trainee will build a web application using the fundamental components of the Spring MVC architecture.	Avinash Meetoo	3:00
	Processing Form Submissions and Rendering Views	SimpleFormController, Processing form submissions, View resolution, JSP templates	The trainee will build a web application which processes form submissions (including validation) and displays views accordingly.	Avinash Meetoo	3:00
5	Using Spring Web Flow	Creating a flow, Flow variables, Start and end states	The trainee will build a web application featuring a multistep workflow process using the Spring Web Flow engine.	Avinash Meetoo	3:00
	Spring Security	Security, Role-based access	The trainee will build a secure web application which allows authenticated users only to use its functionalities.	Avinash Meetoo	3:00