HP Education Services

	J2EE - Struts with Hibernate	
S.NO	**TOPIC**	**SUB TOPICS**
1	Introduction to Java EE	Introduction to Java EE Important J2EE API J2EE Architecture Introduction to EE Components EE Containers
2	HTML	Introduction To HTML Markup Tags HTML Comments Character entities Working with CSS Invoking JavaScript methods for event handling
3	JAVA EE Web Application & its working	A conceptual view of JAVA EE Web Application Web Application Structure ServletContext Deployment Descriptor Deployment Descriptor Elements Servlets & dynamic content Advantage of Servlets Life cycle of a Servlet Packages & Classes Generic & Http Servlets Declaring & Mapping Servlets in web.xml Retrieving Http Headers & Form Data Request and Response Request dispatching & response redirection
4	Session Management	Session Management Different ways to session management URL Rewriting : Advantage & Disadvantage Hidden Form Fields : Advantage & Disadvantage Cookies: Session-Level & Persistent Using HttpSession

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S.NO	**TOPIC**	**SUB TOPICS**
5	Servlet Listeners	Introduction To Servlet Listeners
6	Servlet Filter	Servlet Filter Overview Filter API Using Filters Filter Processing Filter Chain Mapping of a filter in web.xml Using filters to modify a request or response
7	Getting Started with JSP	Shortcomings of Servlets : Solution is JSP JSP Life Cycle JSP Elements JSP Directives Scripting Elements Built-in Action Elements Using Beans in JSP
8	JSP Custom Tags	An Overview Using a tag library in a web application Custom Tag API Defining a Tag Handler class Configuring the .tld file More about prefix & URI
9	Using JSTL	Using JSTL Different Libraries in JSTL JSTL Expression Language Implicit Object & Operators in EL Data Objects & the JSTL EL Using Core Tag Library Accessing DB using SQL Tag Library

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	J2EE - Struts with Hibernate	
10	Introduction to Struts Framework	MVC Architecture Application Flow Components Model, View and Controller Building a simple web application using struts
11	Struts Validator Framework	Introduction to validator plugin Using different types of validators Configuring the application Applying validators Building custom validators Declarative exception handling
12	Struts Tiles Framework	Introduction to tiles framework Building tiles Configuring struts-config.xml file Creating the template page Using tiles module-wise
13	Introduction to Hibernate	Issues with Persistence layers Object/Relational Mapping(ORM) What is and Why Hibernate Hibernate architecture Instance states Persistence lifecycle operations POJO (Plain Old Java Object) Based Mapping DAO
14	Mapping Class	Persistent Entity Class Hibernate Mapping Mapping the Entity Class Primary keys: Id property, Generated Id Hibernate Type System Working with sessions and Persistent Objects

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15	Hibernate Query Lanaguage(HQL)	What is HQL The Query Interface Creating and working with queries Named Queries Projection Queries Aggregate Queries "from" clause Associations and join "select" clause Polymorphic query "where" clause
16	Criteria query	Criteria query Criteria query API Pagination Restrictions Ordering Aggregate function Fetch modes Query By Example
17	Persistence Lifecycle	Transaction Overview Transactions in Hibernate Hibernate Transaction API The lifecycle of managed objects Persistent, transient, and detached objects The Persistence (Session) Context Contextual Sessions Synchronization to the Database The Session as cache
18	Optimistic Locking / Versioning	Detached Objects and Optimistic Locking Versioning overview and Using Versioning Locking Objects

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S.NO	TOPIC	SUB TOPICS
19	Relationships	Object Relationship Overview
		Mapping Collections of Value Objects
		Entity Relationships: 1-N, N-1, N-N, 1-1
		Mapping Entity Relationships
		Uni and Bi-directional Relationships
		The Relationship "inverse"
		Cascading Over Relationships
		Queries Across Relationships
20	Inheritance Mapping	Entity Inheritance with Hibernate
		Table-per-class mapping
		Table per Subclass mapping
		Table per Concrete Class mapping