Java

FULLSTACK

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Technovalley is a global technology company leveraging the potential of Information Technology for creating best opportunities for businesses and individuals across the world. We are a Foreign Direct Investment Company, and incorporated with a vision to facilitate our varied high technology services to many locations across the Globe.

Technovalley is a milestone in the ever-changing global IT scenario. From unrivaled services, ranging from Strategy Consulting to Technical Education and undeniably the best resources ranging from experienced manpower to well-equipped infrastructure, we strive to be the best in the IT consulting & service landscape in India. Technovalley is a milestone in the ever-changing global IT scenario.

At Technovalley, We believe in technology Innovation. We are dedicated to provide the latest state-of-the-art technology solutions to our Clients and Organizations Across varied business domains.

Technovalley is spear-headed by the Board of Directors, who are highly experienced and successful in multiple domains. All of them have set inspirational benchmarks on their own turfs, and this drives our vision.

Strategic Partners

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JAVA Basics

History of Java Difference between Java and other programming languages. Features of Java Working of Java JDK tools- javac, java, appletviewer Set path and how to run Java Program in Command Prompt JVM Byte code Java Program Structure Packages in java Java naming rules and conventions comments Wrapper Classes Conditional Statements Looping constructs Create objects of class Functions Variable types – local, instance and static variables Parameterized functions Function overloading Variable argument function.

IDE

- ◆ Eclipse: Overview
- ◆ Menus Views
- ◆ Perspective
- ◆ Workspaces
- ◆ Create project
- ◆ Create package
- ◆ Create java class
- ◆ Run
- ◆ Configuration
- ◆ Running Program
- ◆ Build Project

OOPS

OOPs concepts in JAVA Object Oriented Features Constructors Constructor overloading Types of inheritance – single, hierarchical and multilevel Base class and child class concepts Access specifies and scope of variables – public, private, protected Method overriding super-3 uses final- 3 uses Static functions and properties Dynamic method dispatch (Runtime Polymorphism) Order of constructor calling in inheritance Abstract class Interface.

Inner Class and Nested Class

◆ Regular inner class
◆ Method local inner
◆ class Anonymous inner
◆ class Static nested
◆ class

Exception handling and assertions

◆ Exception hierarchy in java Exception
◆ handling in Java Error Vs Exception
◆ Types of Exception Checked and
◆ unchecked exceptions
◆ Try-catch-finally Nested try and multi
◆ catch statements Throw and throws
◆ clause Creating user defined
◆ exceptions Assertions

Strings

◆ String, StringBuffer and StringBuilder
◆ Built-in methods in String and StringBuffer class and its usage

String manipulation using Java Regex

◆ Matcher class
◆ Pattern class

Arrays

◆ One-dimensional array
◆ Enhanced for loop Two-dimensional array (dynamic column size) Multidimensional array

Collection Framework

◆ Introduction to Collection framework
◆ List Interface ArrayList Vector
◆ LinkedList Set Interface HashSet
◆ LinkedhashSet TreeSet Map
◆ Interface HashMap HashTable
◆ LinkedHashMap TreeMap Queue and Priority Queue

Generics

◆ Introduction to Generics code Mixing
◆ Generics and Non Generic code
◆ Polymorphism in Generics Generics methods

Date

◆ Create and manipulate calendar data using classes from
◆ java.time.LocalDateTime java.time.LocalDate
◆ java.time.LocalTime
◆ java.time.format.DateTimeFormatter java.time.Period

Annotations

◆ What is Annotation and its
◆ usage Built in Annotations User
◆ Defined Annotations

File Navigation and IO

Introduction to java.io package Character and Byte Streams File Class Character Classes – FileReader, FileWriter, BufferedReader, Buffered-Writer,PrintWriter Byte Streams – FileInputStream, FileOutputStream, BufferInputStream, BufferedOutputStream Object Serialization ObjectInputStream and ObjectOutputStream readObject() and writeObject() Serialization in inheritance Externalization.

Multithreading

◆ What is Multithreading
◆ Lifecycle of Thread
◆ Creating Thread
◆ Thread Scheduler

Multithreading

- Sleeping a thread
- Starting thread
- Calling run() Joining thread

JDBC and MYS QL

Introduction to MySql Queries: create – database, table alter – add, modify, change, rename, drop column drop – table, database insert, delete, update, select, show, desc where clause, order by, group by, operators – and, or, between and, in, not in, like, distinct sub queries join – inner join, left join, right join JDBC Introduction JDBC Driver DB Connectivity steps Connectivity Java with MySQL and Oracle/MongoDB Driver Manager Connection Statement ResultSet.

Web Application Introduction

Introduction Web server and web client Web application directory structure Web application components Web container Deployment descriptor Apache Maven build tool Starting a web application in Eclipse Internet, client server architecture, Http, https, ftp, file uploading etc. – introduction.

HTML 5 & CSS

- HTML introduction HTML tags
- Images HTML tables HTML forms
- CSS syntax CSS Id and Class selectors. Practical labs

JavaScript

◆ Introduction External and internal
◆ JavaScript Functions Accessing HTML
◆ form controls JavaScript pop up boxes
◆ Validation Debugging JavaScript

jQuery

◆ Introduction
◆ Syntax Selectors Events jQuery effects – hide,
◆ show, fade, slide, animate Callback function
◆ Chaining effects

AJAX using jQuery

◆ Introduction to AJAX Send GET and POST
◆ data Read response and display it in HTML controls

jQuery UI

◆ Datepicker
◆ Accordion
◆ Button Dialog
◆ Menu SLider
◆ Jquery Effects

Bootstrap

◆ Create First Page using Bootstrap
◆ Bootstrap Text / Typography
◆ Table Jumbotron Wells
◆ Alerts Dropdowns Forms
◆ Form Inputs
◆ Buttons.Practical labs

Node JS and React Introduction Servlet

Features of Servlet Working of Servlet Introduction to Servlet API and Servlet class hierarchy Servlet life cycle Life cycle methods The Servlet API and its interfaces How to set Servlet initialization parameter How to set context initialization parameter Servlet Event handling Servlet events and interfaces Servlet session handling techniques Inter Servlet communication Servlet filters.

JSP

◆ Introduction to JSP
◆ Advantages JSP Life
◆ cycle Structure of JSP
◆ page Components of JSP
◆ page JSP implicit objects
◆ Create error pages in JSP
◆ JSP and JavaBean JSTL
◆ Custom tags

Hibernate

- Introduction Advantages Hibernate
- architecture Hibernate configuration
- Hibernate persistent class
- Hibernate mapping files HQL Using
- hibernate in a web application
- Hibernate Query Language (HQL)
- CRUD using HQL

Spring

- Benefits of using Spring framework
- Dependency injection Aspect Oriented
- Programming Spring framework architecture Spring environmental setup One example Spring IoC containers Spring BeanFactory
- Container Spring ApplicationContext
- Container Spring Bean definition XML based configuration file.
- Annotation-based configuration Spring
- Bean scopes Spring Dependency
- Injection Constructor based DI Setter based DI Spring Injecting
- Inner Beans
- Spring injecting Collections Spring
- Beans AutoWiring By name By type
- Spring Annotation Based
- Configuration @Required @AutoWired
- Spring JDBC framework Spring with
- Hibernate Spring MVC framework

Web Services

◆ Introduction Features of Web Services Roles – service provider, service requestor, service registry Web services protocol stack Life cycle Standards RESTful web service

◆ Create a RESTful web service REST - Representational

◆ State Transfer JAX-RS with Jersey

◆ Installation of Jersey Web container

◆ Prerequisites Create your first

◆ RESTful Webservice Create a REST client RESTful web services and JAXB CRUD RESTful webservice

◆ JSON

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