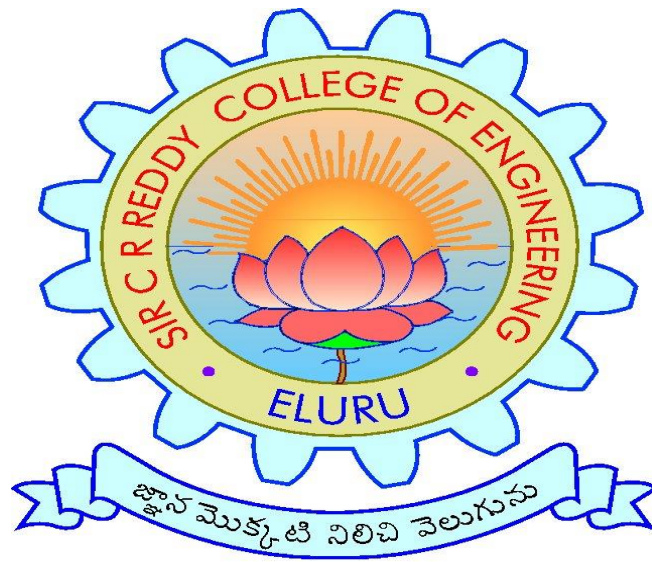


SIR C.R.REDDY COLLEGE OF ENGINEERING, ELURU

DEPARTMENT OF INFORMATION TECHNOLOGY

LESSON PLAN



SUBJECT: I.T 3.1 ADVANCED JAVA PROGRAMMING

CLASS: 3/4 B.Tech., I SEMESTER, A.Y.2019-20

INSTRUCTOR: Sri K SATYANARAYANA

SIR C R REDDY COLLEGE OF ENGINEERING
DEPARTMENT OF INFORMATION TECHNOLOGY

PROGRAMME : B.Tech **SEMESTER** : III/IV I Semester
A.YEAR : 2019-20
COURSE : ADVANCED JAVA PROGRAMMING
INSTRUCTOR : Sri K SATYANARAYANA

Course Contents

| Category of Course | Course Title | Credits- 4 | Theory Paper |
|--------------------|---------------------------|------------|--------------------------------|
| Departmental Core | ADVANCED JAVA PROGRAMMING | L-4 | Max.Marks-70 Duration-3hrs. |

Course description: On completion of this course, a student will be familiar with client server architecture and able to develop a web application using java technologies. Students will gain the skills and project-based experience needed for entry into web application and development careers.

Course objectives:

- Getting the student to be trained in Advanced Java Programming skills for an easy entry in the IT Industry

OUTCOMES:

- Construct Web Applications using Servlets.
- Construct Web applications using Java Server Pages.
- Construct web applications linked with any Database.

Prerequisite: Good understanding of the Java programming language. Basic understanding of web application and how internet works.

Internal Assessment Details:

Internal Test 1& 2 : 15 Marks
Online Test 1 & 2 : 10 Marks
Assignment-1 & 2 : 5 Marks
Total : 30 Marks.

III Year - I Semester

| | | | |
|----------|----------|----------|----------|
| L | T | P | C |
| 4 | 0 | 0 | 3 |

ADVANCED JAVA PROGRAMMING

UNIT –I:

Recapitulation of XHTML, XHTML5, Java Swing package – use of System class – Applet Context– signed applet – object serialization- shallow and deep copying – Java collections –Iterators – Array Lists – sets –hashset-hash table- queue- priority queue class-vector classcomparable interface.

UNIT – II:

Java Beans Introduction to Java Beans, Advantages of Java Beans, JDK Introspection, Using Bound properties, Bean Info Interface, Constrained properties Persistence, Customizers, Java Beans API

UNIT - III:

Introduction to Servlets: Lifecycle of a Servlet, JSDK The Servlet API, The javax.servelet Package, Reading Servlet parameters, Reading Initialization parameters. Thejavax.servelet HTTP package, Handling Http Request & Responses, Using Cookies-Session Tracking, servlet chaining-Security Issues.

UNIT -IV:

Introduction to JSP The Problem with Servlet. The Anatomy of a JSP Page, JSP Processing. JSP Application Design with MVC Setting Up and JSP Environment: Installing the JavaSoftware Development Kit, Tomcat Server & Testing Tomcat

UNIT - V:

JSP Application Development: Generating Dynamic Content, Using Scripting Elements Implicit JSP Objects, Conditional Processing – Displaying Values Using an Expression to Set an Attribute, Declaring Variables and Methods Error Handling and Debugging Sharing Data Between JSP pages, Requests, and Users Passing Control and Date between Pages Sharing Session and Application Data – Memory Usage Considerations

UNIT - VI:

Database Access Database Programming using JDBC Studying Javax.sql. package. AccessingMySQL database- Accessing MS Access database- Accessing a Database from a JSP PageApplication – Specific Database Actions Deploying JAVA Beans in a JSP Page. Introduction to struts framework.

TEXT BOOKS:

1. Internet and World wide web- How to program , Dietel and Nieto , Pearson. (Chapters: 3,

- 4, 8, 9, 10, 11, 12 to 18)
2. The Complete Reference, Java 2 , 3ed, Patrik Naughton, Herbert Schildt, TMH. (Chapters: 19, 20, 21, 22, 25, 27)
3. Java Server Pages , Hans Bergstan, Oreilly (Chapters: 1-9)

REFERENCE BOOKS:

1. Jakarta Struts cook book, Bill Siggelkow, SPD, Oreilly (Chapter 8)
2. Murach’s, Beginning Java JDK5, Murach, SPD.
3. An introduction to Web Design and Programming, Wang Thomson
4. Web application technologies concepts, Knuckles, John Wiley.
5. Programming world wide web, Sebesta, Pearson
6. Building Web Applications, NIIT, PHI
7. Web Warrior Guide to Web Programing, Bai, Ekedaw, Thomas, Wiley
8. Beginning Web Programming, Jon Duckett ,Wrox, Wiley
9. Java server pages, Pekowsky, Pearson

COURSE SCHEDULE

The schedule for the whole course/subject is:

| Unit No | Description of the Chapter | Description of the Topics | Total no of periods (L+T) |
|---------|-----------------------------------|---|---------------------------|
| 1 | HTML5 and java Collections Basics | Recapitulation of XHTML, XHTML5, Java Swing package – use of System class – Applet Context– signed applet – object serialization- shallow and deep copying – Java collections – Iterators –Array Lists – sets – hashset-hash table- queue- priority queue class-vector classcomparable interface. | 8 |
| 2 | Java Beans | Java Beans Introduction to Java Beans, Advantages of Java Beans, JDK Introspection, Using Bound properties, Bean Info Interface, Constrained properties Persistence, Customizers, Java Beans API | 8 |
| 3 | Servlets | Lifecycle of a Servlet, JSDK The Servlet API, The | 10 |

| | | | |
|----|--|---|----|
| | | javax.servelet Package, Reading Servelet parameters, Reading Initialization parameters. Thejavax.servelet HTTP package, Handling Http Request & Responses, Using Cookies-Session Tracking, servlet chaining-Security Issues. | |
| 4 | JSP | The Problem with Servelet. The Anatomy of a JSP Page, JSP Processing. JSP Application Design with MVC Setting Up and JSP Environment: Installing the JavaSoftware Development Kit, Tomcat Server & Testing Tomcat. | 10 |
| 5 | JSP Application Development | Generating Dynamic Content, Using Scripting Elements Implicit JSP Objects, Conditional Processing – Displaying Values Using an Expression to Set an Attribute, Declaring Variables and Methods Error Handling and Debugging Sharing Data Between JSP pages, Requests, and Users Passing Control and Date between Pages Sharing Session and Application Data – Memory Usage Considerations. | 12 |
| 6. | Database Access Database Programming using JDBC | Studying Javax.sql. package. AccessingMySql database- Accessing MS Access database- Accessing a Database from a JSP PageApplication – Specific Database Actions Deploying JAVA Beans in a JSP Page. Introduction to struts framework. | 12 |

Total number of estimated periods

: 60 periods

Signature of the H.O.D

Signature of the Faculty