

Raj Kumar Goel Institute of Technology, Ghaziabad



LABORATORY MANUAL

Faculty Name : Mr. Ram Kr. Sharma

Department : CSE

Course Name : Web Technology Lab

Course Code : KCS-652

Year/Sem : 3rd /6th

NBA Code : C 319

Email ID : rks83fcs@rkgit.edu.in

Academic Year : 2022-23

Department of Computer Science and Engineering

VISION OF THE INSTITUTE

To continually develop excellent professionals capable of providing sustainable solutions to challenging problems in their fields and prove responsible global citizens.

MISSION OF THE INSTITUTE

We wish to serve the nation by becoming a reputed deemed university for providing value based professional education.

VISION OF THE DEPARTMENT

To be recognized globally for delivering high quality education in the ever changing field of computer science & engineering, both of value & relevance to the communities we serve.

MISSION OF THE DEPARTMENT

1. To provide quality education in both the theoretical and applied foundations of Computer Science and train students to effectively apply this education to solve real world problems.
2. To amplify their potential for lifelong high quality careers and give them a competitive advantage in the challenging global work environment.

PROGRAM EDUCATIONAL OUTCOMES (PEOs)

PEO 1: Learning: Our graduates to be competent with sound knowledge in field of Computer Science & Engineering.

PEO 2: Employable: To develop the ability among students to synthesize data and technical concepts for application to software product design for successful careers that meet the needs of Indian and multinational companies.

PEO 3: Innovative: To develop research oriented analytical ability among students to prepare them for making technical contribution to the society.

PEO 4: Entrepreneur / Contribution: To develop excellent leadership quality among students which they can use at different levels according to their experience and contribute for progress and development in the society.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to

comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: The ability to use standard practices and suitable programming environment to develop software solutions.

PSO2: The ability to employ latest computer languages and platforms in creating innovative career opportunities.

COURSE OUTCOMES (COs)

C319.1	Develop a dynamic web page by the use of javascript and DHTML.
C319.2	Manage a well formed/valid XML document.
C319.3	Relate to connect a java program to a DBMS and perform insert ,update and delete operations on DBMS table.
C319.4	Create a server side java application called servlet to catch form data sent from client ,process it and store it on database
C319.5	Create a server side java application called a JSP to catch form data sent from client and store it on database.

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C319.1	2	2	2	2	2							1
C319.2	1	1	1	1	1							1
C319.3	1	2	2	1	2							2
C319.4	2	2	2	2	2							2
C319.5	2	2	2	2	2							2
C319	1.6	1.8	1.8	1.6	1.8							1.6

CO-PSO MAPPING

	PSO1	PSO2
C319.1	2	2
C319.2	2	2
C319.3	2	1
C319.4	2	2
C319.5	2	2
C319	2	1.8

LIST OF EXPERIMENTS

Expt. No.	Title of experiment	Corresponding CO
1.	Write an HTML code to display your education details in a tabular format.	C319.1
2.	Write an HTML code to display your CV on a web page.	C319.1
3.	Write an HTML code to create a Home page having three links: About Us, Our Services and Contact Us. Create separate web pages	C319.1
4.	Write an HTML code to create a login form. On submitting the form, the user should get navigated to a profile page.	C319.1
5.	Write an HTML code to create a Registration Form. On submitting the form, the user should be asked to login with this new credentials.	C319.1
6.	Write an HTML code to create your Institute website, Department Website and Tutorial website for specific subject.	C319.2
7.	Write an HTML code to illustrate the usage of the following: <ul style="list-style-type: none">• Ordered List• Unordered List• Definition List	C319.2
8.	Write an HTML code to create a frameset having header, navigation and content sections.	C319.2
9.	Write an HTML code to demonstrate the usage of inline CSS.	C319.2
10.	Write an HTML code to demonstrate the usage of internal CSS.	C319.2
11.	Write an HTML code to demonstrate the usage of external CSS.	C319.3
12.	Write a Java script to prompt for users name and display it on the screen.	C319.3
13.	Design HTML form for keeping student record and validate it using Java script.	C319.3
14.	Write an HTML program to design an entry form of student details and send it to store at database server like SQL, Oracle or MS	C319.3
15.	Write programs using Java script for Web Page to display browsers information.	C319.3
16.	Create an applet which will have a line, an Oval & a Rectangle	C319.4
17.	Writing program in XML and create a style sheet in CSS & display the document in internet explorer	C319.4
18.	Write an XML program to display products	C319.4
19.	Write a program using PHP and HTML to create a form and display the details entered by the user	C319.5

Content Beyond Syllabus		
20.	To design the scientific calculator and make event for each button using java script	C319.5
21.	Use frames such that page is divided into 3 frames 20% on left to show contents of pages, 60% in center to show body of page, remaining on right to show remarks.	C319.5
22.	Write an HTML page that contains a selection box with a list of 5 countries, when the user selects a country, its capital should be printed next to the list; Add CSS to customize the properties of the font of the capital (color, bold and font size).	C319.5
23.	Install TOMCAT web server and APACHE. Access the above developed static web pages for books web site, using these servers by putting the web pages developed.	C319.4
24.	Install a database (Mysql or Oracle). Create a table which should contain at least the following fields: name, password, email-id, phone number Write a java program/servlet/JSP to connect to that database and extract data from the tables and display them. Insert the details of the users who register with the web site, whenever a new user clicks the submit button in the registration page.	C319.4
25.	Write a JSP which insert the details of the 3 or 4 users who register with the web site by using registration form. Authenticate the user when he submits the login form using the user name and password from the database	C319.5

INTRODUCTION

Web technology is a collective name for technology primarily for the world wide web. This does, however, tend to focus more specifically towards technology that aides in the creation, maintenance and development of web-based applications.

From a developers point of view, these are things like languages and frameworks, data storage mechanisms, services and products to allow us to create platforms and applications for the web.

ASP.NET is a Microsoft framework for web development that allows a developer to use languages like C# and VB.NET to build websites and web applications (a web application is a website that offers functionality, storing data - text, images, etc. - that can be processed and return a useful output to you, or that you can come back to later, such as Facebook or Quora).

You can find web frameworks for Java, Python and a few other languages so that developers can use a whole array of technologies, rather than being pinned down to one. These are known as server-side technologies which lives and runs on a server somewhere.

On the other side, you have client-side web technologies, which include things like HTML, CSS, JavaScript (which includes JavaScript Frameworks like jQuery, Angular and React). These execute run from the web page that a user loads, but actually run on the users (clients) computer.

However, web technology is not limited to the developers. Web browsers, for example, are in the category of web technology as it is technology that allows a user to access the web. FTP may also be considered a web technology as it is designed to send files over the Internet.

I wouldn't, however, consider a VPN as web technology as a VPN is a networking technology that sends network traffic over the Internet without actually interacting with the “world wide web” itself.

PREFACE

We have come a long way—Web Style Guide and the World Wide Web. The first version of Web Style Guide was a web site called the Yale c/aim Web Style Guide posted in 1993, just as the world outside computing and academia began to notice the new medium and the Internet in general. The early web was sorely lacking in aesthetics but exploding with potential. Web Style Guide provided much-needed guidance on structure and design based on several decades’ worth of experience with print, hypermedia, and multimedia design and authoring.

In 1997 we updated the Web Style Guide site to reflect the maturing design trends and changes in web technology. In the web a novel landscape opened up, like a new continent rising from the sea, ready for explorers and builders. People from the arts, publishing, and dozens of computing disciplines poured in, enriching the web and pushing out the boundaries of what might be possible while bringing the wealth of centuries of media and design culture along with them. The web changed to accommodate these new settlers, whose expectations for what could be achieved in the web environment often outstripped its capabilities. This was a time of significant progress in visual design and interface sophistication, but at the cost of standardization and accessibility.

In 1999 we produced the first print edition of Web Style Guide. The web site had gained a significant following as more and more organizations turned to the web as their primary means of communication. People with little or no background in design were assigned the responsibility for web site development, and they looked to Web Style Guide for calm, reassuring, and practical guidance. For many, the slim and straightforward Web Style Guide was a welcome relief from the esoteric, hyperactive, and voluminous books that lined the shelves in the Web Design section of their bookstores.

Since its inception as a web site in 1993 and into this third edition, Web Style Guide has presented solid design advice based on classic design principles, acknowledging the possibilities and limitations of current web technology while trying not to let the media confetti overwhelm good sense and an information-oriented aesthetic. Thanks to enormous advances in html, Cascading Style Sheets, and the “web standards” philosophy for building sites, this edition does not contain sections on cross-platform issues or special techniques for making web sites accessible to people with disabilities.

In this third edition of Web Style Guide, and the nineteenth year of the World Wide Web, we celebrate how far we’ve come and how much we can do to make the web accessible to and usable by everyone.

Mr. Ram Kr. Sharma, Assistant Professor, Dept. of CSE
Ms. Vertika , Assistant Professor, Dept. of CSE

DO'S AND DONT'S

DO's

1. Conform to the academic discipline of the department.
2. Enter your credentials in the laboratory attendance register.
3. Read and understand how to carry out an activity thoroughly before coming to the laboratory.
4. Ensure the uniqueness with respect to the methodology adopted for carrying out the experiments.
5. Shut down the machine once you are done using it.

DONT'S

1. Eatables are not allowed in the laboratory.
2. Usage of mobile phones is strictly prohibited.
3. Do not open the system unit casing.
4. Do not remove anything from the computer laboratory without permission.
5. Do not touch, connect or disconnect any plug or cable without your faculty/laboratory technician's permission.

GENERAL SAFETY INSTRUCTIONS

1. Know the location of the fire extinguisher and the first aid box and how to use them in case of an emergency.
2. Report fire or accidents to your faculty /laboratory technician immediately.
3. Report any broken plugs or exposed electrical wires to your faculty/laboratory technician immediately.
4. Do not plug in external devices without scanning them for computer viruses.

GUIDELINES FOR LABORTORY RECORD PREPARATION

While preparing the lab records, the student is required to adhere to the following guidelines:

Contents to be included in Lab Records:

1. Cover page
2. Vision
3. Mission
4. PEOs
5. POs
6. PSOs
7. COs
8. CO-PO-PSO mapping
9. Index
10. Experiments
 - Aim
 - Source code
 - Input-Output

A separate copy needs to be maintained for pre-lab written work.

The student is required to make the Lab File as per the format given on the next two pages.

Raj Kumar Goel Institute of Technology, Ghaziabad



Web Technology Lab (KCS 652)

Name	
Roll No.	
Section- Batch	

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Experiment No.	Experiment Name	Date of Conduction	Date of Submission	Faculty Signature