

**FR. Conceicao Rodrigues College Of Engineering**  
Father Agnel Ashram, Bandstand, Bandra-west, Mumbai-50  
**Department of Computer Engineering**  
**T.E. (Computer) (semester V)**  
**(2017-2018)**

**Course Outcomes & Assessment Plan**

**Total class Strength : 78**

**Faculty: Sunil Dilip Chaudhari**

**Syllabus:**

<b>PAC Members:</b>	<b>Head Of Department:</b>
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<b>Course Code</b>	<b>Course/Subject Name</b>	<b>Credits</b>
<b>CPL501</b>	<b>Web Technologies Laboratory</b>	<b>2</b>

<b>Module</b>	<b>Detailed Contents</b>	<b>Lab Sessions</b>
<b>01</b>	<b>INTRODUCTION TO WWW</b> <b>1.1</b> Internet Standards – Introduction to WWW – WWW Architecture – SMTP – POP3 – File Transfer Protocol <b>1.2</b> Overview of HTTP, HTTP request – response — Generation of dynamic web pages- W3C Validator, How web works - Setting up the environment (LAMP/XAMP/WAMP server)	<b>01</b>
<b>02</b>	<b>2.1 Markup Language (HTML):</b> Introduction to HTML and HTML5 - Formatting and Fonts –Commenting Code – Anchors – Backgrounds – Images – Hyperlinks	<b>03</b>

	<p><b>2.2</b> Lists – Tables – Frames - HTML Forms and controls.</p> <p><b>2.3 Cascading Style Sheet (CSS):</b> The need for CSS, Introduction to CSS 3– Basic syntax and structure ,CSS Properties-Inline Styles – Embedding Style Sheets</p> <p><b>2.4</b> Linking External Style Sheets – Backgrounds –Box Model( Introduction , Border Properties, Padding Properties, Margin Properties), Manipulating text - Margins and Padding - Positioning using CSS., Creating pageLayout and Site Designs</p>	
<b>03</b>	<p><b>3.1</b> Introduction - Core features - Data types and Variables - Operators,Expressions, and Statements, Functions - Objects - Array, Date and Math related Objects</p> <p><b>3.2</b> Document Object Model - Event Handling Controlling Windows &amp; Frames and Documents Form handling and validations.</p> <p><b>3.3 Advanced JavaScript</b> - Browser Management and Media Management – Classes – Constructors – Object-Oriented Techniques in JavaScript</p> <p><b>3.4</b> Object constructor and Prototyping - Sub classes and Super classes – JSON - jQuery and AJAX., Rich Internet Application with AJAX, JQuery Framework</p>	<b>03</b>
<b>04</b>	<p><b>4.1</b> Introduction - Programming basics - Print/echo - Variables and constants– Strings and Arrays</p> <p><b>4.2</b> Operators, Control structures and looping structures – Functions – Reading Data in Web Pages</p> <p><b>4.3</b> Embedding PHP within HTML - Establishing connectivity with MySQL database, cookies, sessions and Authentication</p> <p><b>4.4</b> AJAX with PHP - AJAX with Databases</p>	<b>04</b>
<b>05</b>	<p><b>5.1</b> Dynamic page generation (adding interactivity, styles, using HTML,DHTML, XHTML, CSS, Java Script), XML –DTD(Document Type Definition) - XML Schema</p> <p><b>5.2</b> XML –DTD(Document Type Definition) - XML Schema – Document Object Model - Presenting XML - Using XML Parsers: DOM and SAX,XSL-eXtensible Style sheet Language</p>	<b>02</b>
<b>06</b>	<p><b>6.1</b>Introduction to Composer - MVC Architecture</p> <p><b>6.2</b> Web Application Development using web development framework:- Introduction to Laravel, Development of Web pages using Laravel. Example web applications – Interactive websites, web based information systems , blogs, social networking sites etc.</p>	<b>01</b>

**Text Books:**

1. Ralph Moseley , M.T. Savliya , Developing Web Applications, Willy India, Second Edition, ISBN: 978-81-265-3867-6
2. —Web Technology Black Book, Dremtech Press, First Edition, 978-7722-997
3. Robin Nixon, "Learning PHP, MySQL, JavaScript, CSS & HTML5" Third Edition, O'REILLY, 2014. ([http://www.ebooksbucket.com/uploads/itprogramming/javascript/Learning\\_PHP\\_MySQL\\_Javascript\\_CSS\\_HTML5\\_\\_Robin\\_Nixon\\_3e.pdf](http://www.ebooksbucket.com/uploads/itprogramming/javascript/Learning_PHP_MySQL_Javascript_CSS_HTML5__Robin_Nixon_3e.pdf))
4. Professional Rich Internet Applications: AJAX and Beyond, Dana Moore, Raymond Budd, Edward Benson, Wiley publications. <https://ebooks-it.org/0470082801-ebook.htm>

**Reference Books:**

1. Harvey & Paul Deitel & Associates, Harvey Deitel and Abbey Deitel, —Internet and World Wide Web - How To Program, Fifth Edition, Pearson Education, 2011.
2. Achyut S Godbole and Atul Kahate, —Web Technologies, Second Edition, Tata McGraw Hill, 2012.
3. Thomas A Powell, Fritz Schneider, —JavaScript: The Complete Reference, Third Edition, Tata McGraw Hill, 2013
4. David Flanagan, —JavaScript: The Definitive Guide, Sixth Edition, O'Reilly Media, 2011
5. Steven Holzner, —The Complete Reference - PHP, Tata McGraw Hill, 2008
6. Mike Mcgrath, —PHP & MySQL in easy Steps, Tata McGraw Hill, 2012.

**Digital Material:**

1. [www.nptelvideos.in](http://www.nptelvideos.in)
2. [www.w3schools.com](http://www.w3schools.com)
3. <http://spoken-tutorial.org>

**\* Setting up /buying the web host management system for hosting of mini project is recommended.**

**Term Work:** The distribution of marks for term work shall be as follows:

- Lab Assignments : 10 Marks
- Mini Project : 10 Marks
- Attendance : 05 Marks

**Practical & Oral Examination:**

Practical & Oral examination is to be conducted by pair of internal and external examiners based on the above syllabus.

**Course Outcomes for Web Technology Lab**

Upon completion of this course students will be able to:

**CPL501.1.** Develop attractive interactive web site. **(B3-Application)**

**CPL501.2.** Develop Dynamic, Flexible, Transaction Based Web application using different web development tools **(B3-Application)**

**CPL501.3:** Understand the basics of XML, DTD and XSL and develop web pages using XML / XSLT.**(B1-remembering)**

**CSL504.4 :** Analyze end user requirements and Develop Software requirement Specification (SRS) **(B3-Application)**

### **Mapping of CO and PO/PSO**

Relationship of course outcomes with program outcomes: Indicate 1 (low importance), 2 (Moderate Importance) or 3 (High Importance) in respective mapping cell.

	PO1 (Engg Know)	PO2 (Ana)	PO3 (De sign)	PO4 (inve stiga )	PO5 (tools)	PO6 (eng g Soci)	PO7 (Env)	PO8 (Eth )	PO9 (ind Team )	PO10 (comm .)	PO11 (Piio M)	PO12 (life Long )
<b>CSL504:.1</b>	3	3	3		3				3	2		
<b>CSL504:.2</b>	3	3	3		3				3	2		
<b>CSL504:.3</b>	1				3							
<b>CSL504:4</b>	1	3	3		1							
<b>Course To PO</b>	2.33	3	3		3				3	2		

CO	PSO1	PSO2
<b>CSL504.1</b>	3	3
<b>CSL504.2</b>	<b>3</b>	<b>3</b>
<b>CSL504.3</b>	1	1
<b>CSL504.4</b>	2	2
<b>CourseTo PO</b>	2.33	2.33

**Out of syllabus skills which students can learn depending on self commitment of Students initiative are as follows:**

1. Writing Skills will help in documentation of project.

2. Cohesion and Coupling will help in developing flexible of modular web applications.
3. Collection Framework importance in developing Java Based Web applications.
4. SQL injection attacks prevention will secure web application.
5. Securing passwords will provide strong Authentication System.
6. Image animation using java script will help in making web site interactive.
7. Image/file upload or download will allow upload or download important files on server.
8. Email Sending Application will provide acknowledgement service.
9. SMS Sending Application will provide acknowledgement service.
10. One Time Password will make Strong Authorization System.
11. Session Management will help in managing each user session and avoid conflict

### **CO Assessment Tools:**

CSL504:.1. Develop attractive interactive web site

<b>Direct Method Tools (dm)</b>	<b>1</b>
Lab (lab)	0.3
Quiz (Quiz)	0.1
End Sem Marks(Practical)( utprac)	0.1
Online Courses Certifications(onlineCerti)	0.2
Mini Project (mp)	0.3
<b>Indirect Method Tools(idm)</b>	<b>1</b>
Course Exit Survey (C01idm)	
<b><u>CPL501.1 = 0.8*CO1dm + 0.2* CO1idm</u></b>	

CSL504:.2. Develop Dynamic, Flexible Transaction Based Web application

<b>Direct Method Tools (dm)</b>	<b>1</b>
Lab (lab)	0.3
Quiz(Quiz)	0.1
End Sem Marks(Practical)( utprac)	0.2
Mini Project (mp)	0.4
<b>Indirect Method Tools(idm)</b>	<b>1</b>
Course Exit Survey (C03idm)	
<b><u>CPL501.3 = 0.8*CO3dm + 0.2* CO3idm</u></b>	

**CSL504.3:** Understand the basics of XML, DTD and XSL and develop web pages using XML / XSLT.(B1-remembering)

<b>Direct Method Tools (dm)</b>	<b>1</b>
Lab (lab)	0.5
Quiz	0.5
<b>Indirect Method Tools(idm)</b>	<b>1</b>
Course Exit Survey (CO3idm)	
<b><u>CPL501.3 = 0.8*CO3dm + 0.2* CO3idm</u></b>	

**CSL504.4 :** Analyze end user requirements and Develop Software requirement Specification (SRS)

<b>Direct Method Tools (dm)</b>	<b>1</b>
SRS Document (srs)	1.0
<b>Indirect Method Tools(idm)</b>	<b>1</b>
Course Exit Survey (CO3idm)	
<b><u>CPL501.3 = 0.8*CO3dm + 0.2* CO3idm</u></b>	

### **Course Outcomes Target:**

Upon completion of this course students will be able to:

**CPL501.1.** Develop attractive interactive web site.

**Target level: 3**

**CPL501.2.** Develop Dynamic, Flexible Transaction Based Web application

**Target level: 3**

**CPL501.3:** To learn how XML and its related technologies function and their applications

**Target level: 3**

**CSL504.4 :** Analyze end user requirements and Develop Software requirement Specification (SRS)

**Target level 3**

**CPL501.1.** Develop attractive interactive web site.

Direct Methods	Criteria	Weightage	Marks
<b>Lab (Lab 1,2,3)</b>	70% of Students with minimum score 70% marks	0.3	3*10=30
<b>Mini Project</b>	70% of Students with minimum score 70% marks	0.3	(Evaluation 1) 10
<b>Quiz(1) (online)</b>	70% of Students with	0.1	25+20+10=

<b>(html,css,javascript)</b>	minimum score 70% marks		55
<b>Online Courses Certifications</b>	All Students must successfully complete courses	0.2	5
<b>End Exam Marks</b>	70% of Students with minimum score 70% marks	0.1	25
<b>Course Exit survey</b>	Total No of respondents ? (75% students strongly agree and agree)	Strongly Agree	
<b>Total attainment</b>	<b><u>CPL501.1 = 0.8*CO1dm + 0.2* CO1dm</u></b>		

**CPL501.2.** Develop Dynamic, Flexible Transaction Based Web application

<b>Direct Methods</b>	<b>Criteria</b>	<b>weight age</b>	<b>Marks</b>
<b>Lab (Lab 4 to 8)</b>	70% of Students with minimum score 70% marks	0.3	5*10=50
<b>Mini Project</b>	60% of Students with minimum score 70% marks	0.4	(Evaluation 2 &3)10+10=20
<b>Quiz(online) (2) (Servlets,Jsp,Jdbc)</b>	50% of Students with minimum score 60% marks	0.1	(20+20+10)=50
<b>End Exam Marks</b>	70% of Students with minimum score 70% marks	0.2	25
<b>Course Exit survey</b>	Total No of respondents ? (75% students strongly agree and agree)	Strongly Agree	
<b>Total attainment</b>	<b><u>CPL501.3 = 0.8*CO1dm + 0.2* CO1dm</u></b>		

**CPL501.3:** To learn how XML and its related technologies function and their applications (B1-remembering)

Direct Methods	Criteria	weightage	Marks
lab	70% of Students with minimum score 70% marks	0.5	10
Quiz	70% of Students with minimum score 70% marks	0.5	5
Course Exit survey	Total No of respondents ? (75% students strongly agree and agree)	Strongly Agree	
Total attainment	<u><math>CPL501.1 = 0.8*CO1dm + 0.2* CO1idm</math></u>		

CSL504.4 : Analyze end user requirements and Develop Software requirement Specification (SRS)

Direct Methods	Criteria	weightage	Marks
Software Requirement Specification	70% of Students with minimum score 70% marks	1.0	10
Course Exit survey	Total No of respondents ? (75% students strongly agree and agree)	Strongly Agree	
Total attainment	<u><math>CPL501.1 = 0.8*CO1dm + 0.2* CO1idm</math></u>		

**Content Beyond Syllabus:**



Sr.No.	Curriculum gap contents	Action Plan	Mapping to CO
1.	JDBC	Planning to take Practicals	CO2
2.	MVC architecture using JAVA based web Technologies:	Source Moodle Study Material& lab	CO2
3.	Usage of online tools for Documentation :	Self learning online resource www.codeschool.com	CO2
4.	Cohesion and Coupling	Source Moodle Study Material	CO2

### Curriculum Gap:

In the 2<sup>nd</sup> year the students study the course OOPM& DBMS that is prerequisite for this course. For the transition from 2<sup>nd</sup> year to 3<sup>rd</sup> year there is no curriculum gap.

In order to achieve the course objectives, there are some topics listed below are not given much importance.

Sr.No.	Curriculum gap contents	Action Plan	Mapping to CO
1.	MVC architecture	One Practical Session with sample application demo Guest Lecture.	CO2
2.	Jquery & Angular web hosting on cloud	Self learning online course (angular / react/ MEAN stack/AWS web deployment	CO1
3.	Interactive web page Development (Jquery/ajax/angularJs)	<b>Guest Lecture is planned in September</b>	CO2

### Justification

CO1 maps PO's in following manner,

PO1: Student's apply knowledge of Engineering fundamentals to make automated systems. i.e. Online Tiffin Services.

PO2:Students do requirement gathering for a chosen project .Also analyses the requirements.

PO3:Students design the website layout for chosen project

PO5:Students use the IT tools like netbeans, eclipse, sublimeText,Email,SMS,file upload API's for development of chosen project

PO7:Students develop web sites which are beneficial to the society

PO9:Students work in a team to develop project using web technologies. Students also progress independently

**CO2 maps PO's in following manner:**

PO1:Students use knowledge of Development tools for development of web site as well as web application

PO5: Students use new development tools like netbeans,eclipse,umbrello,email sending API,File upload API etc.

PO1:Students apply knowledge of Engineering fundamentals to make automated systems. i.e. Online Grievance Redressal System.

PO2:Students do requirement gathering for a chosen project .Also analyses the requirements.

PO3:Students design the ER Diagram ,use case diagram etc. for chosen project

PO5:Students use the IT tools like netbeans/eclipse for development of chosen project

PO7:Students develop web applications which are beneficial to the society

PO9:Students work in a team to develop web applications using web technologies. Students also progress independently by working in their favorite area.

**CO3 maps PO's in following manner:**PO1: PO5: Students use netbeans or sublime text tool for creating xml files

**CO's maps PSO's in following manner:**

**PSO1:** All COs are mapped to PSO1 because the graduates will be able to apply fundamental knowledge of Web Engineering principles to provide computer based solution to real world problems.

**PSO2:** CPL501.1, CPL501.2are mapped to this PSO2 because the students design and implement the a software system with consideration of Web Engineering Principles.

**Rubrics for the Lab Experiments: for First 3 Lab Experiments**

**Rubrics for WT Lab Experiment 1**

<i>Indicator</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
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<b>Use of At least 30 tags in Web pages (5)</b>	N.A.	Less than 15 tags used (<=2)	Between 15-30 tags used. (3-4)	30 or more tags are used with their attributes (5)
<b>Level of content (2)</b>	The text is extremely difficult to read due to inappropriate use of fonts, point size, bullets, italics, bold, and indentations for headings and sub-headings and body text. (0.5)	The typography is difficult to read and uses too many different fonts, overuse of bold, bullets, italics, capital letters or lack of appropriate indentations of text. (1)	Sometimes the typography is easy-to-read, but in a few places. The use of fonts, point size, bullets, italics, bold, and indentations for headings and subheadings detract and do not enhance readability. (1.5)	The typography is easy-to-read and point size varies appropriately for headings and text. Use of bullets, italics, bold, and indentations enhances readability. Consistent format extends page-to-page. (2)
<b>Post Lab Questions (2)</b>	Answered 1 question correctly. (0.5)	Answered 2 questions correctly. (1)	Answered any 3 questions correctly(1.5)	Answered all 4 questions correctly. (2)
<b>Timeline (1)</b>	Not performed on time (0)	N.A.	N.A.	Early or on time. (1)

## Rubrics for WT Lab Experiment 2

<b>Indicator</b>	<b>Poor</b>	<b>Average</b>	<b>Good</b>	<b>Excellent</b>
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<b>Implementation of all types of CSS (4)</b>	N.A.	Only 1 type used (<=2)	Any 2 types used (3)	All 3 types used (4)
<b>Attractive Layout (3)</b>	The layout uses horizontal and vertical white space inappropriately and the content appears cluttered. The background, colors and layout make the site unattractive, and it is difficult to read the information presented. (1)	The layout uses horizontal and vertical white space inappropriately in some places. The background, colors and layout are distracting and make it difficult to read the information presented. (2)	The layout uses horizontal and vertical white space appropriately in most places. The background, colors and layout are consistent across the website and make it easy to read the information presented. (2.5)	The layout uses horizontal and vertical white space appropriately. The background, colors and layout are artful and consistent across the website and enhance the readability of the information presented. (3)
<b>Post Lab Questions (2)</b>	N.A.	Answered any 1 question correctly. (1)	Answered any 2 questions correctly(1.5)	Answered all 3 questions correctly. (2)
<b>Timeline (1)</b>	Not performed on time (0)	N.A.	N.A.	Early or on time. (1)

### Rubrics for WT Lab Experiment 3

<b>Indicator</b>	<b>Poor</b>	<b>Average</b>	<b>Good</b>	<b>Excellent</b>
<b>Implementation of event handling (3)</b>	Needs Work (0.5)	Partially proficient(1)	Proficient (2)	Advanced (3)
<b>Client side validations using Regular expressions (4)</b>	Needs Work (1)	Partially proficient(2)	Proficient (3)	Advanced (4)
<b>Post Lab Questions (2)</b>	N.A.	N.A.	Answered any 1 question correctly(1)	Answered both questions correctly. (2)
<b>Timeline (1)</b>	Not performed on time (0)	N.A.	N.A.	Early or on time. (1)

### Rubrics for WT Mini Project Demonstration

<i>Indicator</i>	<i>Poor</i>	<i>Average</i>	<i>Good</i>	<i>Very Good</i>	<i>Excellent</i>
<b>Knowledge of Static web site development(10M)</b> <b>CO1</b>	N.A.	Usage of html only  (3-4)	Usage of html ,CSS(5-6)	Usage of html,css ,javascript  (7-8)	Usage of html,css,js,jquery,ajax,json,angular  (9-10)
<b>Knowledge of web development Tools(5M)</b> <b>CO2</b>	NA	Knowledge of web development tool like netbeans only	Knowlwdge of Web development tools like (eclipse,netbeans,webstorm),email sending API	Knowlwdge of Web development tools like (eclipse,netbeans,webstorm) ,SMS sending API	Knowlwdge of Web development tools like (eclipse,netbeans,webstorm) plus oracle/postgrese/mysql connectivity from IDE,plusSMS sending API plus Email Sending API
<b>Knowledge of Dynamic web application development(20M)</b> <b>CO3</b>	Incomplete (<10)	Non mvc architecture of web application without JDBC(10-14)	Non MVC architecture plus JDBC(14-15)	Jdbc without MVC but use of Standard action tags  (16-18)	MVC with JDBC(18-20)plus OTP, Email, SMS sending
<b>Requirement Document (10M)</b> <b>CO2,CO1</b>	Unorganized(2M)	Functional and non functional Requirements	Functional and non functional Requirements, plus (h/w and s/w requirements)  (5-6)	Functional and non functional Requirements plus(h/w and s/w requirements) plus (Use Case ,Class ,ER Diagrams)  (7-8)	Document with IEEE format(9-10)  Plus Functional and non functional Requirements plus(h/w and s/w requirements)  plus (Use Case ,Class ,ER Diagrams)  plus database Queries
<b>Team Work (5M)</b> <b>Maps to CO1 &amp; CO2</b>	No Coordination at all	Many Problems while integrating group members	Very few problems on integration.lack of time management(3M)	Used google drive for integrating project,tasks divided wisely,time	Used git-hub for project integration.Divided Tasks wisely , well presentation, good documentation.  could manage time very

	(1M)	code,no time management ,uneven distribution of Tasks(2M)		management good(4M)	well(5M)
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## Rubrics for the Mini Project:

The Mini project that covers design and implementation of a Web application based on Social & commercial theme and some contents beyond syllabus is allotted to the students in groups. The requirements will be announced and discussed in lab and on Moodle. The students' progress on their project will be discussed in the practical session and faculty office.

### **Evaluation 1: Dates: 27<sup>th</sup> august to 2<sup>nd</sup> Sept18 10Marks**

<b>Technology</b>	<b>Criteria</b>	<b>Rubrics</b>	<b>Marks</b>
<b>Html</b>	1. Html4 and Html5 tags	<ul style="list-style-type: none"><li>• Usage of minimum 30 html tags</li><li>• Content spelling should be correct</li><li>• Content should be relevant to topic</li></ul>	1
	2. Images	<ul style="list-style-type: none"><li>• Image placement should be proper</li><li>• Image should be relevant to the information/content you are displaying</li></ul>	1
	3. Hyperlinks	<ul style="list-style-type: none"><li>• There should be no broken Link</li><li>• Web pages continuity should be maintained</li></ul>	1
<b>CSS</b>	4. External CSS	<ul style="list-style-type: none"><li>• Layout uniformity should be maintained using external CSS</li></ul>	1
	5. Usage of colours fonts, margin ,padding	<ul style="list-style-type: none"><li>• Colours,Fonts,padding ,margin of the web pages should be accurate</li></ul>	1
	6. Internal CSS	<ul style="list-style-type: none"><li>• Specific pages layout should be changed using internal CSS</li></ul>	1
<b>Java Script</b>	7. Client side Validations	<ul style="list-style-type: none"><li>• Validating non-empty Field</li><li>• Validating different Form Fields like</li></ul>	3

		(textfield,passwordField,phonenu mber,email Fields )etc.. accordingly	
	8. Making websi te intera ctive	<ul style="list-style-type: none"> <li>Usage of java script concepts to make web pages interactive</li> </ul>	1
<b>Total</b>			<b>10</b>
Suggestions:			
<b>Mentor Signatures</b>	<b>1</b>	<b>2</b>	<b>3</b>

**Evaluation 2: Dates: 17-19 September18 10Marks**

<b>Technology</b>	<b>Criteria</b>	<b>Rubrics</b>	<b>Mark s</b>
<b>Requirement document</b>	1. ER diagram	Identifying Entities and attributes appropriately	2
	2. Database Queries	CRUD queries	3
	3. Use case diagram for project	Identification of use cases with precondition ,execution ,post execution	1
<b>Features (Project Specific)</b>	4. Functional Requirement 1	Login Module Eg. (signup,login,forgotpassword,change password)	2
	5. Functional Requirement 2	E.g.Shopping cart, email sending, sms sending	2
<b>Total</b>			<b>10</b>
Suggestions:			
<b>Mentor Signatures</b>	<b>1</b>	<b>2</b>	<b>3</b>



### **Evaluation 3: Dates: 15-17 October18 10Marks**

<b>Technology</b>	<b>Criteria</b>	<b>Rubrics</b>	<b>Marks</b>
<b>Group Work</b>	1. Cooperation	<ul style="list-style-type: none"> <li>Students will be judged based on how they cooperate with the team members</li> </ul>	2
	2. Code integration	<ul style="list-style-type: none"> <li>Student will be judged based on how well he is able to integrate code</li> </ul>	2
		<ul style="list-style-type: none"> <li></li> </ul>	
<b>Features</b>	1. Functional Requirement 1	<ul style="list-style-type: none"> <li>Coupling &amp; cohesion</li> </ul>	2
	2. Functional Requirement 2	<ul style="list-style-type: none"> <li>JDBC with MVC</li> </ul>	2
	3. Functional Requirement 3	<ul style="list-style-type: none"> <li>Etc Etc...</li> </ul>	2
		<ul style="list-style-type: none"> <li></li> </ul>	
<b>Total</b>			<b>10</b>
<b>Suggestions:</b>			
<b>Mentor Signatures</b>	<b>1</b>	<b>2</b>	<b>3</b>

**FR. Conceicao Rodrigues College Of Engineering**  
 Father Agnel Ashram, Bandstand, Bandra-west, Mumbai-50  
**Department of Computer Engineering**  
**T.E. (Computer) (semester V)**  
**Web Design Laboratory**  
**(2018-2019)**

<b>Sr. No.</b>	<b>Experiment Name</b>	<b>WEEK</b>	<b>DATE</b>	<b>CO Mapping</b>
<b>1</b>	Hyper Text Markup Language(HTML4,HTML5) 1. Resume preparation 2. Develop Login Pages 3. Develop Registration Form	WEEK1	16/07/18- 21/07/18	CO1
<b>2</b>	Cascading Style Sheet(Different Types of CSS) Style 1. Resume, 2. Login Page, 3. Registration Form	WEEK2	23/07/18- 28/07/18	CO1
<b>3</b>	Java script(client side validations and event Handling) 1. Validate Registration Form(Regular Expressions) 2. Develop Interactive web Pages using Event Handling	WEEK3	30/07/18 to 11/08/18	CO1
<b>4</b>	Servlets(Server Side Programming) 1. Servlets LifeCycle, 2. Servlet API Class Hierarchy 3. Develop Login Application using servlet 4. Develop Login Application such that, if username is "raj" and password is "123" then request is forwarded to "success.jsp" else redirect to "login.html" page	WEEK4	20/08/18 to 24/08/18	CO2

	<p><b>Hints:</b>  getParameter(),getRequestDispatcher() and  sendRedirect() ,setAttribute() ,getAttribute()  functions</p>			
<b>5.a</b>	<p>Java Server Pages(Scriptlet, declaration,  expression, page directive)</p> <ol style="list-style-type: none"> <li>1. JSP page Translation Mechanism</li> <li>2. JSP Life Cycle</li> <li>3. Write a JSP Program to Increment  Counter by one each time client hits the web  page</li> <li>4. Write a JSP program to Display current  date</li> <li>5. Write a JSP program which will have a  getDoubleCounter() method incrementing  the counter by 2 each time the page is  reloaded</li> </ol>	WEEK5	27/8/18 to 31/8/18	CO2
<b>5.b</b>	<p>Script free pages(expression Language,  Standard actions)</p> <ol style="list-style-type: none"> <li>1. Develop script free pages using  following JSP standard actions</li> <li>2. &lt;jsp:include&gt; V.S. &lt;%@ include %&gt;  directive</li> <li>3. &lt;jsp:usebean&gt;</li> <li>4. &lt;jsp:getProperty&gt;</li> <li>5. &lt;jsp:setProperty&gt;</li> <li>6. &lt;jsp:forward&gt;</li> <li>7. &lt;jsp:param&gt;</li> </ol>	WEEK5	27/8/18 to 31/8/18	CO2
<b>5.c</b>	<p>Script free pages(expression Language,JSTL)</p> <ol style="list-style-type: none"> <li>1. Develop script free JSP pages using  Expression Language</li> <li>2. Develop script free jsp pages using Jsp  Standard tag Library)</li> </ol>	WEEK5	27/8/18 to 31/8/18	CO2

6	<p>Java Database Connectivity with Model View Controller Architecture</p> <ol style="list-style-type: none"> <li>1. Learn design principles cohesion and coupling.</li> <li>2. Develop a web application which will perform CRUD operation on Customer table using JDBC API</li> <li>3. Develop web application using Model-View-Controller Architecture</li> </ol> <p>Eg.</p> <ol style="list-style-type: none"> <li>1. Register Customer</li> <li>2. Update Customer</li> <li>3. Delete Customer</li> <li>4. View Customer</li> <li>5. View Customers</li> </ol>	WEEK6	1/9/18 to 13/9/18	CO2
7	<p><b>PHP (Server Side Scripting)</b> Develop Server Side scripting PHP Programs.</p> <ol style="list-style-type: none"> <li>1. Use HTML form to accept the two numbers N1 and N2 and using PHP program display only prime numbers in between N1 and N2.</li> <li>2. Develop a number guessing application.</li> </ol>	WEEK7	1/9/18 to 13/9/18	CO2
8	<p>Develop sample CD catalog XML application,DTD,XSL</p> <hr/> <p>Learn difference between XML and JSON</p>	WEEK8	18/9/18 to 29/9/18	CO3
9	Mini Project Presentation With Software Requirement Specification ( <b>Final</b> )	WEEK 9	15/10/18 to 17/10/18	CO4

**Mentors:**

**Sunil Chaudhari :**

**Mahendra Mehra:**

**Ashwini Pansare:**

## **FR. Conceicao Rodrigues College Of Engineering**

Father Agnel Ashram, Bandstand, Bandra-west, Mumbai-50

**Department of Computer Engineering**

**S.E. (Computer) (semester V)**

**(2018-2019)**

### **Lesson Plan : Web Design Lab**

**Semester III**

**Year: 2018-19**

#### **Modes of Content Delivery:**

i	Class Room/Lab Teaching	v	Self Learning Online Resources	ix	Industry Visit
ii	Tutorial	vi	Slides	X	Group Discussion
iii	Remedial Coaching	vii	Simulations/Demonstrations	xi	Seminar
iv	Lab Experiment	viii	Expert Lecture	xii	Case Study

<b>Sr. No.</b>	<b>Experiment Name</b>	<b>Category</b>	<b>Planned Date</b>	<b>Actual Date</b>	<b>Content Delivery Method/Learning Activities</b>	<b>No of Hours</b>
1	Hyper Text Markup Language	<b>Static Web site Development Maps To CO1</b>	16/07/18-21/07/18	16/07/18-22/07/18	I,IV,V,VI,VII	4
2	Cascading Style Sheet		23/07/18-28/07/18	23/07/18-28/07/18	I,IV,V,VI, VII	4
3	Java script(client side validations and event Handling)		30/07/18 to 11/08/18		I,IV,V,VI, VII	8
4	Servlets(basic,	<b>Dynamic Web Application Development Maps To CO2</b>	20/08/18 to 24/08/18		I,IV,V,VI, VII	4
5	Java Server Pages(Syntax) Script free pages(expression Language, Script free pages(Jsp Standard tag Library)	<b>Dynamic Web Application Development Maps To CO2</b>	27/8/18 to 31/8/18		I,IV,V,VI, VII	4
6	Java Database	<b>Transaction</b>	1/9/18 to		I,IV,V,VI, VII	4

	Connectivity with Model View Controller Architecture	based web Application Development Maps To CO2	13/9/18			
7	php	Dynamic Web Application Development Maps To CO2	1/9/18 to 13/9/18		I,IV,V,VI, VII	4
8	XML.	Knowledge based Maps To CO3	18/9/18 to 29/9/18		I,IV,V,VI, VII	4
<b>Total Hours</b>						<b>36</b>

**Each Student is expected to invest (46 Hours Hours of Lab + atleast 30 Hours of se Study) for this project.**

**Text Books/ Reference Books: Head First Html,Head First Java Script,Head First Servlet & JSP  
Reference Web sites: Study Material On Moddle, headfirstlabs.com**

**First 8 Experiments will have one Quiz each having 20 to 25 Multiple choice Questions.**

**Term Work consists of 25 Marks(8 Marks for Practical's +4 Marks for Quiz+ 8 Marks for Mini Project + 5 marks for online course(nodejs/react/ angularjs/aws web deployment on web portals like codeschool,udemy,nptel,cloudguru,coursera)**

**Practical will be conducted based on Mini Project (25 Marks)**

**Total Web Technology Laboratory Marks=TW +PRACTICAL=25+25=50**

**Students commitment, attendance, behavior in lab will be considered while giving Term Work**

**Fr. Conceicao Rodrigues College Of Engineering**

**Bandra,**

**Web Design Laboratory(CSL504)**

**Mini Project Project Assessment**

<b>Project Title:</b>				
<b>Team Members:</b>				
<b>Roll number</b>	<b>Name</b>	<b>Self Assessment Marks (Out Of 8)</b>	<b>Mentor Assessment Marks (Out Of 8)</b>	<b>Signature of Students</b>

**Mentor Signature:**

**External Signature:**

<b>Sr No</b>	<b>Feature List:</b>	<b>Yes</b>	<b>No</b>	<b>Who did Implementation</b>
1	Email Sending			
2	Non-Derby Database			
	OTP Generation			
3	Captcha			
4	Forgot password			
5	Reset Password			

6	Password Encryption			
7	Registration			
8	SMS sending			
9	SQL Injection attack prevention			
10	Use of Bootstrap or semantic			
11	File uploading			
12	E R Diagram up to 3 <sup>rd</sup> Normal Form			
13	Table Queries file			
14	Session Management			
15	Use of Ajax			
16	Use of JQuery			
17	Documentation of Software Requirement Specification			
18	Web Application Screen Shots			
19	How to take database backup automatically			
20	Login with google or Facebook			
21	High Cohesion			
22	Low coupling			
23	Usage of Data Access Object Design pattern			
24	Model View Controller Architecture			
25	Pagination feature For fetching records from database			
26	Script free JSP page development			
	Etc... Any Extra Feature Student can add here..			
	Etc... Any Extra Feature Student can add here..			
	Etc... Any Extra Feature Student can add here..			
	Etc... Any Extra Feature Student can add here..			



**Quiz on HTML**  
**Fr. C.R.C.E. Bandra.**  
**Sem V(Computer)**  
**Web Design Lab**  
**Year 2018-19**

1. How to define the link should open in new page in HTML?
  - a. `<a href = "http://www.mcqsets.com/" target = "blank">Click Here</a>`
  - b. `<a href = "http://www.mcqsets.com/" target = "_blank"> Click Here </a>`
  - c. `<a href = "http://www.mcqsets.com/" target = "#blank"> Click Here </a>`
  - d. `<a href = "http://www.mcqsets.com/" target = "@blank"> Click Here </a>`
  
2. In HTML, Uniform Resource Identifier (URI) is used to
  - a. To create a frame document .
  - b. To create a image map in the webpage.
  - c. To customize the image in the webpage.
  - d. To identify a name or a resource on the internet.
  
3. Which HTML tag would be used to display power in expression  $(A+B)^2$ 
  - a. `<SUP>`
  - b. `<SUB>`
  - c. `<B>`
  - d. `<P>`
  
4. Which of the following is an attribute of `<Table>` tag?
  - a. SRC
  - b. LINK
  - c. CELLPADDING
  - d. CAPTION
  
5. What is the correct HTML for making a hyperlink?
  - a. `<a href="http:// mcq.com">ICT Trends Quiz</a>`
  - b. `<a src= "http://mcq.com">ICT Trends Quiz</a>`
  - c. `<http://mcq.com</a>`
  - d. `<a url="http://mcq.com">ICT Trends Quiz</a>`
  
6. What does vlink attribute mean?
  - a. visited link
  - b. virtual link
  - c. very good link
  - d. active link
  
7. To create a combo box (drop down box) which tag will you use?
  - a. `<select>`
  - b. `<list>`

- c. <input type="dropdown">
- d. all of above

8. Choose the correct HTML tag for the smallest size heading?

- a. <heading>
- b. <h6>
- c. <h1>
- d. <head>

9. There are \_\_\_\_ different of heading tags in HTML

- a. 4
- b. 5
- c. 6
- d. 7

10. Which tag inserts a line horizontally on your web page?

- a. <hr>
- b. <line>
- c. <line direction="horizontal">
- d. <tr>

11. Which element is a inline element?

- A. strong element
- B. span element
- C. div element
- D. All of the above

12. What is default port number for HTTP protocol?

- a. 3128
- b. 8080
- c. 80
- d. 8084

13. Who invented World Wide Web (WWW) and HTML?

- a. Blaise Pascal
- b. Charles Babbage
- c. Herman Hollerith
- d. Tim Berners-Lee

14. Comments in html document is given by:

- a. <?-- \_\_-->
- b. <!\_\_\_\_!>
- c. <!\_\_\_\_>

d. `</_ _ _ _>`

15. How to set a picture as a background web page?

- a. `<body background= "bgimage.gif">`
- b. `<body background -image= "bgimage.gif">`
- c. `<background= "bgimage.gif">`
- d. `<background image= "bgimage.gif">`

16. Which of the following is the correct regarding meta tag in HTML?

- A. `<meta> ... </meta>`
- B. `<meta name = " " />`
- C. `<metadata> ... </metadata>`
- D. `<metadata name = " " />`

17. Which element is a block-level element?

- A. div element
- B. span element
- C. strong element
- D. All of the above

18. What does an HTML tag do?

- a. It specifies formatting and layout instructions for your web page.
- b. It hides programming instructions from view.
- c. It determines the organizational structure of your Web site.
- d. It connects your web site to an operating environment.

19. The ..... attribute adds space within each cell.

- a. CELSPACING
- b. CELLPADDING
- c. WIDTH
- d. ALIGN

20. An ordered list is a ..... list and an unordered list is a ..... list.

- a. bulleted & numbered
- b. bulleted & tabular
- c. tabular & numbered
- d. numbered & bulleted

21. If you wanted to create text that was a different color or font than other text in your Web page, what type of tag would you use?

- a. Layout
- b. Basic formatting

- c. Design
- d. Outline

22. When creating a Web document, what format is used to express an image's height and width?

- a. Centimeters
- b. Pixels
- c. Dots per inch
- d. Inches

23. What should be the first and last pair of tags in your Web document?

- a. <html></html> and <body></body>
- b. <start><end> and <body></body>
- c. <head><body> and <title></title>
- d. <title></title> and <body></body>

24. Which element gives the functionality in section of webpage to make it easier to manage, style, and manipulate?

- A. div element
- B. span element
- C. strong element
- D. All of the above

25 Which Specifies the maximum number of characters for the text field?

- A. maxlength
- B. largelength
- C. maxlength
- D. Size

\*\*\*\*\*TheEnd\*\*\*\*\*

**CSS QUIZ**  
**Web Design Lab**  
**Vth sem Computer**  
**Fr.C.R.C.E. Bandra.**  
**Year 2018-19**

1. Which of the following are the advantages of CSS?

- i) CSS saves time ii) Page load faster
  - iii) Easy maintenance iv) Multiple compatibility
- A) i, ii and iii only
  - B) ii, iii and iv only
  - C) i, ii and iv only
  - D) All i, ii, iii and iv

2. A CSS style rule is made up of three parts which are ..

- i) Selector ii) Property
  - iii) Value iv) Attribute
- A) i, ii and iii only
  - B) ii, iii and iv only
  - C) i, ii and iv only
  - D) All i, ii, iii and iv

3. Which is not the selector type of CSS?

- A) Type selector
- B) Universal selector
- C) Local selector
- D) Descendant selector

4. The correct example of class selector is .

- A) h2.type1 {color: #000000;}
- B) h2 type1 {color: #000000;}
- C) h2 #type1 {color: #000000;}
- D) #h2 type1 {color: #000000;}

5. CSS comments are inserted inside .

- A) //.....//
- B) <!.....>
- C) /\*.....\*/
- D) All of the above

6. We can handle old browsers by placing CSS codes inside.

- A) //.....//

- B) <!.....>
- C) /\*.....\*/
- D) None of the above

7. State whether True or False.

- i) Any inline style sheet takes highest priority.
- ii) Any rule defined in <style> .....</style> tag will override rules defined in any external style sheet file.

- A) i-True, ii-False
- B) i-False, ii-True
- C) i-True, ii-True
- D) i-False, ii-False

8. Which is the correct CSS syntax?

- A) body:color=black;
- B) {body:color=black;}
- C) body {color: black;}
- D) {body;color:black;}

9. Which of the following is / are the measurement units in CSS?

- i) % ii) cm iii) em iv) pc v) px

- A) i, ii, iii and iv only
- B) i, ii, iii and v only
- C) i, ii, iv and v only
- D) All i, ii, iii, iv and v

10. The possible formats of CSS colors are.

- i) Hex code - #RRGGBB
- ii) Short Hex Code - #RGB
- iii) RGB% - rgb(rrr%, ggg%, bbb%)
- iv) Keyword - teal, blue, black

- A) i, ii and iv only
- B) ii, iii and iv only
- C) i, iii and iv only
- D) All i, ii, iii and iv

11. Which of the following are the background properties in CSS?

- i) background-color ii) background-image iii) background-repeat
- iv) background-position v) background

- A) i, ii, iii and iv only
- B) i, ii, iii and v only
- C) i, ii, iv and v only
- D) All i, ii, iii, iv and v

12. State whether the statement is/are True.

- i) font-family property is used to change the face of a font.
- ii) font-variant property is used to create small-caps effects.

- A) i-True, ii-False
- B) i-False, ii-True
- C) i-True, ii-True
- D) i-False, ii-False

13. The CSS links properties are

- A) :link, :visited, :hover, :active
- B) :link, :visit, :hover, :active
- C) :link, :visited, :over, :active
- D) :link, :visited, :hover, :active, :inactive

14. Internet Explorer uses ..... property to create transparent images.

- A) -moz-opacity:x
- B) filter: alpha(opacity=x)
- C) Both of the above
- D) None of the above

15. The different ways to associate styles with a HTML document is/are

- A) Embedded CSS with <style> element
- B) Inline CSS with style attribute.
- C) External CSS with <link> element.
- D) All of the above

16. Which of the following is correct CSS syntax for using font property?

- A) <p style="font: italic, bold, 15px;"> ..... </p>
- B) <p style="font-style: italic font-weight: bold font-size: 15px;"> ..... </p>
- C) <p style="font: italic bold 15px;"> ..... </p>
- D) None of the above

17. State True or False for the CSS table properties.

- i) The border-spacing specifies the width that should appear between table rows.
- ii) The empty-cells specifies whether the border should be shown if a cell is empty.

- A) i-True, ii-False
- B) i-False, ii-True
- C) i-True, ii-True
- D) i-False, ii-False

18. In CSS tables, the possible values for the caption-side property can have the following values.

- A) top, bottom, left or right
- B) top, bottom, center, left or right
- C) top or bottom
- D) left or right

19. The ..... property indicates whether a cell without any content should have a border displayed.

- A) blank-cells
- B) empty-cells
- C) nocontent-cells
- D) noborder-cells

20. The ..... specifies whether a border should be solid, dashed line, dotted line, double line, groove etc.

- A) border-layout
- B) border-decoration
- C) border-style
- D) border-weight

\*\*\*\*\*TheEnd\*\*\*\*\*



**JavaScript QUIZ**  
**Web Design Lab**  
**Vth sem Computer**  
**Fr.C.R.C.E. Bandra.**  
**Year 2018-19**

Q1. JavaScript is a \_\_\_\_\_ typed language.

- a) tightly
- b) loosely

Q2. What is the output of following JavaScript code?

```
<script type="text/javascript">  
x=4+"4";  
document.write(x);  
</script>
```

- a) 44
- b) 8
- c) 4
- d) Error output

Q3. Math. round(-20.51) = ?

- a) 20
- b) -21
- c) 19
- d) None

Q4. Which of these comment lines are used in JavaScript?

- (1) // , /\* ..... \*\*/
- (2) / , /\*\* ...../ , /\*
- (3) /\*.....\*/ , //
- (4) \*.....\* , //

- a) Only (4)
- b) Only (3)
- c) Either (3) or (4)
- d) Only (2)

Q5. Who invented the JavaScript programming language?

- a) Tennis Ritchie
- b) James Gosling
- c) Brendan Eich

Q6. \_\_\_\_\_ method returns the number of milliseconds in a date string.

- a) setHours()
- b) setMinutes()
- c) parse()

Q7. What are the following looping structures available in JavaScript?

- a) for, foreach
- b) foreach, whileloop
- c) do-while loop, foreach
- d) for, while loop

Q8. What will be the output of following JavaScript code snippet?

```
<script type="text/javascript">  
  var s = "9123456 or 80000?";  
  var pattern = /d{4}/;  
  var output = s.match(pattern);  
  document.write(output);  
</script>
```

- a) 9123
- b) 91234
- c) 80000
- d) None of the above

Q9- \_\_\_\_\_ method is used to remove focus from the specified object.

- a) blur()
- b) focus()
- c) None

Q10. What will be the output of following JavaScript code snippet?

```
<script type="text/javascript">  
  var cst = "PHPKB Knowledge Base Software";  
  var result =cst.substring(7,8);  
  document.write(result);  
</script>
```

- a) PHPKB Kn
- b) Kn

c) ow  
d) n