Ref No:

SRI KRISHNA INSTITUTE OF TECHNOLOGY, BANGALORE

COURSE PLAN

Academic Year 2019-20

Program:	Information Science and Engineering
Semester :	7
Course Code:	15CSL77
Course Title:	Web Technology laboratory with Mini Project
Credit / L-T-P:	2 / 0-1-2
Total Contact Hours:	40
Course Plan Author:	Dhananjay V

Academic Evaluation and Monitoring Cell

No. 29, Chimney hills, Hesaraghatta Road, Chikkabanavara
BANGALORE-560090, KARNATAKA , INDIA
Phone / Fax :+91-08023721315/23721477, Web: www.skit.org.in

INSTRUCTIONS TO TEACHERS

- Classroom / Lab activity shall be started after taking attendance.
- Attendance shall only be signed in the classroom by students.
- Three hours attendance should be given to each Lab.
- Use only Blue or Black Pen to fill the attendance.
- Attendance shall be updated on-line & status discussed in DUGC.
- No attendance should be added to late comers.
- Modification of any attendance, over writings, etc is strictly prohibited.
- Updated register is to be brought to every academic review meeting as per the COE.

Table of Contents

Note : Remove “Table of Content” before including in CP Book
Each Laboratory Plan shall be printed and made into a book with cover page
Blooms Level in all sections match with A.2, only if you plan to teach / learn at higher levels

A. LABORATORY INFORMATION

1. Laboratory Overview

Degree:	BE	*Program:*	CS
Year / Semester :	4 / 7	*Academic Year:*	2018-19
Course Title:	Web Technology laboratory with Mini Project	*Course Code:*	15CSL77
Credit / L-T-P:	2 / 0-1-2	*SEE Duration:*	180 Minutes
Total Contact Hours:	40	*SEE Marks:*	80 Marks
CIA Marks:	20	*Assignment*	---
Lab. Plan Author:	DHANANJAYA	*Sign*	Dt : 18/08/19
Checked By:		*Sign*	Dt :

2. Laboratory Content

Expt.	Title of the Experiments	Lab Hours	Concept	Blooms Level
1	Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient	3	Simple calculator	L4 Analyze
2	Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.	3	Squares and cubes	L4 Analyze
3	Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.	3	Text growing and Shrinking	L4 Analyze
4	Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems: a. Parameter: A string b. Output: The position in the string of the left-most vowel c. Parameter: A number d. Output: The number with its digits in the reverse order	3	Vowels and number	L4 Analyze
5	Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.	3	Students information	L4 Analyze
6	Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.	3	Track of Visitors number	L4 Analyze
7	Write a PHP program to display a digital clock which displays the current time of the server.	3	Digital clock	L4 Analyze
8	Write the PHP programs to do the following: a. Implement simple calculator operations. b. Find the transpose of a matrix. c. Multiplication of two matrices. d. Addition of two matrices.	3	Calculator operations	L4 Analyze
9	Write a PHP program named states.py that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does the following: a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named statesList. b.Search for a word in states that begins with k and ends in s. Perform a case insensitive comparison. [Note: Passing re.las a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 of statesList. c. Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list. d. Search for a word in states that ends in a. Store this word in element 3 of the list.	3	String operations	L4 Analyze
10	Write a PHP program to sort the student records which are stored in the database using selection sort.	3	Sorting technique.	L4 Analyze

Part B				
11	Develop a web application project using the languages and concepts learnt in the theory and exercises listed in part A with a good look and feel effects. You can use any web technologies and frameworks and databases.	10	Deign a web page	L6 Create

3. Laboratory Material

Books & other material as recommended by university (A, B) and additional resources used by Laboratory teacher (C).

Expt.	Details	Expt. in book	Availability
A	**Text books (Title, Authors, Edition, Publisher, Year.)**	**-**	**-**
	Randy Connolly, Ricardo Hoar, **"Fundamentals of Web Development",** 1st Edition, Pearson Education India. (**ISBN:**978-9332575271)	In Lib	
B	**Reference books**		
1	Robin Nixon, **"Learning PHP, MySQL &JavaScript with jQuery, CSS andHTML5",** 4thEdition, O'Reilly Publications, 2015. (**ISBN:**978-9352130153)	In dept	
2	2) Luke Welling, Laura Thomson, **"PHP and MySQL Web Development",** 5th Edition, Pearson Education, 2016. (**ISBN:**978-9332582736)		
C	**Concept Videos or Simulation for Understanding**		
C1	https://www.w3schools.com/		
C2	https://www.w3.org/Style/CSS/Overview.en.html		
C3	https://www.tutorialspoint.com/php/index.htm		
C4	https://www.javascript.com/		
C5	https://www.tutorialspoint.com/ajax/what_is_ajax.htm		
D	**Software Tools for Design**	**-**	**-**
1	https://www.eclipse.org/downloads/		
E	**Recent Developments for Research**	**-**	**-**
1	https://www.itm-conferences.org/articles/itmconf/abs/2019/02/itmconf_icicci2018_01008/itmconf_icicci2018_01008.html		
2	http://ijsrcseit.com/paper/CSEIT195368.pdf		
F	**Others (Web, Video, Simulation, Notes etc.)**	**-**	**-**
1	https://nptel.ac.in/courses/106105084/ (NPTEL course related to web Technology course		

4. Laboratory Prerequisites:

Refer to GL01. If prerequisites are not taught earlier, GAP in curriculum needs to be addressed. Include in Remarks and implement in B.5.

Students must have learnt the following Courses / Topics with described Content . . .

Expt.	Lab. Code	Lab. Name	Topic / Description	Sem	Remarks	Blooms Level
1						
2						
3						
5						
-						
-						

5. Content for Placement, Profession, HE and GATE

The content is not included in this course, but required to meet industry & profession requirements and help students for Placement, GATE, Higher Education, Entrepreneurship, etc. Identifying Area / Content requires experts consultation in the area.
Topics included are like, a. Advanced Topics, b. Recent Developments, c. Certificate Courses, d. Course Projects, e. New Software Tools, f. GATE Topics, g. NPTEL Videos, h. Swayam videos etc.

Expt.	Topic / Description	Area	Remarks	Blooms Level
1	Object Oriented Programming using C++	Programming		L3
3				
3				
5				
-				

B. Laboratory Instructions

1. General Instructions

SNo	Instructions	Remarks
1	Observation book and Lab record are compulsory.	
2	Students should report to the concerned lab as per the time table.	
3	After completion of the program, certification of the concerned staff in-charge in the observation book is necessary.	
4	Student should bring a notebook of 100 pages and should enter the readings /observations into the notebook while performing the experiment.	
5	The record of observations along with the detailed experimental procedure of the experiment in the Immediate last session should be submitted and certified staff member in-charge.	
6	Should attempt all problems / assignments given in the list session wise.	
7	It is responsibility to create a separate directory to store all the programs, so that nobody else can read or copy.	
8	When the experiment is completed, should disconnect the setup made by them, and should return all the components/instruments taken for the purpose.	
9	Any damage of the equipment or burn-out components will be viewed seriously either by putting penalty or by dismissing the total group of students from the lab for the semester/year	
10	Completed lab assignments should be submitted in the form of a Lab Record in which you have to write the algorithm, program code along with comments and output for various inputs given	

2. Laboratory Specific Instructions

SNo	Specific Instructions	Remarks
1	Start computer	
2	Open the text editor	
3	Select new file.	
4	Write the program	
5	Save the program with .c extension.	
6	Compile the program F9	
7	Execute the program F10	

C. OBE PARAMETERS

1. Laboratory Outcomes

Expt.	Lab Code #	COs / Experiment Outcome	Teach. Hours	Concept	Instr Method	Assessment Method	Blooms' Level
-	-	**At the end of the experiment, the**	-	-	-	-	-

		student should be able to . . .					
1	15CSL77.1	Understanding JavaScript code to design a simple calculator	3	Simple calculator	Demonstrate	Viva & presentation	L4 Analyzing
2	15CSL77.2	Understanding JavaScript that calculates the squares and cubes	3	Squares and cubes	Demonstrate	Viva & presentation	L4 Analyzing
3	15CSL77.3	Execute JavaScript code that displays text "TEXT-GROWING" with increasing font	3	Text growing and Shrinking	Demonstrate	Viva & presentation	L4 Analyzing
4	15CSL77.4	Execute a web page for finding leftmost vowel in given string and reverse a given number	3	Vowels and number	Demonstrate	Viva & presentation	L4 Analyzing
5	15CSL77.5	Execute XML document to store information about a student in an engineering college affiliated to VTU	3	Students information	Demonstrate	Viva & presentation	L4 Analyzing
6	15CSL77.6	Execute PHP program to keep track of the number of visitors visiting the web page.	3	Track of Visitors number	Demonstrate	Viva & presentation	L4 Analyzing
7	15CSL77.7	Execute PHP program to display a digital clock	3	Digital clock	Demonstrate	Viva & presentation	L4 Analyzing
8	15CSL77.8	Execute PHP programs for simple calculator operations.	3	Calculator operations	Demonstrate	Viva & presentation	L4 Analyzing
9	15CSL77.9	Execute PHP program for string operations.	03	String operations	Demonstrate	Viva & presentation	L4 Analyzing
10	15CSL77.10	Execute PHP program to sort the student records	03	Sorting technique.	Demonstrate	Viva & presentation	L4 Analyzing
11	15CSL77.11	Design a web application project using the languages like HTML, PHP, XML with a good look and feel effects. You can use any web technologies and frameworks and databases.	10	Deign a web page	Demonstrate	Viva & presentation	L6 Create
-		**Total**	**40**	-	-	-	-

Note: Identify a max of 2 Concepts per unit. Write 1 CO per concept.

2. Laboratory Applications

Expt.	Application Area	CO	Level
1	Banking sectors	CO1	L2
2	Mathematical operations	CO2	L2
3	Web services	CO3	L2
4	Number theory	CO4	L3
5	Student information	CO5	L2
6	Hotel database	CO6	L2
7	Digital clock	CO7	L3
8	Business sectors	CO8	L2
9	e Commerce Applications	CO9	L2
10	Data Representation	CO10	L2
11	online retail sales, e commerce, student database		

Note: Write 1 or 2 applications per CO.

3. Mapping And Justification

CO – PO Mapping with mapping Level along with justification for each CO-PO pair.
To attain competency required (as defined in POs) in a specified area and the knowledge & ability required to accomplish it.

Expt	Mapping	Mapping	Justification for each CO-PO pair	Lev

.			Level		el
-	CO	PO	-	'Area': 'Competency' and 'Knowledge' for specified 'Accomplishment'	-
1	CO1	PO1	L2	Knowledge is required to understand the javascript	L4
1	CO1	PO2	L2	Analyzing problem is required to compare values	L4
2	CO2	PO3	L3	Design is required to make calculator	L4
2	CO2	PO1	L3	Knowledge is required to understand the javascript	L4
3	CO3	PO1	L3	Analyzing problem is required to compare values of squares and cubes	L4
3	CO3	PO1	L2	Knowledge is required to understand the javascript	L4
3	CO3	PO2	L2	Analyzing problem is required to compare with text	L4
4	CO4	PO1	L3	Knowledge is required to understand the javascript	L4
4	CO4	PO2	L3	Analyzing problem is required to compare STRINGS,OVALS, NUMBER, DIGITS	L4
4	CO4	PO3	L3	Development is required to make digits in the reverse order	L4
5	CO5	PO1	L2	Knowledge is required to understand the XML	L4
5	CO5	PO2	L2	Analyzing problem is required to compare student records	L4
6	CO6	PO1	L2	Knowledge is required to understand the php	L4
6	CO6	PO2	L2	Analyzing problem is required to compare number of visitors	L4
7	CO7	PO1	L2	Knowledge is required to understand the php	L4
7	CO7	PO2	L2	Analyzing problem is required to digital clock	L4
8	CO8	PO1	L2	Knowledge is required to understand the php	L4
8	CO8	PO2	L2	Analyzing problem is required to compare with matrix values	L4
9	CO9	PO1	L2	Knowledge is required to understand the php	L4
9	CO9	PO2	L2	Analyzing problem is required to compare with search and store	L4
10	CO10	PO1	L2	Knowledge is required to understand the php	L4
10	CO10	PO2	L2	Analyzing problem is required to compare selection sort	L4
11	CO11	PO1	L2	Knowledge is required to understand the javascript	L4
11	CO11	PO2	L2	Analyzing problem is required to compare	L4
11	CO11	PO3	L2	Development is required based on requirement	L4

4. Articulation Matrix

CO – PO Mapping with mapping level for each CO-PO pair, with course average attainment.

-	-	Experiment Outcomes	Program Outcomes														-
Expt.	CO.#	**At the end of the experiment student should be able to . . .**	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	Level
1	**15CSL77.1**	Understanding JavaScript code to design a simple calculator	√	√	√			√				√		√				L3
2	**15CSL77.2**	Understanding JavaScript that calculates the squares and cubes	√	√	√			√				√		√				L2
3	**15CSL77.3**	Execute JavaScript code that displays text "TEXT-GROWING" with increasing font	√	√	√			√				√		√				L2
4	**15CSL77.4**	Execute a web page for finding leftmost vowel in given string and reverse a given number	√	√	√			√				√		√				L3
5	**15CSL77.5**	Execute XML document to store information about a student in an engineering college affiliated to VTU	√	√	√			√				√		√				L2
6	**15CSL77.6**	Execute PHP program to keep track of the number of visitors visiting the web page.	√	√	√			√				√		√				L2
7	**15CSL77.7**	Execute PHP program to display a digital clock	√	√	√			√				√		√				L2
8	**15CSL77.8**	Execute PHP programs for simple calculator operations.	√	√	√			√				√		√				L2
9	**15CSL77.9**	Execute PHP program for string	√	√	√			√				√		√				L2

		operations.															
10	**15CSL77.10**	Execute PHP program to sort the student records	√	√	√			√				√		√				L2
11	**15CSL77.11**	Design a web application project using the languages like HTML, PHP, XML with a good look and feel effects. You can use any web technologies and frameworks and databases.	√	√	√		√	√				√		√				L3
-	**15CSL77**	**Average attainment (1, 2, or 3)**																**-**
-	*PO, PSO*	*1.Engineering Knowledge; 2.Problem Analysis; 3.Design / Development of Solutions; 4.Conduct Investigations of Complex Problems; 5.Modern Tool Usage; 6.The Engineer and Society; 7.Environment and Sustainability; 8.Ethics; 9.Individual and Teamwork; 10.Communication; 11.Project Management and Finance; 12.Life-long Learning; S1.Software Engineering; S2.Data Base Management; S3.Web Design*																

5. Curricular Gap and Experiments

Topics & contents not covered (from A.4), but essential for the course to address POs and PSOs.

Expt	Gap Topic	Actions Planned	Schedule Planned	Resources Person	PO Mapping
1					
2					
3					

Note: Write Gap topics from A.4 and add others also.

6. Experiments Beyond Syllabus

Topics & contents required (from A.5) not addressed, but help students for Placement, GATE, Higher Education, Entrepreneurship, etc.

Expt	Gap Topic	Actions Planned	Schedule Planned	Resources Person	PO Mapping
1					
2					
3					

D. COURSE ASSESSMENT

1. Laboratory Coverage

Assessment of learning outcomes for Internal and end semester evaluation. Distinct assignment for each student. 1 Assignment per chapter per student. 1 seminar per test per student.

Unit	Title	Teaching Hours	No. of question in Exam							CO	Levels
			CIA-1	CIA-2	CIA-3	Asg-1	Asg-2	Asg-3	SEE		
1	Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient	03	1	-	-	-	-	-	1	CO1	L4
2	Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.	03	1	-	-	-	-	-	1	CO2	L4
3	Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.	03	1	-	-	-	-	-	1	CO3	L4
4	Develop and demonstrate a HTML5 file that includes JavaScript script that	03	1	-	-	-	-	-	1	CO4	L4

	uses functions for the following problems: a. Parameter: A string b. Output: The position in the string of the left-most vowel c. Parameter: A number d. Output: The number with its digits in the reverse order										
5	Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.	03	1	-	-	-	-	-	1	CO5	L4
6	Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.	03	-	1	-	-	-	-	1	CO6	L4
7	Write a PHP program to display a digital clock which displays the current time of the server.	03	-	1	-	-	-	-	1	CO7	L4
8	Write the PHP programs to do the following: a. Implement simple calculator operations. b. Find the transpose of a matrix. c. Multiplication of two matrices. d. Addition of two matrices.	03	-	1	-	-	-	-	1	CO8	L4
9	Write a PHP program named states.py that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does the following: a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named statesList. b.Search for a word in states that begins with k and ends in s. Perform a case insensitive comparison. [Note: Passing re.Ias a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 of statesList. c. Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list. d. Search for a word in states that ends in a. Store this word in element 3 of the list.	03	-	1	-	-	-	-	1	CO9	L4
10	Write a PHP program to sort the student records which are stored in the database using selection sort.	03	-	1	-	-	-	-	1	CO10	L4
11	Develop a web application project using the languages and concepts learnt in the theory and exercises listed in part A with a good look and feel effects. You can use any web technologies and frameworks and databases.	03	-	-	1	-	-	-	1	CO11	L6
-	**Total**	**40**	**5**	**5**	**1**	**3**	**3**	**3**	**11**		**L6**

2. Continuous Internal Assessment (CIA)

Assessment of learning outcomes for Internal exams. Blooms Level in last column shall match with A.2.

Evaluation	Weightage in Marks	CO	Levels
CIA Exam – 1	10	CO1, CO2, CO3, CO4	L4
CIA Exam – 2	10	CO5, CO6, CO7,	L4
CIA Exam – 3	10	CO8, CO9,CO10	L4
	-	-	-
Other Activities – define – Slip test	-	-	-
Final CIA Marks	**20**	**-**	**-**

-

SNo	Description	Marks
1	Observation and Weekly Laboratory Activities	04 Marks
2	Record Writing / Viva	08 Marks for each Expt
3	Internal Exam Assessment	08Marks
4	Internal Assessment	20 Marks
5	SEE	80Marks
-	**Total**	**100 Marks**

E. EXPERIMENTS

Experiment 1: Simple Calculator

-	**Experiment No.:**	1	**Marks**	10	**Date Planned**	08/08/19 07/08/19	**Date Conducted**	
1	Title	Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient						
2	Course Outcomes	Understanding JavaScript code to design a simple calculator						
3	Aim	Design a simple calculator to perform the following operations: sum, product, difference and quotient.						
4	Material / Equipment Required	Lab Manual / computer(intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	Sum =number+number product= number*number difference=number-number quotient=dividend ÷ divisor						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	• Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 1.html • Execute program in browser by giving this path htpp://localhost/1.html • Output will be displayed on browser screen						
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	----						
8	Observation Table, Look-up Table, Output	• Enter two numbers 5,6 • The sum of two numbers 11						
9	Sample Calculations	--						
10	Graphs, Outputs	--						
11	Results & Analysis	--						
12	Application Areas	Banking sectors						
13	Remarks							

14	Faculty Signature with Date	

Experiment 2 : Squares and cubes

-	**Experiment No.:**	2	**Marks**	10	**Date Planned**	22/08/19 14/08/19	**Date Conducted**	
1	Title	Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.						
2	Course Outcomes	Understanding JavaScript that calculates the squares and cubes						
3	Aim	Design a web page that calculates the squares and cubes of given number.						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
	Theory, Formula, Principle, Concept	square=number*number cubes=number*number*number						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	• Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 2.html • Execute program in browser by giving this path htpp://localhost/2.html • Output will be displayed on browser screen						
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	---						
8	Observation Table, Look-up Table, Output	Enter any number 5 The square of two number 25 The cube of two number 125						
9	Sample Calculations	--						
10	Graphs, Outputs	--						
11	Results & Analysis	--						
12	Application Areas	Mathematical operations						
13	Remarks							
14	Faculty Signature with Date							

Experiment 3 : Increasing font size of the text

-	**Experiment No.:**	3	**Marks**	10	**Date Planned**	21/08/19 29/08/19	**Date Conducted**	
1	Title	Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.						
2	Course Outcomes	Execute JavaScript code that displays text "TEXT-GROWING" with increasing font						
3	Aim	Execute a web page text-growing with increasing font and decrease after few seconds						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	JavaScript						
6	Procedure, Program, Activity, Algorithm, Pseudo	• Open terminal • Start apachectl start • Path creation cd /var/www/html						

	Code	• Type program in vi 3.html • Execute program in browser by giving this path htpp://localhost/3.html • Output will be displayed on browser screen
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	--
8	Observation Table, Look-up Table, Output	Enter the any string TEXT-GROWING
9	Sample Calculations	--
10	Graphs, Outputs	TEXT-GROWING
11	Results & Analysis	--
12	Application Areas	Web services
13	Remarks	
14	Faculty Signature with Date	

Experiment 4 : String operations using HTML file

-	**Experiment No.:**	4	**Marks**	10	**Date Planned**	19/09/19 28/08/19	**Date Conducted**	
1	Title	Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems: a. Parameter: A string b. Output: The position in the string of the left-most vowel c. Parameter: A number d. Output: The number with its digits in the reverse order						
2	Course Outcomes	Execute a web page for finding leftmost vowel in given string and reverse a given number						
3	Aim	Finding leftmost vowel in given string and reverse a given number						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	Java Scripting						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	• Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 4.html • Execute program in browser by giving this path htpp://localhost/4.html • Output will be displayed on browser screen						
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	--						
8	Observation Table, Look-up Table, Output	Enter a string SKIT Position of the string in left most vowel is 3 Enter the number 12345 Reverse of the given number is 54321						
9	Sample Calculations	---						
10	Graphs, Outputs	---						
11	Results & Analysis	---						
12	Application Areas	Number theory						
13	Remarks	---						

14	Faculty Signature with Date	

Experiment 5 : Student information using XML

-	**Experiment No.:**	5	**Marks**	10	**Date Planned**	26/09/19 04/09/19	**Date Conducted**	
1	Title	Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.						
2	Course Outcomes	Execute XML document to store information about a student in an engineering college affiliated to VTU						
3	Aim	Execute a xml documents to store and display student information of 3 students						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	XML language						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	• Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 5.xml • Execute program in browser by giving this path htpp://localhost/5.xml • Output will be displayed on browser screen						
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	---						
8	Observation Table, Look-up Table, Output	Enter usn number of student 1 USN:1KT15IS001 NAME: Abhi Enter usn number of student 2 USN:1KT15IS002 NAME: Babu Enter usn number of student 3 USN:1KT15IS003 NAME: Chaitra						
9	Sample Calculations	---						
10	Graphs, Outputs	---						
11	Results & Analysis	---						
12	Application Areas	Student information						
13	Remarks	---						
14	Faculty Signature with Date	---						

Experiment 6 : Keep track of no of visitors

-	**Experiment No.:**	6	**Marks**	10	**Date Planned**	03/10/19 11/09/19	**Date Conducted**	
1	Title	Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.						
2	Course Outcomes	Execute PHP program to keep track of the number of visitors visiting the web page.						

3	Aim	To keep track of number of visitors
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)
5	Theory, Formula, Principle, Concept	PHP language
6	Procedure, Program, Activity, Algorithm, Pseudo Code	• Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 6.html • before executing create a file count.txt and write 0 in the file and do chmode 777 count.txt • Execute program in browser by giving this path htpp://localhost/6.html • Output will be displayed on browser screen
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	---
8	Observation Table, Look-up Table, Output	Number of visitors 5
9	Sample Calculations	---
10	Graphs, Outputs	---
11	Results & Analysis	---
12	Application Areas	Hotel database
13	Remarks	
14	Faculty Signature with Date	

Experiment 7 : Digital clock

-	**Experiment No.:**	7	**Marks**	10	**Date Planned**	10/10/19 25/09/19	**Date Conducted**	
1	Title	Write a PHP program to display a digital clock which displays the current time of the server.						
2	Course Outcomes	Execute PHP program to display a digital clock						
3	Aim	Display current time of system						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	PHP language						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	• Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 7.php • Execute program in browser by giving this path htpp://localhost/7.php • Output will be displayed on browser screen						
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	---						
8	Observation Table, Look-up Table, Output	10:35:42:44						
9	Sample	---						

	Calculations	
10	Graphs, Outputs	---
11	Results & Analysis	---
12	Application Areas	Digital clock
13	Remarks	---
14	Faculty Signature with Date	

Experiment 8 : Matrix operation using PHP

-	**Experiment No.:**	8	**Marks**	10	**Date Planned**	17/10/19 09/10/19	**Date Conducted**	
1	Title	Write the PHP programs to do the following: a. Implement simple calculator operations. b. Find the transpose of a matrix. c. Multiplication of two matrices. d. Addition of two matrices.						
2	Course Outcomes	Execute PHP programs for simple calculator operations and adding, multiplication, transpose of matrix.						
3	Aim	Display simple calculator and different operations like adding, multiplication, transpose of matrix						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	PHP language						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 8.php • Execute program in browser by giving this path htpp://localhost/8.php Output will be displayed on browser screen						
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	---						
8	Observation Table, Look-up Table, Output	Enter any number 2 2 2 2 2 2						
9	Sample Calculations	---						
10	Graphs, Outputs	---						
11	Results & Analysis	---						
12	Application Areas	Business sectors						
13	Remarks							
14	Faculty Signature with Date							

Experiment 9 : PHP program name states

-	Experiment No.:	9	Marks	10	Date Planned	24/10/19 23/10/19	Date Conducted	
1	Title	Write a PHP program named states.py that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does the following: a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named statesList. b.Search for a word in states that begins with k and ends in s. Perform a case						

		insensitive comparison.[Note:Passing re.las a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 of statesList. c. Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list. d. Search for a word in states that ends in a. Store this word in element 3 of the list.
2	Course Outcomes	Execute PHP program for string operations.
3	Aim	Perform string operation in PHP.
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)
5	Theory, Formula, Principle, Concept	PHP language
6	Procedure, Program, Activity, Algorithm, Pseudo Code	Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 9.php • Execute program in browser by giving this path htpp://localhost/9.php Output will be displayed on browser screen
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	---
8	Observation Table, Look-up Table, Output	Enter the string "Mississippi Alabama Texas Massachusetts"
9	Sample Calculations	---
10	Graphs, Outputs	---
11	Results & Analysis	---
12	Application Areas	e Commerce Applications
13	Remarks	
14	Faculty Signature with Date	

Experiment 10 : Selection sort

-	**Experiment No.:**	10	**Marks**	10	**Date Planned**	31/10/19 30/10/19	**Date Conducted**	
1	Title	Write a PHP program to sort the student records which are stored in the database using selection sort.						
2	Course Outcomes	Execute PHP program to sort the student records.						
3	Aim	Store student record and sort the students records.						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	PHP language with database.						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	Open terminal • Start apachectl start • Path creation cd /var/www/html • Type program in vi 9.php • Execute program in browser by giving this path htpp://localhost/9.php Output will be displayed on browser screen						
7	Block, Circuit, Model Diagram,							

	Reaction Equation, Expected Graph	
8	Observation Table, Look-up Table, Output	Enter any number 2 sree sreenu
9	Sample Calculations	---
10	Graphs, Outputs	---
11	Results & Analysis	---
12	Application Areas	**Data Representation**
13	Remarks	
14	Faculty Signature with Date	

Experiment 11 :MINI Project

-	**Experiment No.:**	11	**Marks**		**Date Planned**		**Date Conducted**	
1	Title	Develop a web application project using the languages and concepts learnt in the theory and exercises listed in part A with a good look and feel effects. You can use any web technologies and frameworks and databases.						
2	Course Outcomes	Design a web application project using the languages like HTML, PHP, XML with a good look and feel effects. You can use any web technologies and frameworks and databases						
3	Aim	Store student record and sort the students records.						
4	Material / Equipment Required	Lab Manual / computer (intel core 2.93GHz, 2 GB RAM, 320 GB HDD, 18.5' TFT monitor, Keyboard, optical Mouse)						
5	Theory, Formula, Principle, Concept	HTML, PHP, XML basic concepts to design a web page.						
6	Procedure, Program, Activity, Algorithm, Pseudo Code	Execute the developed program in browser.						
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	--						
8	Observation Table, Look-up Table, Output	--						
9	Sample Calculations	---						
10	Graphs, Outputs	---						
11	Results & Analysis	---						
12	Application Areas							
13	Remarks							
14	Faculty Signature with Date							

F. Content to Experiment Outcomes

1. TLPA Parameters

Table 1: TLPA – Example Course

Expt-#	Course Content or Syllabus (Split module content into 2 parts which	Content Teachin	Blooms' Learning	Final Bloo	Identified Action	Instructi on	Assessment Methods to

	have similar concepts)	g Hours	Levels for Content	ms' Level	Verbs for Learning	Methods for Learning	Measure Learning
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*
1	Write a C++ program to read series of names, one per line, from standard input and write these names spelled in reverse order to the standard output using I/O redirection and pipes. Repeat the exercISE using an input file specified by the user instead of the standard input and using an output file specified by the user instead of the standard output.	3	L2 (Understand)	L2 (Understand)	Summarize	Demonstrate	Viva & presentation
2	Write a C++ program to read and write student objects with fixed length records and the fields delimited by "|". Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.	3	L3 (Apply)	L3 (Apply)	Develop	Demonstrate	Viva & presentation
3	Write a C++ program to read and write student objects with Variable - Length records using any suitable record structure. Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.	3	L3 (Apply)	L3 (Apply)	Develop	Demonstrate	Viva & presentation
4	Write a C++ program to write student objects with Variable - Length records using any suitable record structure and to read from this file a student record using RRN.	3	L4 Analyze	L4 Analyze	Develop	Demonstrate	Viva & presentation
5	Write a C++ program to implement simple index on primary key for a file of student objects. Implement add ( ), search ( ), delete ( ) using the index.	3	L4 Analyze	L4 Analyze	Develop	Demonstrate	Viva & presentation
6	Write a C++ program to implement index on secondary key, the name, for a file of student objects. Implement add ( ), search ( ), delete ( ) using the secondary index.	3	L3 Apply	L3 Apply	Develop	Demonstrate	Viva & presentation
7	Write a C++ program to read two lists of names and then match the names in the two lists using Co Sequential Match based on a single loop. Output the names common to both the lists.	3	L3 Apply	L3 Apply	Develop	Demonstrate	Viva & presentation
8	Write a C++ program to read k Lists of names and merge them using k-way merge algorithm with k = 8.	3	L3 Apply	L3 Apply	Develop	Demonstrate	Viva & presentation
9	Mini Project	16	L6 (Create)	L6 (Create)	Design and create	Demonstrate	Viva & presentation

2. Concepts and Outcomes:

Table 1: Concept to Outcome – Example Course

Expt - #	Learning or Outcome from study of the Content or Syllabus	Identified Concepts from Content	Final Concept	Concept Justification (What all Learning Happened from the study of Content / Syllabus. A short word for learning or	CO Components (1.Action Verb, 2.Knowledge, 3.Condition / Methodology, 4.Benchmark)	Course Outcome **Student Should be able to ...**

				outcome)		
A	*I*	*J*	*K*	*L*	*M*	*N*
1	File operations	File operations	File operations	Will be able to understand the basic file operations	Action Verb : Understanding Knowledge : File operations condition : C/ C++	Understanding the basic file operations using c/c++
2	Will know how to pack and unpack the contents with record and filed delimiter	Record Structure	Record Structure	Will be able to understand buffer management	Action Verb : Analyzing Knowledge : Record structure condition : C/ C++	Analyze fixed and variable length records in the file
3	Will demonstrate how to access in short time	Relative Record number	Relative Record number	Direct access	Action Verb : Evaluate Knowledge : Direct access condition : C/ C++	Compare the time taken in index based accessing by known index no
4	Will demonstrate single and multiple views on a file	Primary and secondary key	Primary and secondary key	Multiple views on a single table	Action Verb : Evaluate Knowledge : condition : C/ C++	Comparing single and multiple index based accessing of record
5	Will able to demonstrate parallel processing on files	Multiple file operations	Multiple file operations	Parallel processing	Action Verb : Analyzing Knowledge : Parallel Processing condition : C/ C++	Analyzing the operations on multiple files
6	Will be able design and create a Mini Project	Operations on files with menu based or graphical based	Operations on files with menu based or graphical based	Mini Project	Action Verb : Creating Knowledge : Files and its operations on design	Design and Develop the Project by menu based or graphical