A

LABORATORY MANUAL

FOR

WEB TECHNOLOGY
[310252]

T.E. Computer Engineering
(Course Pattern-2019)
AS PER THE CURRICULUM OF

SAVITRIBAI PHULE PUNE UNIVERSITY

Name of Faculty: Prof. Haseebuddin Khan (Asst. Professor)

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Roll No: 29

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Academic Year: 2022-23

Jamia Mohammadia Education Society Mumbai's
MAULANA MUKHTAR AHMAD NADVI TECHNICAL CAMPUS
ABDUL LATIF ALI AL SHAYA FACULTY OF ENGINEERING & TECHNOLOGY
Approved by AICTE, New Delhi
Recognised by DTE, Mumbai & Govt. of Maharashtra
Affiliated to Savitribai Phule Pune University & MSBTE, Mumbai
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VISION

To build a strong research and learning environment producing globally competent professionals and innovators who will contribute to the betterment of the society

MISSION

- To create and sustain an academic environment conducive to the highest level of research and teaching.
- To provide state-of-the-art laboratories which will be up to date with the new developments in the area of computer engineering.
- To organise competitive event, industry interactions and global collaborations in view of providing a nurturing environment for students to prepare for a successful career and the ability to tackle lifelong challenges in global industrial needs.
- To educate students to be socially and ethically responsible citizens in view of national and global development.

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CERTIFICATE

This is to certify that,

Mr. ***MINHAJ AHMED ANSARI FAHEEM AHMED***, Of Class ***T.E.Computer Engg.*** ***Third Year Sem-VI*** Roll No 29. Has completed all the practical work in the subject ***Web Technology Laboratory (310252)*** satisfactorily in the ***Department of Computer Engineering*** as prescribed by**Savitribai Phule Pune University**, in the academic year **2022 – 23.**

Staff In-charge **Head of the Department** **Principal**

WEB TECHNOLOGY LAB

(310252)

Teaching Scheme	Credit	Examination Scheme
PR: 02 Hours/Week	01	TW:- 25 Marks ORAL:- 25 Marks

Guidelines for Instructor's Manual

The instructor‘s manual is to be developed as a reference and hands-on resource. It should include prologue (about University/program/ institute/ department/foreword/ preface), curriculum of the course, conduction and Assessment guidelines, topics under consideration, concept, objectives, outcomes, set of typical applications/assignments/ guidelines, and references.

Guidelines for Student's Laboratory Journal

The laboratory assignments are to be submitted by student in the form of journal. Journal consists of Certificate, table of contents, and handwritten write-up of each assignment (Title, Date of Completion, Objectives, Problem Statement, Software and Hardware requirements, Assessment grade/marks and assessor's sign, Theory- Concept in brief, algorithm, flowchart, test cases, Test Data Set(if applicable), mathematical model (if applicable), conclusion/analysis. Program codes with sample output of all performed assignments are to be submitted as softcopy. As a conscious effort and little contribution towards Green IT and environment awareness, attaching printed papers as part of write-ups and program listing to journal must be avoided. Use of DVD containing students programs maintained by Laboratory In-charge is highly encouraged. For reference one or two journals may be maintained with program prints in the Laboratory.

Guidelines for Laboratory /Term Work Assessment

Continuous assessment of laboratory work should be based on overall performance of Laboratory assignments by a student. Each Laboratory assignment assessment will assign grade/marks based on parameters, such as timely completion, performance, innovation, efficient codes, and punctuality.

Guidelines for Oral Examination

Oral examination should be jointly conducted by the internal examiner and external examiner.Relevant questions may be asked at the time of evaluation to test the student‘s understanding of the fundamentals, effective and efficient implementations in term work. This will encourage, transparent evaluation and fair approach, and hence will not create any uncertainty or doubt in the minds of the students. So, adhering to these principles will consummate our team efforts to the promising start of student's academics.

Guidelines for Laboratory Conduction

The instructor is expected to frame the assignments by understanding the prerequisites, technological aspects, utility and recent trends related to the topic. The assignment framing policy need to address the average students and inclusive of an element to attract and promote the intelligent students. Use of open source software is encouraged. Based on the concepts learned. Mini project should be implemented by the students in a group of 2-3 students.

INDEX

Sr. No.	Name of The Experiment	Date Of Start	Date Of Completion	SIGN
1	Case study: Before coding of the website, planning is important, students should visit different websites (Min. 5) From the evaluation, students should learn and conclude different website design issues, which should be considered while developing a website.			
2	Implement a web page index.htm for any client website (e.g., a restaurant website project) using following: a. HTML syntax: heading tags, basic tags and attributes, frames, tables, images, lists, links for text and images, forms etc. b. Use of Internal CSS, Inline CSS, External CSS			
3	Design the XML document to store the information of the employees of any business organization and demonstrate the use of: a) DTD b) XML Schema And display the content in (e.g., tabular format) by using CSS/XSL.			
4	Design and implement a simple calculator using Java Script for operations like addition, multiplication, subtraction, division, square of number etc. a) Design calculator interface like text field for input and output, buttons for numbers and operators etc. b) Validate input values c) Prompt/alerts for invalid values etc			
5	Implement the sample program demonstrating the use of Servlet. e.g., Create a database table ebookshop (book_id, book_title, book_author, book_price, quantity) using database like Oracle/MySQL etc. and display (use SQL select query) the table content using servlet.			

6	Build a dynamic web application using PHP and MySQL. a. Create database tables in MySQL and create connection with PHP. b. Create the add, update, delete and retrieve functions in the PHP web app interacting with MySQL database			
7	Design an application using Angular JS. e.g., Design registration (first name, last name, username, password) and login page using Angular JS.			

Experiment No.:01

Title: Study different website design issues.

Objectives: Understand about the design issues of different website.

Problem Statement: Case study:

Before coding of the website, planning is important, students should visit different websites (Min. 5) From the evaluation, students should learn and conclude different website design issues,which should be considered while developing a website.

Outcomes: Visit different website.

Software & Hardware requirements:

Any browser.

Theoretical concept:

What is Website?

A website is a collection of many web pages, and web pages are digital files that are written using HTML (Hyper Text Markup Language). To make your website available to every personin the world, it must be stored or hosted on a computer connected to the Internet round a clock. Such computers are known as a **Web Server**.

The website's web pages are linked with hyperlinks and hypertext and share a commoninterface and design. The website might also contain some additional documents and files such as images, videos, or other digital assets.

With the Internet invading every sphere, we see websites for all kinds of causes and purposes. So, we can also say that a website can also be thought of as a digital environment capable of delivering information and solutions and promoting interaction between people, places, and things to support the goals of the organization it was created for.

Components of a Website: We know that a website is a collection of a webpages hosted on a web-server. These are the components for making a website.

- **Webhost:** Hosting is the location where the website is physically located. Group of webpages (linked webpages) licensed to be called a website only when the webpage is hosted on the webserver. The webserver is a set of files transmitted to user computers when they specify the website's address.
- **Address:** Address of a website also knows as the URL of a website. When a user wants to open a website then they need to put the address or URL of the website into the web browser, and the asked website is delivered by the webserver.
- **Homepage:** Home page is a very common and important part of a webpage. It is the first webpage that appears when a visitor visits the website. The home page of a website is very important as it sets the look and feel of the website and directs viewers to the rest of the pages on the website.
- **Design:** It is the final and overall look and feel of the website that has a result of proper use and integration elements like navigation menus, graphics, layout, navigation menus etc.
- **Content:** Every web pages contained on the website together make up the content of the website. Good content on the webpages makes the website more effective and attractive.
- **The Navigation Structure:** The navigation structure of a website is the order of the pages, the collection of what links to what. Usually, it is held together by at least one navigation menu.

How to access website:

When we type a certain URL in a browser search bar, the browser requests the page from the Web server and the Web server returns the required web page and its content to the browser. Now, it differs from how the server returns the information required in the case of static and dynamic websites.

Types of Website:

- Static Website
- Dynamic Website

Static Website: In Static Websites, Web pages are returned by the server which are prebuilt source code files built using simple languages such as HTML, CSS, or JavaScript. There is no

processing of content on the server (according to the user) in Static Websites. Web pages are returned by the server with no change therefore, static Websites are fast. There is no interaction with databases. Also, they are less costly as the host does not need to support server-side processing with different languages.

Dynamic Website: In Dynamic Websites, Web pages are returned by the server which isprocessed during runtime means they are not prebuilt web pages, but they are built during runtime according to the user's demand with the help of server-side scripting languages suchas PHP, Node.js, ASP.NET and many more supported by the server. So, they are slower than static websites but updates and interaction with databases are possible. Dynamic Websites are used over Static Websites as updates can be done very easily as compared to static websites (Where altering in every page is required) but in Dynamic Websites, it is possible to do a common change once, and it will reflect in all the web pages.

There are different types of websites on the whole internet, we had chosen some most common categories to give you a brief idea –

- **Blogs:** These types of websites are managed by an individual or a small group of persons, they can cover any topics — they can give you fashion tips, music tips, travel tips, fitness tips. Nowadays professional blogging has become an external popular way of earning money online.
- **E-commerce:** These websites are well known as online shops. These websites allow us to make purchasing products and online payments for products and services. Stores can be handled as standalone websites.
- **Portfolio:** These types of websites acts as an extension of a freelancer resume. Itprovides a convenient way for potential clients to view your work while also allowing you to expand on your skills or services.
- **Brochure:** These types of websites are mainly used by small businesses, these types of websites act as a digital business card, and used to display contact information, and to advertise services, with just a few pages.
- **News and Magazines:** These websites needs less explanation, the main purpose of these types of websites is to keep their readers up-to-date from current affairs whereas magazines focus on the entertainment.

- **Social Media:** We all know about some famous social media websites like Facebook, Twitter, Reddit, and many more. These websites are usually created to let people share their thoughts, images, videos, and other useful components.
- **Educational:** Educational websites are quite simple to understand as their name itself explains it. These websites are designed to display information via audio or videos or images.
- **Portal:** These types of websites are used for internal purposes within the school, institute, or any business, These websites often contain a login process allowing students to access their credential information or allows employees to access their emails and alerts.

Different Design issues:

Website accessibility

The Web is basically designed to work for all people, irrespective of their culture, language, location, or physical or mental ability. However, one of the major challenges a web designer faces is to enhance the accessibility of websites. A good designer should ensure that the website is not only accessible across the world but also its various features are fully functional as well.

Compatibility with browsers

With the introduction of different browsers, designers are constantly facing the challenge of building a website that is compatible with almost all the major browsers. After designing a website, it should be tested on all browsers to ensure that the website is completely functional.

Navigational structure

The navigational structure is one of the vital aspects of any website, as the usability of the website is based on an excellent navigational structure. Hence, in order to avoid any such issues, designers have to ensure that they provide a proper navigational structure to the users.

Positioning of content

Sr.No	Website URL	Purpose of website	Thinks Liked in the Websites	Things Disliked in the Websites	Overall evaluation of the Websites

Another prominent aspect of a website is that the users should find it readable. While designing the structure of the website, the designer should place the content in such a manner that it enhances easy reading. In addition, use suitable colours when it comes to font.

Challenges in creating a responsive website

The process of creating a responsive website is a major challenge for designers as it involves a wide array of devices, code frameworks, scripts, and of course, the constant need to work in an innovative way with clients to effectively manage the process.

Here are some of the major issues faced by web designers while building a responsive website:

- When compared to a desktop site, building a responsive website takes a significant amount of time.In responsive websites, the content should be prioritized for mobile use. For smaller screens, the designer must know precisely what matters, the devices that people use, theircircumstances, and their unique goals.
- Interactions in desktop sites and mobile devices are different.
- Responsive websites recognize media queries to assess the screen size of every visitor and then display the layout accurately. The issue here is that old browsers, particularly Internet Explorer version 8 and older, do not recognize media queries.
- In responsive design, scaled images instantly lose details, and hence their meaning. This is because scaling mainly happens depending on the size of the screen and not on context.
- On smaller devices, designing intuitive navigation menus becomes a real a challenge due to the limited screen size.

Result:

01	https://www.amazon.in	e-commerce, cloud computing, digital streaming and AI	SSH Protocol Responsive Website Good Service	Online Payment Failures	Very Good
02	https://internshala.com	Internship and Training Platform	Responsive Website Quality Courses Best learning Platform	Internship Fraud	Good
03	https://www.udemy.com/	Online Learning and Teaching marketplace	Responsive Website Good Mentorship	Can't save videos in device storage	Very Good
04	https://www.netflix.com/	Entertainment	Responsive Website Easy-to-navigate Interface	Paid Subscription Subscription Value	Not Bad
05	https://en.wikipedia.org/wiki/Main_Page	Open online Encyclopedia	Free Source of Knowledge	Not Attractive	Good

Design Issues:

1) Images are loaded very late.

2) Some sections are missing like information about library and there is no events listed incomputer department section.

3) While using mobile for observing websites didn't like it's font and styling.

4) For some websites difficult for me to signing by using google.

5) Plug-Ins required.

6) Site isn't optimized for mobile.

Conclusion:

Therefore, we studied about the different design issues occurs in web development. And leant theBasics of form validation like Email's @ and Password's * .

Experiment No.:02

Title: HTML, Web pages

Objective: Understand about the concept of html.

Problem statements: Implement a web pages index.htm for any client website (e.g.., a restaurant website project) using following:

a. HTML syntax:heading tags, basic tags and attributes ,frames ,tables, images, lists, links for text and text and images, forms, etc.

b. use of internsl css, inline css, external css.

Outcomes: Design dynamic college website using html.

Software & Hardware requirements:

Any browser, visual studio code software.

Theoretical concept:

A. FRAMES

With frames, you can display more than one HTML document in the same browser window. Each HTML document is called a frame, and each frame is independent of the others.

The Frameset Tag:-The <frameset> tag defines how to divide the window into frames.

The Frame Tag:-The <frame> tag defines what HTML document to put into each frame.

Example:

```
<frameset cols="25%, 75 %">
<frame src="frame_a.htm">
<frame src="frame_b.htm">
</frameset>
```

Tags and their Description:

<frameset> Defines a set of frames

<frame> Defines a sub window (a frame)

B. LINKS

A hyperlink is a reference (an address) to a resource on the web.

Example:

Visit W3Schools!

The href Attribute:-The href attribute defines the link "address".

The target Attribute:-The target attribute defines where the linked document will be opened.

Tag and its Description: <a> Defines an anchor

C. TABLES

Tables are defined with the <table> tag. A table is divided into rows (with the <tr> tag), and each row is divided into data cells (with the <td> tag). The letters td stands for "table data," which is the content of a data cell.

Example:

<table border="1">

<tr>

<td>Row 1, cell 1</td>

<td>Row 1, cell 2</td>

</tr>

</table>

Tags and their Description:

<Table> Defines a table

<th> Defines a table header

<tr> Defines a table row

<td> Defines a table cell

D.HTML Form

An HTML form is a section of a document which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.An HTML form facilitates the user to enter data that is to be sent to the server for processing such as name, email address, password, phone number, etc. .

Why use HTML Form?

HTML forms are required if you want to collect some data from of the site visitor.

For example: If a user want to purchase some items on internet, he/she must fill the form such as shipping address and credit/debit card details so that item can be sent to the given address.

HTML Form Syntax:-

<form action="server url" method="get|post">

//input controls e.g. textfield, textarea, radiobutton, button

</form>

E.HTML Lists

Lists are used to group together related pieces of information so they are clearly associated with each other and easy to read. In modern web development, lists are workhorse elements, frequently used for navigation as well as general content.

LIST TYPES:- There are three list types in HTML:

unordered list — used to group a set of related items in no particular order

ordered list — used to group a set of related items in a specific order

description list — used to display name/value pairs such as terms and definitions

Each list type has a specific purpose and meaning in a web page.

Unordered lists:- Unordered (bulleted) lists are used when a set of items can be placed in any order. An example is a shopping list:

milk

bread

butter

coffee beans

Although the items are all part of one list, you could put the items in any order and the list would still make sense:

bread

coffee beans

milk

butter

You can use CSS to change the bullet to one of several default styles, use your own image, or even display the list without bullets — we'll look at how to do that in the Styling lists and links article.

Unordered list markup:- Unordered lists use one set of tags wrapped around one or more sets of tags:

```
<ul>
  <li>bread</li>
  <li>coffee beans</li>
  <li>milk</li>
  <li>butter</li></ul>
```

Ordered lists:- Ordered (numbered) lists are used to display a list of items that should be in a specific order. An example would be cooking instructions:

Gather ingredients

Mix ingredients together

Place ingredients in a baking dish

Bake in oven for an hour

Remove from oven

Allow to stand for ten minutes

Serve

Ordered lists can be displayed with several sequencing options. The default in most browsers is decimal numbers, but there are others available:

Letters:-

Lowercase ascii letters (a, b, c…)

Uppercase ascii letters (A, B, C…).

Lowercase classical Greek: (έ, ή, ί…)

Numbers:-

Decimal numbers (1, 2, 3…)

Decimal numbers with leading zeros (01, 02, 03…)

Lowercase Roman numerals (i, ii, iii…)

Uppercase Roman numerals (I, II, III…)

Traditional Georgian numbering (an, ban, gan…)

Traditional Armenian numbering (mek, yerku, yerek…)

As with unordered lists, you can use CSS to change the style of your ordered lists. See Styling lists and links for more information.

Ordered list markup:-

Ordered lists use one set of tags wrapped around one or more sets of tags:

```
<ol>
  <li>Gather ingredients</li>
  <li>Mix ingredients together</li>
  <li>Place ingredients in a baking dish</li>
  <li>Bake in oven for an hour</li>
  <li>Remove from oven</li>
  <li>Allow to stand for ten minutes</li>
  <li>Serve</li>
</ol>
```

Beginning ordered lists with numbers other than 1

A common requirement in ordered list usage is to get them to start with a number other than 1 (or i, or I, etc.). This is done using the start attribute, which takes a numeric value (even if you're using CSS to change the list counters to be alphabetic or Roman). This is useful if you have a single list of items, but need to break up the list with a note or other relatedinformation. For example, we could do this with the previous example:

```
<ol>
  <li>Gather ingredients</li>
  <li>Mix ingredients together</li>
  <li>Place ingredients in a baking dish</li>
```

```
</ol>
<p>Before you place the ingredients in the baking dish, preheat the oven to
180 degrees centigrade/350 degrees fahrenheit in readiness for the next step.</p>
<ol start="4">
  <li>Bake in oven for an hour</li>
  <li>Remove from oven</li>
  <li>Allow to stand for ten minutes</li>
  <li>Serve</li>
</ol>
```

This gives the following result:

Gather ingredients

Mix ingredients together

Place ingredients in a baking dish

Before you place the ingredients in the baking dish, preheat the oven to 180 degrees centigrade/350 degrees fahrenheit in readiness for the next step.

Bake in oven for an hour

Remove from oven

Allow to stand for ten minutes

Serve

Note that this attribute was deprecated in HTML 4, so it will prevent your page from validating if you are using an HTML4 strict doctype. If you want to make use of such functionality in an HTML4 strict page, and it absolutely has to validate, you can do it using CSS Counters instead. Fortunately, however, the start attribute has been reinstated in HTML5.

Description lists

Description lists (previously called definition lists, but renamed in HTML5) associate specific names and values within a list. Examples might be items in an ingredient list and their descriptions, article authors and brief bios, or competition winners and the years in which they won. You can have as many name-value groups as you like, but there must be at least one name and at least one value in each pair.

Description lists are flexible: you can associate more than one value with a single name, or vice versa. For example, the term ‑coffee‖ can have several meanings, and you could show them one after the other:

coffee

a beverage made from roasted, ground coffee beans

a cup of coffee

a social gathering at which coffee is consumed

a medium to dark brown colour

Or, you can associate more than one name with the same value. This is useful to show variations of a term, all of which have the same meaning:

soda

pop

fizzy drink

cola

a sweet, carbonated beverage

Description list markup:- Description lists use one set of <dl></dl> tags wrapped around one or more groups of <dt></dt> (name) and <dd></dd> (value) tags. You must pair at least one <dt></dt> with at least one <dd></dd>, and the <dt></dt> should always come first in the source order.

A simple description list of single names with single values would look like this:

```
<dl>
  <dt>Name</dt>
  <dd>Value</dd>
  <dt>Name</dt>
  <dd>Value</dd>
  <dt>Name</dt>
  <dd>Value</dd>
</dl>
```

This is rendered as follows:

Name

Value

Name

Value

Name

Value

In the following example, we associate more than one value with a name, and vice versa:

```
<dl>
  <dt>Name1</dt>
  <dd>Value that applies to Name1</dd>
  <dt>Name2</dt>
  <dt>Name3</dt>
  <dd>Value that applies to both Name2 and Name3</dd>
```

```
  <dt>Name4</dt>
  <dd>One value that applies to Name4</dd>
  <dd>Another value that applies to Name4</dd>
</dl>
```

That code would render like this:

Name1

  Value that applies to Name1

Name2

Name3

  Value that applies to both Name2 and Name3

Name4

  One value that applies to Name4

  Another value that applies to Name4

EXECUTION STEPS:-

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
* { box-sizing: border-box;
}
.button {
  background-color:green;
  border: none;
  color: rgb(32, 19, 19);
```

```
  padding: 15px 32px;
  text-align: center;
  text-decoration: none;
  display: inline-block;
  font-size: 16px;
  margin: 4px 2px;
  cursor: pointer;
}
/* Add a gray background color with some padding */
body {
  font-family: Arial;
  padding: 20px;
  background:white;}
/* Header/Blog Title */
.header {
  padding: 30px;
  font-size: 40px;
  text-align: center;
  background-image:black;
}
/* Create two unequal columns that floats next to each other */
/* Left column */
.leftcolumn {
  float: left;
  width: 75%;
}
/* Right column */
.rightcolumn {
  float: left;
```

```
  width: 25%;
  padding-left: 20px;
}
/* Fake image */
.fakeimg {
  background-color: #aaa;
  width: 100%;
  padding: 20px;
}
/* Add a card effect for articles */
.card {
   background-color: white;
   padding: 20px;
   margin-top: 20px;
}
/* Clear floats after the columns */
.row:after {
  content: "";
  display: table;
  clear: both;
}
/* Footer */
.footer {
  padding: 20px;
  text-align: center;
  background: #ddd;
  margin-top: 20px;
}
```

```
/* Responsive layout - when the screen is less than 800px wide, make the two columns stack on top of each other instead of next to each other */
@media screen and (max-width: 800px) {
  .leftcolumn, .rightcolumn {
    width: 100%;
    padding: 0;}
}
</style>
</head>
<body>
<div class="header">
  <h2 style="color:red">Maulana Mukhtar Ahmad Nadvi Technical College Malegeon</h2>
   <h5>(MANSOORA)</h5>
     <img  src="image/1.jpg"><br>
    <a href="#" class="button">Home</a>
    <button class="button">Admissions</button>
    <button class="button">About</button>
    <button class="button">Help</button>
    <button class="button">Feedback</button>
   </body>
</div>
<div class="row">
  <div class="leftcolumn">
    <div class="card">
       <h1>Welcome to Mmantc</h1>
     <img src="image/l2.jpg" style="width: 1250px;">
   <p><h3>MMANTC college of Engineering,Malegeon camp</h3> </p>
     </div>
    <div class="card">
```

```
    <h2>College photo</h2>
    <h5>date, Sep 2, 2017</h5>
  <img src="image/images (4).jpg"  alt="college" style="width:1250px;height: 600px;">
    <img src="image/download1.jpg"  style="width:1250px;height:800px;">
    <p>Admissions open for Engineering Students.</p>
   </div>
  </div>
  <div class="rightcolumn">
   <div class="card">
    <h2>About Me</h2>
    <img src="image/images (4).jpg" > </div>
   <div class="card"> <h3>Popular Post</h3>
    <img src="image/download.jpg" style="width:300px;height:300px;">
    <div >international confernce.</div><br>
    <img src="image/images (3).jpg" style="width:300px;height:450px;"  >
   <div >Industrial visit.</div><br>
       <img src="image/images (2).jpg" style="width:300px;height:500px;">
   <div >Tree plantation Day</div><br>
    <img src="image/images (1).jpg" style="width: 300px;height:500px;">
     <div>M.E Project.</div>      </div>
 </div>
</div>
<div class="footer">
 <h2>Follow Me</h2>
 <p>Mmantc.edu.in</p>
    <p>MMANTC@gmail.com</p>
 <h2 >MMANTC.2022</h2></div>
</body>
</html>
```

Maulana Mukhtar Ahmad Nadvi Technical College Malegeon

(MANSOORA)

MMANTC

Home Admissions About Help Feedback

Welcome to Mmantc

MMANTC college of Engineering,Malegeon camp

About Me

Popular Post

international conference.

5/17/22, 3:29 PM 127.0.0.1:5500/file 2.html

date, Sep 2, 2017

Conclusion:

Hence, we studied the design of dynamic college website by using html and CSS. And we learnt aboutbasic tags of HTML and basic properties of CSS.

Experiment No.:03

Title: XML

Objective: Understand the basic concept of XML document.

Problem statement:

To write a program which takes user id as input and displays the user details by taking the user information from the XML document.

Software & Hardware Requirement:

Notepad, any browser, VScode

Theoretical concept:

DTD stands for Document Type Definition and it is a document which defines the structure of an XML document. It is used to describe the attributes of XML language precisely. It can be classified into two types namely internal DTD and external DTD. It can be specified inside a document or outside a document. DTD mainly checks the grammar and validity of a XML document. It checks that a XML document has a valid structure or not.

XML Schema Definition:

XSD stands for XML Schema Definition and it is a way to describe the structure of a XML document. It defines the rules for all the attributes and elements in a XML document. It can also be used to generate the XML documents. It also checks the vocabulary of the document. It doesn't require processing by a parser. XSD checks for the correctness of the structure of the XML file. XSD was first published in 2001 and after that it was published in 2004.

Implementation:

Code

User Information

```
<?xml version="1.0"?>
<userdata>
<user1>
    <jntuno>561</jntuno>
    <name> chandu</name>
    <phno>9989891510</phno>
    <address>srikakulam</address>
</user1>
<user2>
    <jntuno>540</jntuno>
    <name> karteek</name>
    <phno>9701443556</phno>
    <address>srikakulam1</address>
</user2>
<user3>
    <jntuno>525</jntuno>
    <name> giri</name>
    <phno>9897895301</phno>
    <address>rajam</address>
</user3>
    <user4>
        <jntuno>526</jntuno>
        <name>gopi</name>
        <phno>9999789540</phno>
        <address>parlakimidi</address>
    </user4>
    <user5>
        <jntuno>513</jntuno>
        <name> manoj</name>
        <phno>9989233331</phno>
        <address>hyderabad</address>
    </user5>
    <user6>
        <jntuno>514</jntuno>
        <name> balaji</name>
        <phno>9999789560</phno>
        <address>vizag</address>
    </user6>
    <user7>
        <jntuno>567</jntuno>
        <name>kiran </name>
```

```
        <phno>9999178957</phno>
        <address>vijayanagaram</address>
    </user7>
    <user8>
        <jntuno>518</jntuno>
        <name> sekhar</name>
        <phno>789580</phno>
        <address>bobili</address>
    </user8>
    <user9>
        <jntuno>517</jntuno>
        <name>chaitu</name>
        <phno>789590</phno>
        <address>sallur</address>
    </user9>
    <user10>
        <jntuno>595</jntuno>
        <name> sravan</name>
        <phno>9000789500</phno>
        <address>sklm</address>
    </user10>
    </userdata>
```

```
<?xml version="1.0" ?>
- <userdata>
  - <user1>
      <jntuno>561</jntuno>
      <name>chandu</name>
      <phno>9989891510</phno>
      <address>srikakulam</address>
    </user1>
  - <user2>
      <jntuno>540</jntuno>
      <name>karteek</name>
      <phno>9701443556</phno>
      <address>srikakulam1</address>
    </user2>
  - <user3>
      <jntuno>525</jntuno>
      <name>giri</name>
      <phno>989789530</phno>
      <address>rajam</address>
    </user3>
  - <user4>
      <jntuno>526</jntuno>
      <name>gopi</name>
      <phno>9999789540</phno>
      <address>parlakimidi</address>
    </user4>
  - <user5>
      <jntuno>513</jntuno>
```

Output:

Conclusion:

Hence, we applied the XML document using the XML. And leant basic tags of XML which are define inXML and learnt how it works with other languages and what are the difference between HTML and CSStags.

Experiment No.04

Title: HTML, Java Script

Objective:

1. Understand about basic concepts of JavaScript.
2. Use JavaScript for validation of data.

Problem statement: Design and implement a simple calculator using Java Script for operations like addition, multiplication, subtraction, division, square of number etc.

a) Design calculator interface like text field for input and output, buttons for numbers and operators etc.
b) Validate input values
c) Prompt/alerts for invalid values etc.

SOFTWARE & HARDWARE REQUIREMENTS:

1. Visual studio code
2. Browser

THEORY-CONCEPT

JavaScript is a programming language of HTML as well web. It is preferred for creating network-centric applications. It is integrated and complimentary with Java. As JavaScript is integrated with HTML it is very easy to implement. It is open as well as cross-platform.

Advantages:

The advantages of using JavaScript are −

- It requires less server interaction
- Immediate feedback to the visitors
- Increased interactivity
- Richer interfaces.

Validation:

When client enters the all necessary data and press the submit button form validation is done at server side If data entered by a client is incorrect or missing,the server needs to send all data back to the client and request for resubmission of form with correct information. This is really a lengthy process which puts a lot of load(burden) on the server.

Implementation

Code:

```
<! DOCTYPE html>
<html>
<head>
<meta charset="utf-8">
<title>
Calculator using HTML Example
</title>
<link href="https://fonts.googleapis.com/css2?family=Cookie&display=swap"
rel="stylesheet">
<!-- CSS property to create interactive
calculator interface -->
<style>
html {
height: 100vh;
display: flex;
align-items: center;
justify-content: center;
background-color: #2d3436;
background-image: linear-gradient(315deg, #2d3436 0%, #000000 74%);
font-family: 'Cookie', cursive;
20. }
.title {
margin-bottom: 10px;
padding: 5px 0;
```

```
font-size: 40px;
font-weight: bold;
text-align: center;
color: red;
font-family: 'Cookie', cursive;
29. }
input[type=button] {
width: 60px;
height: 60px;
float: left;
padding: 0;
margin: 5px;
box-sizing: border-box;
background: #ecedef;
border: none;
font-size: 30px;
line-height: 30px;
border-radius: 50%;
font-weight: 700;43.
color: #5E5858;
44.   cursor: pointer;
45. }
input[type=text] {
width: 270px;
height: 60px;
float: left;
padding: 0;
box-sizing: border-box;
border: none;
background: none;
color: red;
text-align: right;
font-weight: 700;
font-size: 60px;
line-height: 60px;
margin: 0 25px;
}
```

```
.calculator {
background-color: #c0c0c0;
box-shadow: 0px 0px 0px 10px #666;
border: 5px solid black;
border-radius: 10px;
66. }
#display {
height: 40px;
text-align: right;
background-color: black;
border: 3px solid white;
font-size: 18px;
left:   2px;
top:   2px;
color: red;
76. }
.btnTop {
color: white;
background-color: #6f6f6f;
font-size: 14px;
margin: auto;
width:  50px;
height: 25px;
84. }
</style>
</head>
<body>
<div class = "title" align="center">
Example of Calculator using HTML
</div>
<form name="Calculator" class = "calculator" >
<table border="2" align="center" cellpadding="15" cellspacing="12" bgcolor="#c0c0c0">
<tr>
<td>
<input type="text" name="Input" Size="35" id="display">
<br>
</td>
```

```
</tr>
<tr>
<td>
<input type="button" name = "one" style="font-
size:30px" value=" 1 " OnClick="Calculator.Input.value += '1'">102.<input type="button" name = "two"
style = "font-
size:30px" value=" 2 " OnCLick="Calculator.Input.value += '2'">
size:30px" value=" 3 " OnClick="Calculator.Input.value += '3'">104.<input type="button" name="add"class
="btnTop" style="font-
size:30px" value=" + " OnClick="Calculator.Input.value += ' + '">105.<br>106.<input type="button" name =
"four" style="font-
size:30px" value=" 4 " OnClick="Calculator.Input.value += '4'">107.<input type="button" name = "five"
style="font-
size:30px" value=" 5 " OnCLick="Calculator.Input.value += '5'">108.<input type="button" name = "six"
style="font-
size:30px" value=" 6 " OnClick="Calculator.Input.value += '6'"> 109.<input type="button" name ="minus"
style="font-size:30px" value=" -
" OnClick="Calculator.Input.value += ' - '">110.<br> 111.<input type="button" name = "seven" style="font-
size:30px" value=" 7 " OnClick="Calculator.Input.value += '7'">112.<input type="button" name = "eight"
style="font-
size:30px" value=" 8 " OnCLick="Calculator.Input.value += '8'">113.<input type="button" name = "nine"
style="font-
size:30px" value=" 9 " OnClick="Calculator.Input.value += '9'"> 114.<input type="button" name = "mul"
style="font-size:30px" value=" * "115.OnClick="Calculator.Input.value += ' * '">
<br>
<input type="button" name = "clear" style="font-
size:30px" value=" c " OnClick="Calculator.Input.value = ''">118.<input type="button" name="zero"
style="font-
size:30px" value=" 0 " OnClick="Calculator.Input.value += '0'">119.<input type="button" name="DoIt"
style="font-
size:30px" value=" = " OnClick="Calculator.Input.value = eval(Calculator.Input.value)">
```

Output:

Conclusion:

Hence, we applied validate the data using JavaScript. And created a calculator with the Help of HTML CSS and Javascript.

Experiment No.:05

Title: Servlets.

Objective:

1. Understand about basic concepts of Servlets.
2. Use SQL for validation of data.

Problem statement: Implement the sample program demonstrating the use of Servlet.

e.g., Create a database table ebookshop (book_id, book_title, book_author, book_price, quantity) using database like Oracle/MySQL etc. and display (use SQL select query) the table content using servlet.

SOFTWARE & HARDWARE REQUIREMENTS:

1. Xampp sever
2. PhpMyadmin

THEORY-CONCEPT

What are Servlets?

Java Servlets are programs that run on a Web or Application server and act as a middle layer between a requests coming from a Web browser or other HTTP client and databases or applications on the HTTP server.

Using Servlets, you can collect input from users through web page forms, present records from a database or another source, and create web pages dynamically.

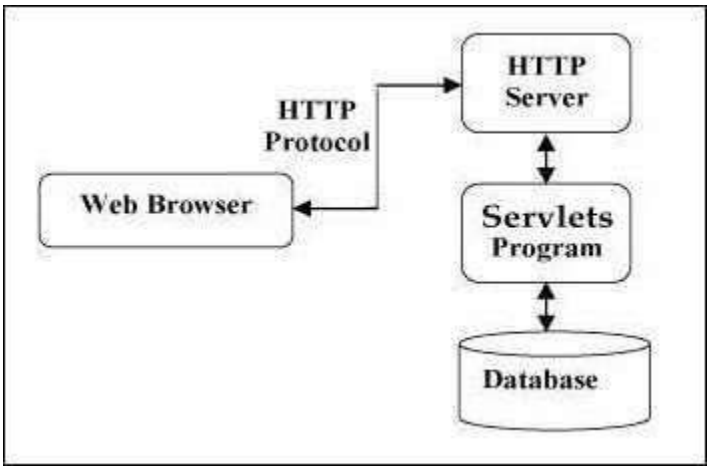
Java Servlets often serve the same purpose as programs implemented using the CommonGateway Interface (CGI). But Servlets offer several advantages in comparison with the CGI.

- Performance is significantly better.
- Servlets execute within the address space of a Web server. It is not necessary to create a separate process to handle each client request.

- Servlets are platform-independent because they are written in Java.
- Java security manager on the server enforces a set of restrictions to protect the resources on a server machine. So servlets are trusted.
- The full functionality of the Java class libraries is available to a servlet. It can communicate with applets, databases, or other software via the sockets and RMI mechanisms that you have seen already.

Servlets Architecture

The following diagram shows the position of Servlets in a Web Application.



What is SQL?

SQL is a short-form of the structured query language, and it is pronounced as S-Q-L or sometimes as See-Quell.

This database language is mainly designed for maintaining the data in relational database management systems. It is a special tool used by data professionals for handling structured data (data which is stored in the form of tables). It is also designed for stream processing in RDSMS.

You can easily create and manipulate the database, access and modify the table rows and columns, etc. This query language became the standard of ANSI in the year of 1986 and ISO in the year of 1987.

If you want to get a job in the field of data science, then it is the most important query language to learn. Big enterprises like Facebook, Instagram, and LinkedIn, use SQL for storing the data in the back-end.

Some SQL Commands

The SQL commands help in creating and managing the database. The most common SQL commands which are highly used are mentioned below:

1. CREATE command
2. UPDATE command
3. DELETE command
4. SELECT command
5. DROP command
6. INSERT command

CREATE Command

This command helps in creating the new database, new table, table view, and other objects of the database.

UPDATE Command

This command helps in updating or changing the stored data in the database.

DELETE Command

This command helps in removing or erasing the saved records from the database tables. It erases single or multiple tuples from the tables of the database.

SELECT Command

This command helps in accessing the single or multiple rows from one or multiple tables of the database. We can also use this command with the WHERE clause.

DROP Command

This command helps in deleting the entire table, table view, and other objects from the database.

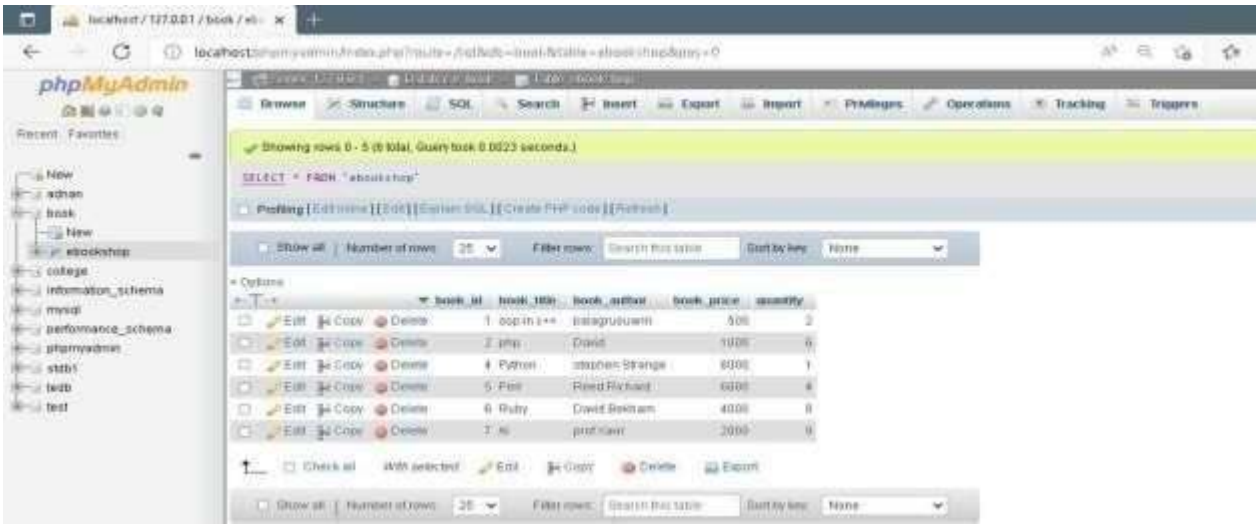
INSERT Command

This command helps in inserting the data or records into the database tables. We can easily insert the records in single as well as multiple rows of the table.

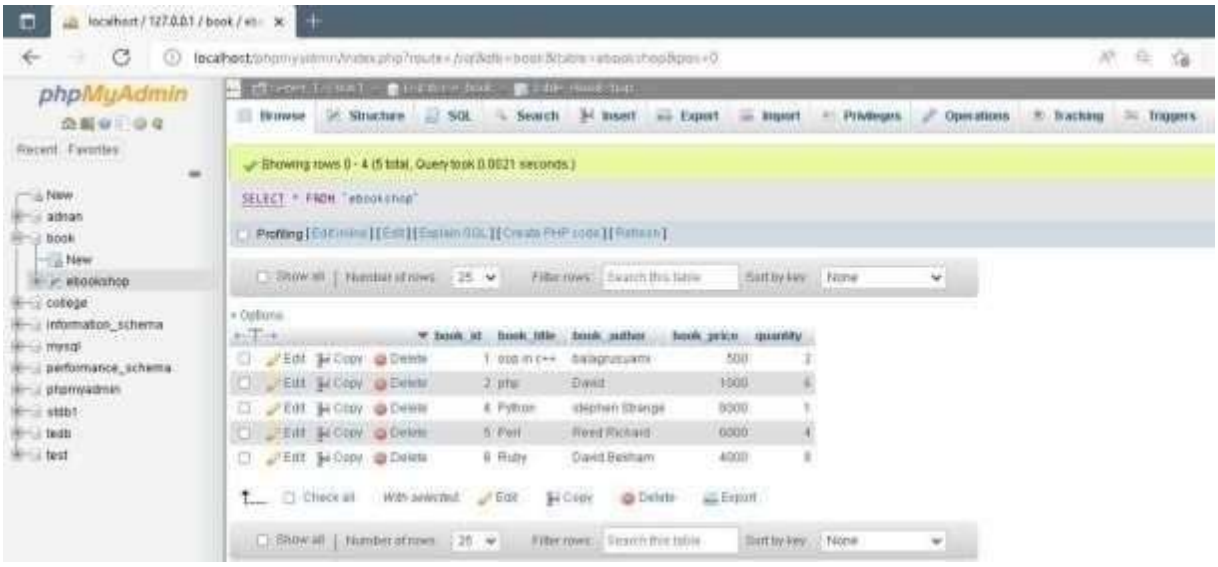
Implementation:

```
Insert INTO ebookshop value (1,‖loops in c++‖,‖Balagrusuami‖,500,2);

Insert INTO ebookshop value (2,‖php‖,‖David‖,1000,6);

Insert INTO ebookshop value (4,‖python‖,‖Stephen strange‖,8000,1);

Insert INTO ebookshop value (5,‖Perl‖,‖Reed Richard‖,6000,4);

Insert INTO ebookshop value (6,‖Ruby‖,‖Tony‖,4000,8);

Insert INTO ebookshop value (7,‖AI‖,‖prof Xavir‖,2000,9);

Select * from ebookshop;
```


```
Update ebookshop set book_author=‖David bekham‖ where book_author=‖Tony‖;
```



Delete from ebookshop where book_id=7;



Conclusion:

Hence, we create database of ebookshop by using SQL commands. And learnt basic query of Mysql And different properties of Mysql.

Experiment No.:06

Title: PHP & MySQL

Objective:

1. Understand about basic concepts of Angular JS.
2. Use HTML for validation of data.

Problem statement: Build a dynamic web application using PHP and MySQL.

a. Create database tables in MySQL and create connection with PHP.

b. Create the add, update, delete and retrieve functions in the PHP web app interacting with MySQL database.

SOFTWARE & HARDWARE REQUIREMENTS:

1. Visual studio code/ Notepad
2. Any Browser

THEORY-CONCEPT

What is PHP?

PHP is an open-source, interpreted, and object-oriented scripting language that can be executed at the server-side. PHP is well suited for web development. Therefore, it is used to develop web applications (an application that executes on the server and generates the dynamic page.).

PHP was created by **Rasmus Lerdorf in 1994** but appeared in the market in 1995. **PHP 7.4.0** is the latest version of PHP, which was released on **28 November**. Some important points need to be noticed about PHP are as followed:

- PHP stands for Hypertext Preprocessor.
- PHP is an interpreted language, i.e., there is no need for compilation.
- PHP is faster than other scripting languages, for example, ASP and JSP.

- PHP is a server-side scripting language, which is used to manage the dynamic content of the website.
- PHP can be embedded into HTML.
- PHP is an object-oriented language.
- PHP is an open-source scripting language.
- PHP is simple and easy to learn language.

What is MySQL?

MySQL is currently the most popular database management system software used for managing the relational database. It is open-source database software, which is supported by Oracle Company. It is fast, scalable, and easy to use database management system in comparison with Microsoft SQL Server and Oracle Database. It is commonly used in conjunction with PHP scripts for creating powerful and dynamic server-side or web-based enterprise applications.

It is developed, marketed, and supported by **MySQL AB, a Swedish company**, and written in C programming language and C++ programming language. The official pronunciation of MySQL is not the My Sequel; it is ***My Ess Que Ell***. *However, you can pronounce it in your way.* Many small and big companies use MySQL. MySQL supports many Operating Systems like Windows, Linux, MacOS, etc. with C, C++, and Java languages.

MySQL is a Relational Database Management System (RDBMS) software that provides many things, which are as follows:

- It allows us to implement database operations on tables, rows, columns, and indexes.
- It defines the database relationship in the form of tables (collection of rows and columns), also known as relations.
- It provides the Referential Integrity between rows or columns of various tables.
- It allows us to updates the table indexes automatically.
- It uses many SQL queries and combines useful information from multiple tables for the end-users.

Web applications are developed in stages, in a step-by-step manner.

1. Gather the requirements – Know what the users want, what the application should do, what the goals are.
2. Design the structure of the database.
3. Build the core PHP scripts and libraries.
4. Design the interface, build the pages with HTML, CSS, Javascript.
5. Finally, test and deploy the web application.

Steps:->

1> Start ->programs->XAMPP->xampp control panel (check APACHE and MySQL has green tick and stop is at button) minimizw this window

2> Open firefox->write in address bar->localhost/phpmyadmin -> create database and table here,also add at least 3 rows in it. (This is MYSQL)

Database name- db

Table name- stud

Table have 2 columns name,address with data type varchar

3> Goto My computer -> c:\ ->Xampp folder->htdoc folder-> in this folder create on folder named as php1(any name you can give) in this folder save two files ->insert.html and index.php (write code in these files using notepad)

ImplementationCode

insert.html

```
<html>
<body>
<form action="index.php" method="post">
Name: <input type="text" name="name"><br>
E-mail: <input type="text" name="address"><br>
<input type="submit">
```

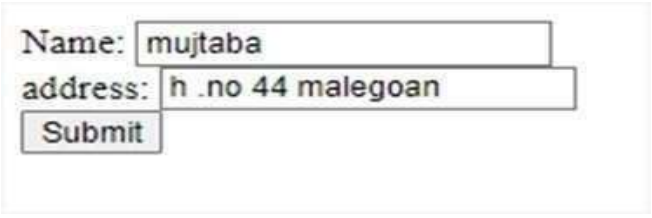
```
</form>
</body>
</html>
```

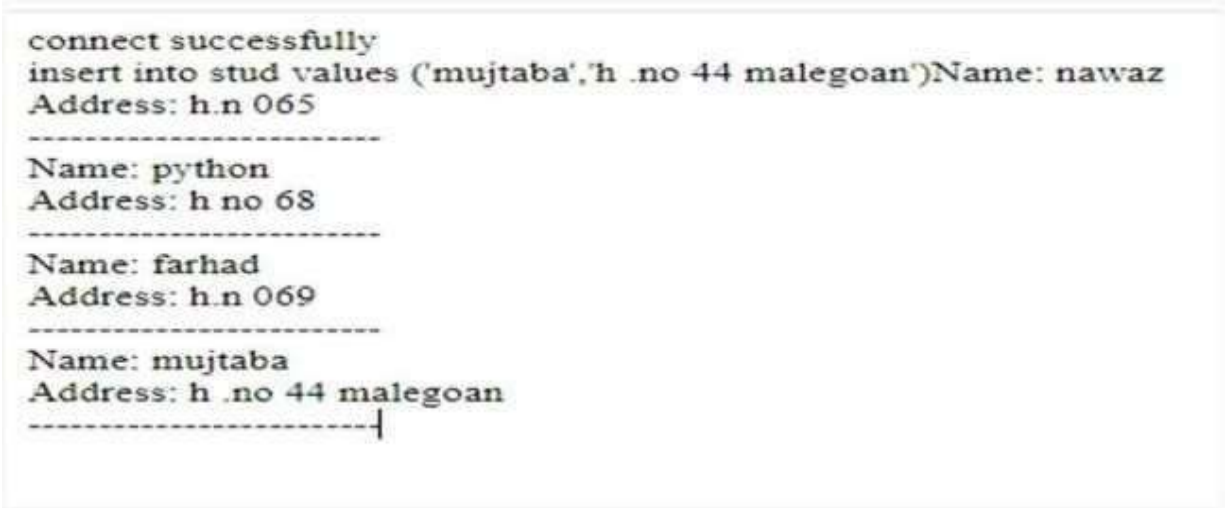
index.php

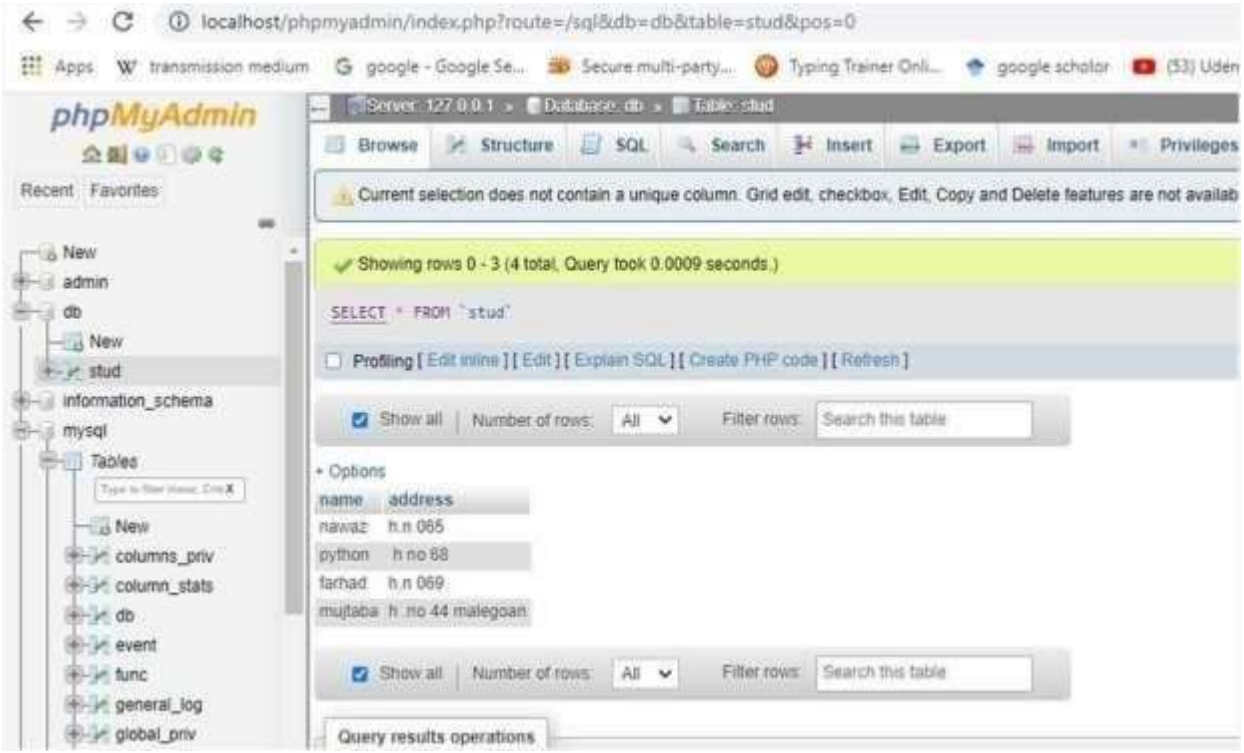
```
<?php
$conn=mysqli_connect('localhost','root','','db'); //db is name of database created in mysql phpmyadmin
if(!$conn)
{
die(mysqli_connect_error());
}
echo "connect successfully";
echo "<br>";
$tname= $_POST["name"];
$tadd=$_POST["address"];
$sql1="insert into stud values ('$tname','$tadd')";
echo $sql1;
mysqli_query($conn,$sql1);

$sql= ' select * from stud ' ;
$rs=mysqli_query($conn,$sql);
$nrows = mysqli_num_rows($rs);
if( $nrows > 0)
{
   while($row=mysqli_fetch_assoc($rs))
        {
        echo "Name: {$row['name']}<br>";
        echo "Address: {$row['address']}<br>";
        echo "..... <br>";
        }
}
else
```

```
{
echo "Record not found";
}
mysqli_close($conn);
?>
```

Output







Conclusion:

In experiment we learn how to create dynamic web application usingPHP and MySQL. And leant how php connect with Mysql database .

Experiment No.:07

Title: Angular JS.

Objective:

1. Understand about basic concepts of Angular JS.
2. Use HTML for validation of data.

Problem statement: Design an application using Angular JS.

e.g., Design registration (first name, last name, username, password) and login page using Angular JS.

SOFTWARE & HARDWARE REQUIREMENTS:

1. Visual studio code/ Notepad
2. Any Browser

THEORY-CONCEPT

AngularJS

AngularJS version 1.0 was released in 2012.Miško Hevery, a Google employee, started to work with AngularJS in 2009. The idea turned out very well, and the project is now officially supported by Google. AngularJS is a **JavaScript framework**. It can be added to an HTML page with a <script> tag. AngularJS extends HTML attributes with **Directives**, and binds data to HTML with **Expressions**. By using Angular JS we are storing students information in the table.

AngularJS is a JavaScript Framework

AngularJS is a JavaScript framework written in JavaScript.AngularJS is distributed as a JavaScript file, and can be added to a web page with a script tag:

```
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.mi
n.js">

</script>
```

It changes the static HTML to dynamic HTML. Its features like dynamic binding and dependency injection eliminate the need for code that we have to write otherwise. AngularJS is rapidly growing and because of this reason, we have different versions of AngularJs with the latest stable being 1.7.7. It is also important to note that Angular is different from AngularJs. It is an open-source project which can be freely used and changed by anyone. It extends HTML attributes with Directives, and data is bound with HTML.

Key Points:

- AngularJS is a JavaScript framework that is mainly used for Frontend Development.
- It is used for making Single Page Applications(SPA).
- It is open source and is completely free for everyone.
- It uses the Model, View, Control(MVC) pattern for developing projects.

Why use it?

- **Easy to work with:** All you need to know to work with AngularJs is basics of HTML,CSS and Javascript,not necessary to be an expert in these technologies.
- **Time-saving:** AngularJs allows us to work with components and hence we can use them again which saves time and unnecessary code.
- **Ready to use template:** AngularJs is mainly plain HTML, and it mainly makes use of the plain HTML template and passes it to the DOM and then the AngularJS compiler. It traverses the templates and then they are ready to use.

Implementation Code :

Angular.html

```
<html ng-app = "simpleApp">
<head>
<script src = "https://ajax.googleapis.com/ajax/libs/angularjs/1.3.14/angular.min.js"></script>
<script src = "index.js"></script>
</head>
<body>
<h2>AngularJS Form Submit Application</h2>
<div  ng-controller = "simpleController">
<table border= 1>
<tr><th> No </th>
<th> Name </th>
<th> Age </th>
<th> City </th>
<th> course </th>
```

```
<th> dept </th></tr>
<tr ng-repeat="entry in collection">
<td> {{$index+1}} </td>
<td> {{entry.name}}</td>
<td> {{entry.age}} </td>
<td> {{entry.city}} </td>
<td> {{entry.course}} </td>
<td> {{entry.dept}} </td>
</tr>
</table>
<form ng-submit="addEntry()">
<h2> New Data Entry Form </h2>
<table>
<tr><td>Name:</td>
<td> <input type="text" ng-model="newData.name" required></td>
</tr>
<tr><td>Age: </td>
<td><input type="number" ng-model="newData.age" required></td>
</tr>
<tr><td>city: </td>
<td><input type="text" ng-model="newData.city" required></td>
</tr>
<tr><td>course: </td>
 <td><input type="text" ng-model="newData.course" required></td>
</tr>
 <tr><td>dept: </td>
<td><input type="text" ng-model="newData.dept" required></td>
 </tr>
<tr><td colspan=2><input type="submit" value="Add Entry"></td>
</td>
</table>
</form>
</div>
</body>
</html>
```

Index.js

```
var app=angular.module("simpleApp",[]);  app.controller("simpleController",function($scope)
{
$scope.collection=[
{name:"Amit",age:22,city:"Nashik",course:"btech",dept:"civil"},
{name:"Neha",age:21,city:"Nashik",course:"mtech",dept:"engg"}
];
$scope.addEntry=function()
{
$scope.collection.push($scope.newData);
$scope.newData='';
};
});
```

Output

AngularJS Form Submit Application

No	Name	Age	City	course	dept
1	Amit	22	Nashik	btech	civil
2	Neha	21	Nashik	mtech	engg

New Data Entry Form

Name: arshiya
Age: 21
city: malegoan
course: btech
dept: cse
Add Entry

AngularJS Form Submit Application

No	Name	Age	City	course	dept
1	Amit	22	Nashik	btech	civil
2	Neha	21	Nashik	mtech	engg
3	arshiya	21	malegoan	btech	cse
4	huma	20	nashik	mtech	civil

New Data Entry Form

Name: ar
Age: 31
city: kr
course: br
dept: ms
Add Entry

Conclusion:

Therefore we learn how data store in the table by using angular JS. And angular js isa framework of javascript and we learnt the basic things about this angular.js