


College Roll No : 191725

Level : Bachelors

Programme : Software

Semester : 2nd

Subject : Web Technology.

Signature of Examiner : 

Date : July 6, 2021.

Q. N. 1.

A. Ans.

For the company website development, I would use following languages and tools:

- | | | | |
|-------------------------------------|------------|--|------------|
| • HTML5 | (Frontend) | • PHP | (Backend). |
| • CSS3 | | • MySQL | |
| • Javascript + external JS library. | | • Composer (PHP package | |
| • Bootstrap (CSS framework). | | • MySQL Workbench ^{manager} . | |
| • JQuery (JS Library). | | | |
| • Sass (CSS compiler). | | | |

I would be using these languages and tools because from use of these, we can achieve secure, fast and user-friendly website with ease.

Second part:

To make our website live, we have to take care of two things. First we have to buy domain. Second we have to buy required memory server and map domain to our website (server).

Following steps will describe briefly about the steps:

- Go to your favourite domain registrar website and search for required domain.
- If required domain is available then add it to cart and make payments. The domain thus bought would be saved in your account.
- Most of the domain registrar company provide hosting services, but if they don't then go to your favourite hosting

provider.

- d. Select your required hosting package and the server (Windows server or Linux server).
- e. Add your hosting package to cart and make payment.
- f. You will be given some servers name (Primary name server and other name servers) copy that and set to the DNS of the domain and save it.

For other option such as redirect, canonical name you can set from domain account only.

- g. Now, our domain is connected to the server, when someone hits the domain, it points to our server.
- h. Zip all your website data and configuration and upload in your server. Or, you can use other methods such as SSH to do so.
- i. Extract your webfiles and setup your database (if required). Make sure your one of the file is renamed as 'index' with some extension, so the server will point that file as the homepage of website.

Now, when one enters the domain in browser's URL bar the website gets appear and it is online now.

B. Ans.

These both protocol (http & https) are use for hyper text transfer over the world wide web. The only difference in them is, http doesn't encrypt the transferring data whereas https does encryption of data, making data safe and secure.

The great advantage of using https is, all the website data transfer will occur in encrypted form, which prevent from big security ^{issue} called Mitm (Man in the middle) attack.

second parts:

There are lots of techniques to convert http to https and some of them are:

- a. By signing for https ^(SSL) certificate, we can install in our server and make http to https.
- b. OR, we can connect our server to cloudflare which by default enable https for data transfer.
- c. OR, ~~some~~ we can run auto-SSL certificate in most of the dashboard (mainy cpanel) of hosting which will make http to https.
- d. OR, we can re-write some config to our server to convert all http request to https request.

C. Ans.

Among using the frame and using html/xhtml+css, I would prefer the second option i.e. html/xhtml+css. It is so because frame (one of HTML tag) is a very old and complex ^{concept} to divide web pages into different sections.

But with the use of html & css, we can simply make divisions (div) and set our content positions to it. Content positions can be relative, absolute, sticky, fixed with the values of left, right, bottom and top.

Also for more content alignment or for division, we can make use of 'flex' or 'grid' properties of css.

Yes, although from frames we can load multiple webpages at once but this totally doesn't imply to the modern websites. To load multiple webpages, we can make use of iframe instead of frame with html & css.

Whether we select frame or html+css, the main purpose of them is to divide the webpage into different sections so we can place required content in that place. So for that css techniques would be really helpful in terms of flexibility and easier coding.

Q.N. 2.

A. Ans.

// registration - form.php.

<html>

<head>

<title> Registration form </title>


```

<link rel = "stylesheet" src href = "style.css" />
<script src = "validate.js"> </script>
</head>

```

```

<body>

```

```

  <form action = "register.php" method = "POST">
    <label> Fullname <sup><span class = "asterik"> * </span>
      </sup> </label> id = "fullName"
    <input type = "text" name = "full-name" />
    <br />

```

```

    <label> Mobile <sup><span class = "asterik"> * </span>
      </sup> </label> id = "mobileNum"
    <input type = "number" name = "mobile-num" />
    <br />

```

```

    <label> Password <sup><span class = "asterik">
      * </span> </sup> </label> id = "password"
    <input type = "password" name = "password" />
    <br />

```

```

    <label> Confirm password <sup><span class = "asterik">
      * </span> </sup> </label> id = "confirmPass"
    <input type = "confirm password" name = "confirm-
      password" /> <br />

```

```

    <label> Email <sup><span class = "asterik">
      * </span> </sup> </label> id = "email"
    <input type = "email" name = "email" /> <br />

```

```

<label> Date of Birth <sup><span class="asterisk">
* </span></sup></label>
<input type="text" name="dob" id="dob" required /> <br/>

```

```

<label> Departments </label>
<select name="department_list[]">
  <option value="mg"> Management </option>
  <option value="web"> Web Development </option>
  <option value="qa"> Quality Assurance </option>
</select> <br/>

```

```

<label> Date of Appointment <sup><span class="
"asterisk"> * </span></sup></label>
<input type="text" id="doa" name="doa" required /> <br/>

```

```

<label> Description </label>
<textarea name="description" id="description" rows="5" cols="10">
</textarea> <br/>

```

```

<label> Status </label>
<input type="radio" name="status" id="active" value="
active"> Active.
<input type="radio" name="status" id="inactive" value="
inactive"> InActive.

```

```

<input type="reset" value="Clear" />
<input type="submit" value="Register" />

```

```

</form>

```

```

</body>

```

```

</html>

```


B. Ans.

I would prefer external level of stylesheets to implement the styles. Because external stylesheets are easier to manage and optimize codes, as all the styles will be in one file so there won't be any hassle to find certain element in document to make changes for.

As in terms of scalability of website, external stylesheeting of CSS is must. And for larger components to style, external stylesheeting is very handy and easier as compared to inline and internal stylesheetings.

It can be achieved by creating external file ending with css file and linking to our page by using link tag. As shown in previous code: (as)

```
<link rel="stylesheet" href="style.css">
```

style.css.

```
body {  
    background: wheat;  
}
```

```
input [type="text"], input [type="password"], textarea {  
    background: blue;  
}
```

```
input [type="submit"] {  
    color: white;  
}
```



```
span.asterisk {  
    color: red;  
}
```

C. Ans.

validate.js

```
var fullName = document.getElementById("fullName");  
var mobileNum = document.getElementById("mobileNum");
```

```
function getElement(id){  
    return document.getElementById(id);  
}
```

```
var password = getElement("password");  
var confirmPass = getElement("confirmPass");  
var email = getElement("email");  
var dob = getElement("dob");  
var doa = getElement("doa");  
var description = getElement("description");  
var active = getElement("active");  
var inactive = getElement("inactive");
```

```
function isEmpty(params){  
    return params.includes("");  
}
```

```

if (isEmpty([fullName.value, mobileNum.value, password.value,
confirmPass.value, email.value, dob.value, doc.value,
description.value]))
{
    if (active.value == "" && inactive.value == "")
        alert("Complete all the fields");
}
else {
    if (password.value == confirmPass)
    {
        var pos = email.value.search(/^\w+([\.-]?\w+)*@\w+([\.-]?\w+)*(\.\w{2,3})+$/);
        if (pos != 0) alert("Invalid Email format");
        else {
            var res = mobileNum.value.search(/^[0-9]{9}$/);
            if (res != 0) alert("Invalid Mobile Number");
            else {
                alert("Form validated");
            }
        }
    }
    else alert("Incorrect password & confirm password");
}
}

```


D. Ans.

~~\$host~~ database-init.php

<?php

\$host = "localhost";

\$user = "root";

\$pass = "root";

\$con = mysqli_connect(\$host, \$user, \$pass);

\$con->query("create DATABASE attendance");

\$db=mysqli_select_db(\$con, "attendance");

if (\$db){

echo "database created";

\$con->query("create table staffs (sid

int primary key AUTO_INCREMENT, full-name

varchar(50)

mobile-num ^{varchar}(15),

password varchar(100),

email varchar(50),

date-of-birth varchar(50),

date-of-appointment date,

description text, ^{department} varchar(30),

status varchar(10))");

}

else {

echo "couldnot create database";

die();

}

??

insert_to_db.php.

<?php

```
$full_name = $_POST["full_name"];  
$mobile_num = $_POST["mobile_num"];  
$password = $_POST["password"];  
$confirm_password = $_POST["confirm_password"];  
$email = $_POST["email"];  
$dob = $_POST["dob"];  
$doa = $_POST["doa"];  
$department = $_POST["department_List"];  
$description = $_POST["description"];  
$status = $_POST["status"];
```

```
$con = mysqli_connect("localhost", "root", "root",  
"attendance");
```

```
$res = $con->query("insert into staffs (full_name, mobile_num,  
password, email, date-of-birth, date-of-  
appointment, departmentdescription, status) values ('  
$full_name', '$mobile_num', '$password',  
'$email', '$dob', '$doa', '$description',  
'$department', '$status')");
```

```
if ($res) echo "Inserted to database";  
else echo "Error during insertion to database";
```

?>

Q. N. 3.

A. Ans.

login-form.php.

<html>

<head>

<title> Login </title>

</head>

<body> <form action = "validate_login.php" method = "post">

<h3> Log in </h3>

<label> Username/ email <input type = "email" name = "email" /> </label>

<label> Password <input type = "password" name = "password" required /> </label>

<input type = "checkbox" name = "check">

Remember me

<center> <input type = "submit" value = "Log in" />

</center>

</form>

</body>

</html>

B. Ans.

validate_login.php.

<?php

\$email = \$_POST["email"];

\$pass = \$_POST["password"];

```
$con = mysqli_connect ("localhost", "root", "root", "attendance");
if (! $con) die ("could not connect to database");
```

```
$res = $con->query ("select * from staffs where email = '$email'
and password = '$pass' limit 1");
```

```
if ($res) echo "Attendance successful";
```

```
else echo "Invalid credentials";
```

```
mysqli_close ($con);
```

```
?>
```

C. Ans.

If the user checks the remember me button then we can set cookie of the data.

As below,

```
<?php.
```

```
if (isset ($_POST["check"])) {
    setcookie ("email", $_POST["email"], time()+7
    *24*60*60);
```

```
// time()+7*24*60*60 = 7 days.
```

```
setcookie ("pass", $_POST["pass"], time()+7*24*
60*60);
```

```
// setting password in cookie is a bad practice.
```

```
}
```

```
?>
```

And when ever user goes to login form we can check cookies and if data exist we can redirect them to homepage else back to login page.

Q.N.4.

A. Ans.

Yes, DOM is very useful in Javascript. Because of concept of DOM and its manipulation modern single page application can be made; hence makes webpage very fast.

Some of the examples of DOM manipulation are:

```
<html>
```

```
<head>
```

```
<title> Create Buttons </title>
```

```
</head>
```

```
<body>
```

```
<input type="text" id="inputField" placeholder="Enter Button Name"/>
```

```
<input type="button" value="Create Buttons"
onClick="createBtn()" />
```

```
<br/> <h3> Created Buttons: </h3>
```

```
<div id="container"> </div>
```

```
</body>
```

```
<script>
```

```
function createBtn() {
```

```
var btn = document.createElement("button");
```

```
btn.innerText = document.getElementById("inputField")
    .value;
```

```
document.getElementById("container").innerHTML +=
    btn;
```

```
</script> </html>
```

5. example 2: Toggle visibility of Image.

```

<html>
<head>
  <title> Image Visibility toggle </title>
</head>
<body>
  <img src = "a.png" style = "display: block" />
  <button onclick = "toggleImage()"> Toggle Visibility
  </button>
</body>
<script>
  function toggleImage() {
    var img = document.getElementsByTagName("img")
    [0];
    img.style.display = (img.style.display == "block")
    ? "hidden" : "block";
  }
</script>
</html>

```

Example 3 : Appending text to webpage.

```

<html>
<head>
  <title> Appending text </title>
</head>
<body> </body>
<script> document.body.innerHTML = "<h1>Hello</h1>";
</script>
</html>

```


B. ans.

No, Drag and Drop feature cannot be implemented by using php Because php is backend language and doesn't deal with frontend DOM manipulation. The Drag and Drop feature can be implemented by manipulating DOM by using javascript.

Example of drag and drop:

```
<html>
<head>
  <script src="ddrop.js"></script>
</head>
<body>
  <span id="text1" style="position: absolute; left: 50px;
    top: 50px;" onmousedown="grabber(event)">
    Drag me </span>
</body>
</html>
```

ddrop.js

```
var dffx, dffty, object;
function grabber(event) {
  object = event.currentTarget;
  var posx = parseInt(object.style.left);
  var posy = parseInt(object.style.top);
  dffx = event.clientX - posx;
  dffty = event.clientY - posy;
```

```
document.addEventListener("mousemove", mover, true);  
document.addEventListener("mouseup", dropper, true);  
event.stopPropagation();  
event.preventDefault();
```

```
}
```

```
function mover(event) {
```

```
    object.style.left = (event.clientX - diffx) + "px";  
    object.style.top = (event.clientY - diffy) + "px";  
    event.stopPropagation();
```

```
}
```

```
function dropper(event) {
```

```
    document.removeEventListener("mousemove", mover, true);  
    document.removeEventListener("mouseup", dropper, true);  
    event.stopPropagation();
```

```
}
```

C. Ans.

No, the cookies and sessions are not the same thing. They are different in use cases. The main purpose of cookie and session is to store data but cookies stores in the browser whereas sessions are stored in server.

The sessions are secured as it is readily available to users and are stored in hashed form in the server whereas cookies are stored in browser and is sent to header for every request. So, the sensitive data shouldn't be in cookies.

Example of using cookie:

Syntax:

`setcookie (key, value, time; for - expiry).`

Example of using session:

Syntax:

`$_SESSION ['key'] = value;`

For sessions we have to manually start and destroy it but for cookies we don't have to.

`session_start();` // for starting session.

`session_destroy();` // for destroying session.

Scenario for using Cookie:

- When we have to keep track of non-sensitive data such as fullName, website Name, No. of items in cart. We can make use of cookie. We should always make sure that there is only required and limited data on cookie. (It should not be heavy) If it is heavy it will take more time in data request.

Scenario for using Session:

- When we need to hold the activity or session of user login, or, when we need to hold the sensitive data; which are only limited & required for server. So, in this case sessions are really helpful.

It can be stored as,

```
$_SESSION['login-status'] = true;
```

To retrieve its value, we use:

```
$data = $_SESSION['login-status'];
```

For cookies,

```
setcookie('first-name', 'Saroj', time()*1*24*60);
```

To retrieve its value, we use:

```
$first-name = getcookie('first-name');
```

In this way session and cookies are used and yes, they differ from each other.

Q.N.5.

A. Ans.

in PHP

The purpose of file handling[^] is to store files (such as images, videos, pdf) in the server for the future use.

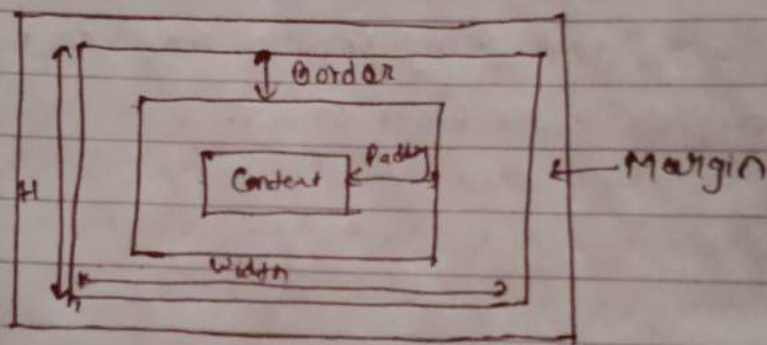
We can't surely say that the file stored in server are always secure. It depends upon the system itself and how the files are saved in server. The file stored in the server has to be backedup frequently by making cron jobs or other methods.

If the person uses linux server for storing, they should take care of file permissions and make sure that

it only be accessible to particular user.

B. Ans.

CSS box model is a container which contains multiple properties including borders, margin, padding and the content itself. It is used to create the design and layout of webpages. It can be used as a toolkit for customizing the layout of different elements. The web browser renders every element as a rectangular box according to CSS box model.



-fig: CSS Box Model.

Border: It is the area between the box's padding and margin. Its dimension is given by height & width of border.

Margin: It is the area or distance betn the parent and its child.

Padding: It is the inner area or distance created by box itself for its inner content.

Example :

```
<html>
```

```
<head>
```

```
<title> CSS Box Model </title>
```

```
<style>
```

```
body {
```

```
margin-top : 20px;
```

```
}
```

```
  .container {
```

```
padding : 20px;
```

```
height : 300px;
```

```
width : 50%;
```

```
}
```

```
</style>
```

```
<body>
```

```
<div class = "container">
```

```
  Hello World.
```

```
</div>
```

```
</body>
```

```
</html>.
```


C. Ans.

The checkboxes, radio buttons and dropdowns are the way to give multiple options of value to the user.

checkboxes : It is used when user have to select more than or multiple values in most cases. Or, simply it can be used for single field also. (for remembering password, for agreement to terms & conditions).

Radio Buttons : It is also similar to checkboxes but they are generally used for selecting only one value out of multiple values.

Dropdown : Dropdown is a fancy way for displaying multiple option for user. Dropdown value can be made to select one or made to select multiple as per requirement.

Hence, there are some differences in checkbox, radio buttons and dropdown menu.

Q.N. 7.

B. Ans.

Practical use of stacking elements in Javascript:

The following example illustrates the concept of stacking element in Javascript. Basically stacking elements are simply achieved by using z-index property of CSS but also we have to check for mouse event using Javascript.

```
<html>
```

```
<head>
```

```
<title> Image Stacking </title>
```

```
<style>
```

```
#img1 {
```

```
    position: absolute;
```

```
    top: 0px;
```

```
    left: 0px;
```

```
    z-index: 0;
```

```
}
```

```
#img2 {
```

```
    position: absolute;
```

```
    top: 100px;
```

```
    left: 50px;
```

```
    z-index: 0;
```

```
}
```

```
#img3 {
```

```
    position: absolute;
```

```
    top: 200px;
```

```
    left: 100px;
```

```
    z-index: 0;
```

```
}
```



```

</style>
<script type="text/javascript" src="stack.js"></script>
</head>
<body>
  
  
  
</body>
</html>

```

stack.js

```

var currentTopImage = "img3";
function moveTop (newTopImage) {
  var currentImage = document.getElementById (currentTopImage);
  currentImage = currentImage.style.zIndex;

  var newImage = document.getElementById (newTopImage);
  newImage = newImage.style.zIndex;

  currentImage = "0";
  newImage = "15";

  currentTopImage = newTopImage;
}

```

3

c. Arrays in PHP:

Arrays are speciable variable that can store multiple values. In PHP we can store any type of values in array. Whereas In other languages like C, C++ we have to specify certain data-type for that array and we can only store value of that type.

In PHP there are three types of array.

i. Indexed array:

It is general array where values are saved with numerical index. The first element of array can be accessed by index 0. and similar with increasing number of element with increase in index.

Ex: `$cars = array("toyota", "Lamborghini");`

Here, `$cars[0]` gives toyota.

`$cars[1]` gives Lamborghini

OR, it can be defined as,

`$cars = array();`

`$cars[0] = "toyota";`

`$cars[1] = "Lamborghini";`

ii. Associative array:

It is different form of array where values can be stored as key-value pair without need of indexing it.

It can be created in two ways :

```
$interest = array ("saroj" => "Books", "Prabesh" => "Singing");
```

OR,

```
$interest ["saroj"] = "Books";  
$interest ["Prabesh"] = "Singing";
```

It is quite easier to access and play with because one don't have to remember index, one can simply remember the key value of array.

iii. Multi-dimension array :

It is an array containing one or more arrays in it.

It comes out to be handy when we have to store large numbers of data into a variable.

Example for defining multi-dimension array.

```
$interests = array (  
    array ("saroj" => "Books", "Ram" => "Singing"),  
    array ("Prabesh" => "Coding")  
);
```

The above example is of 2-dimension array, for more we can simple add another array in the \$interests array.