INSTITUTE OF AERONAUTICAL ENGINEERING
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Lab Manual:

WEB APPLICATION DEVELOPMENT LABORATORY(AITC10)

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Course Information

Course Information

1 Introduction

This course introduces students to developing web applications. This course presents the basics of HTML5 and CSS3, Other HTML tags for Web application Development. Learn to create links in HTML, Uses of HTML forms. Introduction to the use of Reacts trap for Bootstrap 4-based responsive UI design. React router and its use in developing single-page applications, designing controlled forms. Redux and use it to develop React-Redux powered applications, client-server communication and the use of REST API on the server side, React primitives render to native platform UI..

1.1 Student Responsibilities

The student is expected to be prepared for each lab.Lab preparation includes reading the labexperiment and related textbook material. If you have questions or problems with the preparation, contact your Laboratory Teaching faculty, but in a timely manner. Do not wait until an hour or two befor the lab and then expect the lab faculty to be immediately available.

Active participation by each student in lab activities is expected. The student is expected to askthe laboratory faculty any questions they may have.

A large portion of the student's grade is determined in the comprehensive final exam, resulting in a requirement of understanding the concepts and procedure of each lab experiment for the successfulcompletion of the lab class. The student should remain alert and use common sense while performing a lab experiment. They are also responsible for keeping a professional and accurate record of the labexperiments in the lab manual wherever tables are provided. Students should report any errors in the lab manual to the teaching assistant.

1.2 Laboratory Faculty Responsibilities

The laboratory faculty shall be completely familiar with each lab prior to class. The laboratory faculty shall provide the students with a syllabus and safety review during the first class. The syllabus shall include the laboratory faculty office hours, telephone number, and the name of the faculty coordinator. The laboratory faculty is responsible for ensuring that all the necessary equipment and/or preparations for the lab are available and in working condition. Lab experiments should be checked in advance to make sure everything is in working order. The laboratory faculty should fully answer any questions posed by the students and supervise the students performing the lab experiments. The laboratory faculty is expected to grade the lab notebooks and reports in a fair and timely manner. The reports should be returned to the students in the next lab period following submission. The laboratory faculty should report any errors in the lab manual to the faculty coordinator.

1.3 Faculty Co-ordinator Responsibilities

The faculty coordinator should ensure that the laboratory is properly equipped, i.e., that the teaching assistants receive any equipment necessary to perform the experiments. The coordinator is responsible for supervising the teaching assistants and resolving any questions or problems that are identified by the teaching assistants or the students. The coordinator may supervise the format of the final exam for the lab. They are also responsible for making any necessary corrections to this manual and ensuring that it is continually updated and available.

1.4 Lab Policy and Grading

The student should understand the following policy:

ATTENDANCE:

Attendance is mandatory and any absence must be for a valid excuse and must be documented.

LAB RECORDS:

The student must:

1. Perform the Pre Lab assignment before the beginning of each lab,

2. Keep all working preparation of and obtained during lab and

3. Prepare a lab report on experiments selected by the laboratory faculty.

GRADING POLICY:

The final grade of this course is determined using the criterion detailed in the syllabus.

INSTRUCTIONS TO STUDENTS

- Before entering the lab the student should carry the following things (MANDATORY)
    - o Identity card issued by the college.
    - o Work Sheets

- Student must sign in and sign out in the register provided when attending the lab session without fail.
- Come to the laboratory in time. Students, who are late more than 15 min., will not be allowed to attend the lab.
- Students need to maintain 100% attendance in lab if not a strict action will be taken.
- All students must follow a Dress Code while in the laboratory
- Foods, drinks are NOT allowed.
- All bags must be left at the indicated place.
- Refer to the lab staff if you need any help in using the lab.
- Respect the laboratory and its other users.
- Workspace must be kept clean and tidy after experiment is completed.
- Read the Manual carefully before coming to the laboratory and be sure about what you are supposed to do.
- Do the experiments as per the instructions given in the manual.
- Copy all the programs to observation which are taught in class before attending the lab session.
- Students are not supposed to use floppy disks, pen drives without permission of lab- incharge.
- Lab records need to be submitted on or before the date of submission.
- Computer labs are established with sophisticated and high end branded systems, which should be utilized properly.
- Students / Faculty must keep their mobile phones in SWITCHED OFF mode during the lab sessions. Misuse of the equipment, misbehaviors with the staff and systems etc., will attract severe punishment.

• Students must take the permission of the faculty in case of any urgency to go out; if anybody found loitering outside the lab / class without permission during working hours will be treated seriously and punished appropriately.
• Students should LOG OFF/ SHUT DOWN the computer system before he/she leaves the lab after completing the task (experiment) in all aspects. He/she must ensure the system / seat is kept properly.

1.5 Course Goals and Objectives

Goal:

The goal of the laboratory course is to introduce students to web application development. This course will give you the basic terminology and fundamental concepts that you need to understand in order to build modern web applications. This course introduces students to developing web applications. This course presents the basics of HTML5 and CSS3 for Web application Development using HTML links and HTML forms. Introduction to the use of React router and its use in developing single-page applications, redux to develop ReactRedux powered applications, client-server communication and the use of REST API on the server side, React primitives render to native platform UI. This course will make the students to expose the front-end framework Bootstrap and to basic security mechanisms for server-side web application development.

Objectives:

Students will try to learn:

- Programming skills in Html5, CSS3, Bootstrap 4.
- Developing skills of Web Applications user interactions using JavaScript (ES6+)
- Web application Development Database with React and React Native.

2 Data Recording and Reports

2.1 The Laboratory Note book

Students must write their experimental outputs in the provided tables in this laboratory manual and reproduce them in the lab reports. Reports are integral to recording the methodology and results of an experiment. In engineering practice, the laboratory notebook serves as an invaluable reference to the technique used in the lab and is essential when trying to duplicate a result or write a report.Therefore,it is important to learn to keep accurate data.Make plots of data and sketches when these are appropriate in the recording and analysis of observations. Note that the data collected will be an accurate and permanent record of the data obtained during the experiment and the analysis of the results.You will need this record when you are ready to prepare a lab report.

2.2 The Lab Report

Reports are the primary means of communicating your experience and conclusions to other professionals. In this course you will use the lab report to inform your laboratory faculty about what you did and what youhave learned from the experience.Engineering results are meaningless unless they can be communicatedto others. You will be directed by your laboratory faculty to prepare a lab report on a few selected lab experiments during the semester.Your assignment might be different from your lab partner's assignment.

Your laboratory report should be clear and concise.The lab report shall be typed on a word processor.As a guide,use the format on the next page.Use tables,diagrams, sketches, as necessaryto show what you did, what was observed, and what conclusions you can draw from this. Even thoughyou will work with one or more lab partners, your report will be the result of your individual effort in order to

provide you with practice in technical communication.

Formatting and Style

• The lab report shall be typed in a word processor. All page margins must be 1.25 inches.All content (including text, figures, tables, etc.)must fitwithinthemargins.
• Body text should be double-spaced.
• Basic text should be in 12-point size in a commonly used textfont.
• Set your main text justified(with even left/right margins).
• The first line of each paragraph should have a left indent.
• All the tables should have titles and should be numbered. Tables should be labeled numerically as Table 1, Table 2, etc. Table captions appear above the table. The column headings should be labeled with the units specified.
• Use MS-Word equation (under Insert Equation menu), MathType, or a similar tool to type formulas.
• If you need to copy a schematic or figure from the lab manual to your report,use Copy and Paste function or take a screenshot by using Snipping Tool in MS-Windows.
• Do not place screenshots of your lab notebook in the report! Diagrams, tables, calculations, etc.must be generated using the existing tools in the word processor.

2.3 Order of Lab Report Components

COVER PAGE - Cover page must include lab name and number,your name,your lab partner's name,and the date the lab was performed.

OBJECTIVE - Clearly state the experiment objective in your own words.

SOFTWARE Needed - Indicate which software was used in performing the experiment.

FOR EACH PART OF THE LAB:

• Write the lab's part number and title in bold font. Firstly, describe the problem that you studied in this part, give an introduction of the theory, and explain why you did this experiment.Do not lift the text from the lab manual; use your ownwords.
• Secondly,describe the experimental setup and procedures.Do not follow the lab manual in listing out individual pieces of equipment and assembly instructions.That is not relevant information in a lab report! Your description should take the form of a narrative, and include information not present in the manual,such as descriptions of what happened during intermediate steps of the experiment.
• Thirdly,explain your findings. This is the most important part of your report,because here,you show that you understand the experiment beyond the simple level of completing it. Explain(compare expected results with those obtained). Analyse (analyze experimental error). Interpret(explain your results in terms of theoretical issues and relate to your experimental objectives).All the results should be presented even if there is any inconsistency with the theory. It should be possible to understand what is going onby just reading through the text paragraphs, without looking at the figures.
• Finally, provide a summary of what was learned from this part of the laboratory experiment.If the results seem unexpected or unreliable,discuss them and give possible explanations.

CONCLUSIONS–

The conclusion section should provide a take-home message summing up what has been learned from the experiment:
• Briefly restate the purpose of the experiment (the question it was seeking to answer)

- Identify the main findings (answer to the research question)
- Note the main limitations that are relevant to the interpretation of the results
- Summarise what the experiment has contributed to your understanding of the problem.

PROBING FURTHER QUESTIONS-

Questions pertaining to this lab must be answered at the end of laboratory report.

WEEK -1: HTML LAYOUTS AND LINKS

EXPERIMENT-1.a

OBJECTIVE:

Develop a web application to control over different layouts.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>HTML Div Layout</title>
<style>
a{
text-decoration:none;
color:white;
}
body {
font: 14px Arial;
margin: 0px;
}
.header {
padding: 0px 0px;
background: blue;
color:white;

}
.header h1 {
font-size: 24px;
margin-top:0px;
}
.container {
width: 1400px;
background:red;
height:850px;
}
.nav, .section {
float: left;
padding: 0px;
min-height: 650px;
box-sizing: border-box;
}
.nav {
width: 20%;
background: green;
}
.section {
```

```
width: 800px;
height:650px;
background-image:url("ba.png");

}

.nav  a {
color: white;
}

.footer {
background: blue;
text-align: center;
padding: 10px;
position:fixed;
bottom:0;
left:0;
right:0;
color:white;

}
</style>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<div class="container">
<div class="header">
<!--<h1 align="center">Tutorials</h1>-->
<img src="logo.jpeg" width="151px" height="150px">
</div>

<div class="nav">

<h3> <a href="#">Home</a></h3>
<h3> <a href="#">About</a></h3>
<h3><a href="#">Contact</a></h3>
<h3> <a href="#">Services</a></h3>
<h3> <a href="#">Catlogue</a></h3>
<h3><a href="#">Gallary</a></h3>
<h3> <a href="#">Media</a></h3>
<h3> <a href="#">Daily updates</a></h3>
<h3><a href="#">Notifications</a></h3>
</div>
<div class="section">
<h2>Welcome to our site</h2>
<p>Here you will learn how to create webpage layouts...</p>
</div>

<div class="footer">
<p>copyright &copy; All rights reserved.</p>
<img src="queen.jfif" width="30px" height="30px">
</div>
```

```
</div>
</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week1a.png

PRE LAB VIVA QUESTIONS

1. What is an HTML.
2. Define class with example
3. Define div tag
4. How can I include comments in HTML?

POST LAB VIVA QUESTIONS:

1. Define id
2. What is base font
3. whatis a layout
4. How can I use tables to structure forms?

EXPERIMENT-1.b

OBJECTIVE:

Create a webpage with HTML describing your department use paragraph and list tags.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>HTML Div Layout</title>
<style>
body{
padding:20px 150px;
background:#333333;
}
p{
background:#ff9999;

}
#id1{
display:flex;
color:white;

}
</style>
<body>
<h1 style="background:#bdaa55; text-align:center;">Information Technology</h1>
<p>The Department of Information Technology (IT) was established in the year 2001 offering B.T

<p>B.Tech program in Information Technology accredited by the National Board of Accreditation
<fieldset style="border:50px ridge blue; background:blue;">
<legend style="color:red; font-family:forte;">Information Technology</legend>
<ul><h2>Career prespective for Computer Engineer</h2>
<li>ML Engineer</li>
<li>AI Engineer</li>
<li>Data Scientist</li>
<li>Chatbot Designer</li>
<li>BI Developer</li>
<li>Product Manager</li>
</ul>
</fieldset>
<fieldset style="border:10px ridge blue; background:blue;">
<legend style="color:red; font-family:forte;"> Courses offered in CSE</legend>
<img src="logo1.jpg" width=150px; height=150px;>
<img src="logo2.png" width=150px; height=150px;>
<img src="logo3.png" width=150px; height=150px;>
<img src="logo4.jpeg" width=150px; height=150px;>
```

```
<img src="logo5.png" width=150px; height=150px;>
<div id="id1">
<h5 style="padding-left:100px;">CSE</h5>
<h5 style="padding-left:100px;">IT</h5>
<h5 style="padding-left:100px;">AI & ML</h5>
<h5 style="padding-left:120px;">DS</h5>
<h5 style="padding-left:120px;">CS</h5>
</div>
</fieldset>
</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week1b.png

PRE LAB VIVA QUESTIONS

1. What is an list tag
2. How many list tags
3. What is paragrph tag
4. What is a Hypertext link?

POST LAB VIVA QUESTIONS

1. What is ordered list
2. What is undered list

3. What is defination list
4. Can I nest tables within tables?

EXPERIMENT-1.c

OBJECTIVE:

Apply various colors to suitable distinguish key words, also apply font styling like italics, underline and two other fonts to words you find appropriate, also use header tags.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html>
<body>

<p>This is normal Text</p>

<p><b>This text is bold</b></p>
<strong>This text is important!</strong>
<i>This text is italic</i>
<em>This text is italic</em>
<small>This text is italic</small>
<p>Do not forget to buy<mark> milk </mark> today </p>
<p>Do not forget to buy<del> milk </del> today </p>
<p>Do not forget to buy<sub> milk </sub> today </p>
<p>Do not forget to buy<sup> milk </sup> today </p>
<p>My favorite color is <del> blue </del><ins> red </ins></p>
</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week1c.png

PRE LAB VIVA QUESTIONS

1. How many types of heading tags
2. What is italic tag?
3. What is paragrph tag
4. How to create the submit button?

POST LAB VIVA QUESTIONS:

1. What is a underline tag?
2. What is the purpose mark tag?
3. whatis is the difference of bold and strong tags
4. Different type of lists?

EXPERIMENT-1.d

OBJECTIVE:

Create links on the words e.g. “Wi-Fi” and “LAN” to link them to Wikipedia pages.

SOFTWARE NEEDED

Notepad and Crome Browser

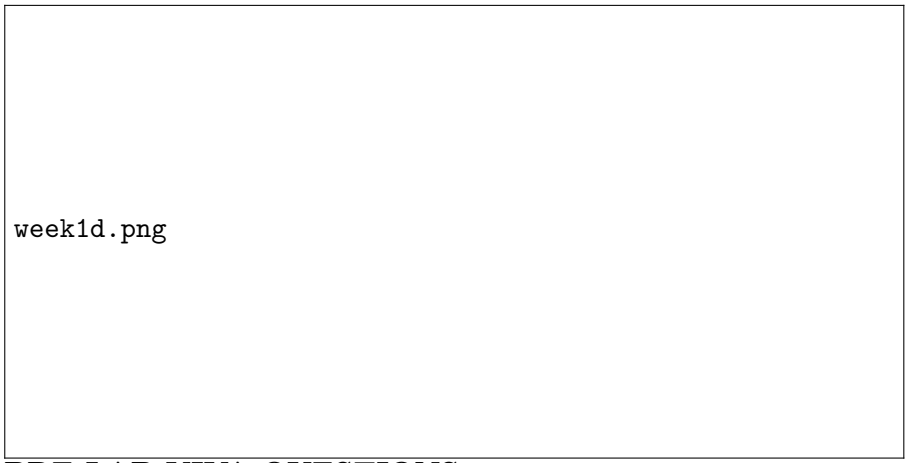
SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>HTML Div Layout</title>
<body>
<fieldset style="border:10px ridge blue; background:pink;">
<legend style="color:red; font-family:forte;">
<h2><a href=https://en.wikipidiea.alg/wiki/wifistyle=black;>wifi</a></h2>
</fieldset>
</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT



PRE LAB VIVA QUESTIONS

1. What is the purpose anchor tag?
2. Full from href?
3. How to inset to image to the browser
4. How do I create frames? What is a frameset?

POST LAB VIVA QUESTIONS:

1. How many ways to create Hyper link?
2. What is image tag?
3. What is the purpose of heigjt and width attributes in image tag?
4. What are Cascading Style Sheets?

WEEK-2 WEB APPLICATION DESIGN FORMATTING

EXPERIMENT-2.a

OBJECTIVE:

Develop a web application with background banner image and navigation menus.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=edge" />
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<title>Document</title>
<style>
* {
margin: 0;
padding: 0;
box-sizing: border-box;
}
body {
font-family: cursive;
background-image: url('logo1.jpg');
background-attachment: fixed;
background-size: cover;
}
a {
text-decoration: none;
}
li {
list-style: none;
}
.navbar {
display: flex;
align-items: center;
justify-content: space-between;
padding: 20px;
background-color: teal;
color: #fff;
}
.nav-links a {
color: #fff;
}
/* LOGO */
.logo {
font-size: 32px;
```

```
}
/* NAVBAR MENU */
.menu {
display: flex;
gap: 1em;
font-size: 18px;
}
.menu li:hover {
background-color: #4c9e9e;
border-radius: 5px;
transition: 0.3s ease;
}
.menu li {
padding: 5px 14px;
}
/* DROPDOWN MENU */
.services {
position: relative;
}
.dropdown {
background-color: rgb(1, 139, 139);
padding: 1em 0;
position: absolute; /*WITH RESPECT TO PARENT*/
display: none;
border-radius: 8px;
top: 35px;
}
.dropdown li + li {
margin-top: 10px;
}
.dropdown li {
padding: 0.5em 1em;
width: 8em;
text-align: center;
}
.dropdown li:hover {
background-color: #4c9e9e;
}
.services:hover .dropdown {
display: block;
}
</style>
</head>
<body>
<nav class="navbar">
<!-- LOGO -->
<div class="logo">MUO</div>
<!-- NAVIGATION MENU -->
<ul class="nav-links">
<div class="menu">
<li><a href="grid.html">Home</a></li>
<li><a href="grid2.html">About</a></li>
```

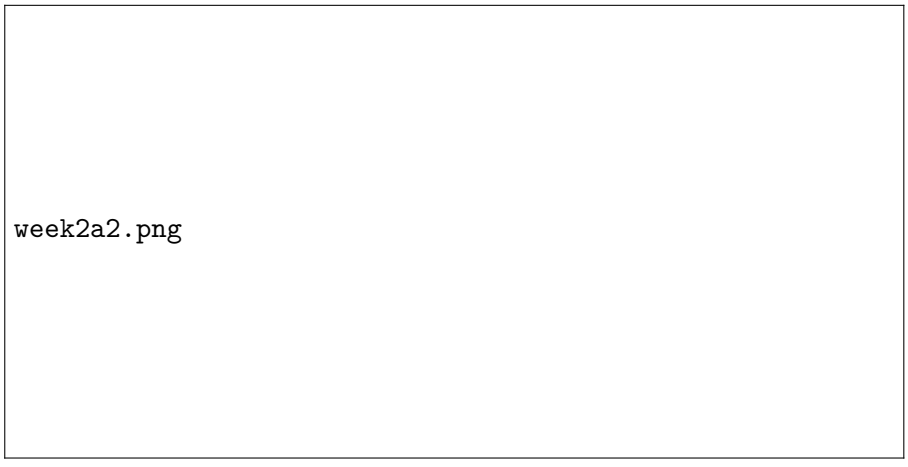
```
<li class="services">
<a href="grid3.html">Services</a>
<!-- DROPDOWN MENU -->
<ul class="dropdown">
<li><a href="res.html">Dropdown 1 </a></li>
<li><a href="grid3.html">Dropdown 2</a></li>
<li><a href="grid3.html">Dropdown 2</a></li>
<li><a href="grid5">Dropdown 3</a></li>
<li><a href="grid6.html">Dropdown 4</a></li>
</ul>
</li>
<li><a href="nowrap.html">Pricing</a></li>
<li><a href="iframe.html">Contact</a></li>
</div>
</ul>
</nav>
</body>
</html>
```

EXCEUTION::

Run with crome browser

INPUT/OUTPUT

week2a1.png



week2a2.png

PRE LAB VIVA QUESTIONS

1. What is an HTML.
2. Define class with example
3. To display the square of a given numbers using Javascript?
4. What is an Empty HTML Tag?

POST LAB VIVA QUESTIONS:

1. What's the difference between a web designer and web developer?
2. What is responsive design?
3. What boolean operators does JavaScript support?
4. To display Fibonacci series using Javascript?

EXPERIMENT-2.b

OBJECTIVE:

Develop a web application with responsive images.

SOFTWARE NEEDED

Notepad and Crome Browser

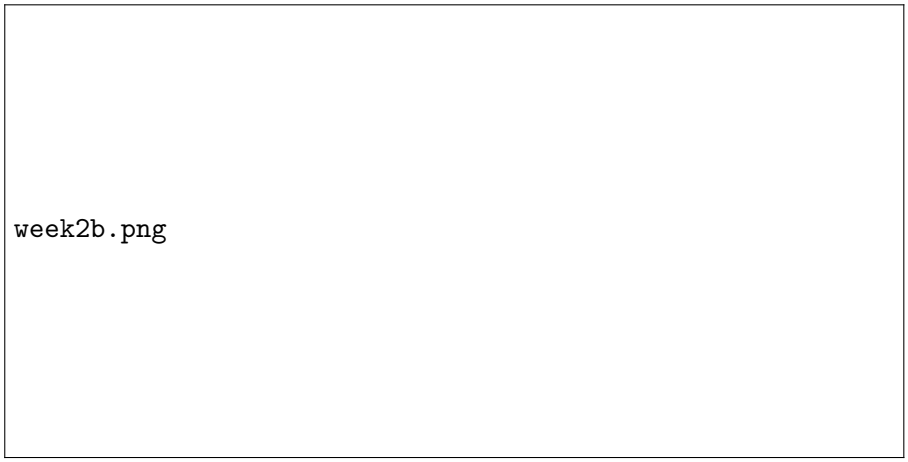
SOURCE CODE

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
img {
width: 100%;
height: auto;
}
</style>
</head>
<body>

<img src="photo.jpeg" width="860" height="645">
<p>Resize the browser window to see how the image will scale.</p>

</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT



PRE LAB VIVA QUESTIONS

1. What is an list tag
2. How many list tags
3. What is paragraph tag
4. What is grouping?

POST LAB VIVA QUESTIONS:

1. What is ordered list
2. What is undered list
3. What is defination list
4. What's relationship between JavaScript and ECMA Script?

EXPERIMENT-2.c

OBJECTIVE:

Develop a web application using left menu..

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>HTML Div Layout</title>
<style>
a{
text-decoration:none;
color:white;
}
body {
font: 14px Arial;
margin: 0px;
}
.header {
padding: 0px 0px;
background: blue;
color:white;

}
.header h1 {
font-size: 24px;
margin-top:0px;
}
.container {
width: 1400px;
background:red;
height:850px;
}
.nav, .section {
float: left;
padding: 0px;
min-height: 650px;
box-sizing: border-box;
}
.nav {
width: 20%;
background: green;
}
.section {
width: 800px;
height:650px;
```

```
background-image:url("backg.jpg");

}

.nav  a {
color: white;
}

.footer {
background: blue;
text-align: center;
padding: 10px;
position:fixed;
bottom:0;
left:0;
right:0;
color:white;

}
</style>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<div class="container">
<div class="header">
<!--<h1 align="center">Tutorials</h1>-->
<img src="logo2.png" width="151px" height="150px">
</div>

<div class="nav">

<h3> <a href="#">Home</a></h3>
<h3> <a href="#">About</a></h3>
<h3><a href="#">Contact</a></h3>
<h3> <a href="#">Services</a></h3>
<h3> <a href="#">Catlogue</a></h3>
<h3><a href="#">Gallary</a></h3>
<h3> <a href="#">Media</a></h3>
<h3> <a href="#">Daily updates</a></h3>
<h3><a href="#">Notifications</a></h3>
</div>
<div class="section">
<h2>Welcome to our site</h2>
<p>Here you will learn how to create webpage layouts...</p>
</div>

<div class="footer">
<p>copyright &copy; All rights reserved.</p>
<img src="queen.jfif" width="30px" height="30px">
</div>
</div>
</body>
```

```
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week2c.png

PRE LAB VIVA QUESTIONS

1. How many types of heading tags
2. What is italic tag?
3. What is paragrph tag
4. What is ID selector?

POST LAB VIVA QUESTIONS:

1. What is a underline tag?
2. What is the purpose mark tag?
3. What is is the difference of bold and strong tags
4. What are different selector forms

EXPERIMENT-2.d

OBJECTIVE:

Develop setting to change the theme of entire web Application

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
div.example {
background-color: lightgrey;
padding: 20px;
}

@media screen and (min-width: 601px) {
div.example {
font-size: 80px;
}
}

@media screen and (max-width: 600px) {
div.example {
font-size: 30px;
}
}
</style>
</head>
<body>

<h2>Change the font size of an element on different screen sizes</h2>

<div class="example">Example DIV.</div>

<p>When the browser's width is 600px wide or less, set the font-size of DIV to 30px. When it i
size to 80px. Resize the browser window to see the effect.</p>

</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week2d.png

PRE LAB VIVA QUESTIONS

1. What is the purpose anchor tag?
2. Full from href?
3. How to inset to image to the browser
4. What are the advantages / disadvantages of various style methods?

POST LAB VIVA QUESTIONS:

1. How many ways to create Hyper link?
2. What is image tag?
3. What is the purpose of height and width attributes in image tag?
4. What are the necessities of using HTML forms?

EXPERIMENT-3.a

OBJECTIVE:

Write code for developing responsive web application with Admin panel and tables with static data.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/css/bootstrap.m
<script src="https://cdn.jsdelivr.net/npm/jquery@3.6.0/dist/jquery.slim.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.1/dist/umd/popper.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/js/bootstrap.bundle.min.js"></s
</head>
<body>

<div class="container">
<h2>Dark Striped Table</h2>
<p>Combine .table-dark and .table-striped to create a dark, striped table:</p>
<table class="table table-dark table-striped">
<thead>
<tr>
<th>Firstname</th>
<th>Lastname</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raj</td>
<td>Kumar</td>
<td>1234</td>
</tr>
<tr>
<td>Vani</td>
<td>Madhuri</td>
<td>6789</td>
</tr>
<tr>
<td>Naveen</td>
<td>Sai</td>
<td>8822</td>
</tr>
```

```
</tbody>
</table>
</div>

</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week3.png

PRE LAB VIVA QUESTIONS

1. How many types of heading tags
2. What looping structures are there in JavaScript?
3. What is this keyword?
4. What is the CSS clear property?

POST LAB VIVA QUESTIONS:

1. How do I open a link into a new window?
2. What is the purpose mark tag?
3. What is is the difference of bold and strong tags
4. What are different selector forms

EXPERIMENT-4.a

OBJECTIVE:

To implement a calculator by using javascript.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!-- calculator application -->
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Calculator</title>
<style>
body /* body settings */
{
background-color: #330066;
}
.calculator /* main container settings */
{
width: 300px;
padding-bottom: 15px;
border-radius: 7px;
background-color: #6b6b6b;
box-shadow: 1px 2px 3px 8px rgba(247,43,5, 0.6);
}
.display /* text box settings */
{
width: 100%;
height: 60px;
padding: 10px;
font-size: 25px;
background-color: white;
color: rgb(3, 3, 3);
text-align: right;
border: none;
border-top-left-radius: 8px;
border-top-right-radius: 8px;
}
.row /* buttons alignment */
{
display: flex;
justify-content: space-between;
}
button { /* buttons designing */
width: 50px;
height: 50px;
border-radius: 40%;
border: none;
outline: none;
```

```
font-size: 24px;
background-color:white;
color:#011a99;
margin: 10px;
}
button:hover {
cursor:pointer;
}
.operator { /* operator buttons styles */
background-color: white;
color: #000fff;
}
</style>
</head>
<body>
<div class="calculator"><!-- main container -->
<input type="text" class="display" disabled/>
<div><!-- main div -->
<div class="row"><!-- rows -->
<button value="7">7</button>
<button value="8">8</button>
<button value="9">9</button>
<button value="+" class="operator">+</button>
</div>
<div class="row">
<button value="4">4</button>
<button value="5">5</button>
<button value="6">6</button>
<button value="-" class="operator">-</button>
</div>
<div class="row">
<button value="1">1</button>
<button value="2">2</button>
<button value="3">3</button>
<button value="*" class="operator">*</button>
</div>
<div class="row">
<button value="AC" class="operator">AC</button>
<button value="0">0</button>
<button value="/" class="operator">/</button>
<button value="=" class="operator">=</button>
</div>
</div>
</div>
<script>
const buttons = document.querySelectorAll('button'); //all buttons 16
const textBox = document.querySelector('.display'); //text box

//featching 1-by-1 button
buttons.forEach( function(bt) {
bt.addEventListener('click', calculate); //adding event to 16
} );
```

```
function calculate(bt)
{
const clickedBtValue = bt.target.value;
if (clickedBtValue === "AC") {
textBox.value = ""; //textBox cleared
}
else if(clickedBtValue === "=")
{
if(textBox.value !== "") {
textBox.value = eval(textBox.value);
}
} else {
textBox.value = textBox.value + clickedBtValue;
}
}
</script>
</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week4a.png

PRE LAB VIVA QUESTIONS

1. How many types of heading tags
2. What looping structures are there in JavaScript?
3. What is this keyword?
4. What is the CSS clear property?

POST LAB VIVA QUESTIONS:

1. How do I open a link into a new window?
2. What is the purpose mark tag?
3. What is is the difference of bold and strong tags
4. What are different selector forms

EXPERIMENT-4.b

OBJECTIVE:

To implement the validation of form by using javascript.

SOFTWARE NEEDED

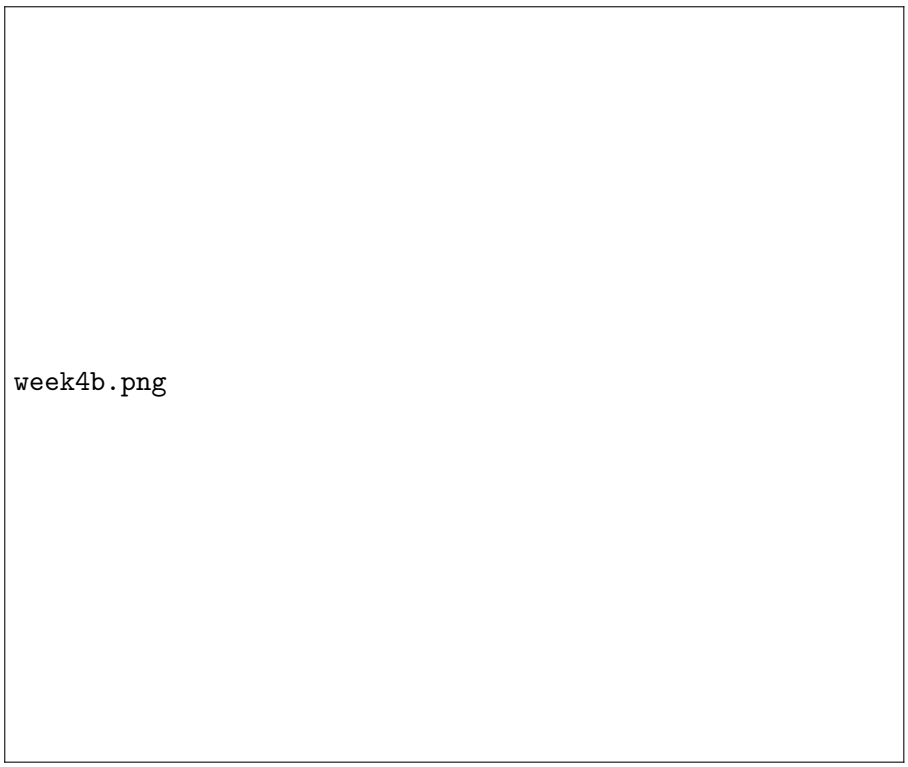
Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Responsive form validation</title>
<script lang="javascript">
function validate(){
var uname = document.myform.tf1,value
var pwd=document.myform.tf2.value
var emailid=document.myform.tf3.value
var Phoneno=document.myform.tf4.value
var p1=new RegExp("^[a-z]*")
var p2=new RegExp("[a-z]*[._][a-z 0-9]*@[a-z 0-9]*[.]com$")
var p3=new RegExp("^[0-9]{10}$")
if(p1.test(uname)&&(uname.length>=6)){
alert("Valid username")
}else{
alert("invalid username")
}
if(pwd.length>=6){
alert("Valid password")
}
else{
alert("invalid password")
}
if(p2.test(emailid)){
alert("valid email")
}else{
alert("inavlid email")
}if(p3.test(Phoneno)){
alert("valid phone number")
}else{
alert("invalid phonenumber")
}
}
</script>

</head>
<body>
```

```
<div align ="center">
<h2>Registartion form</h2>
<hr width ="275" color="red" size="10">
<br>
<form name="myform">
<table>
<tr>
<td>
<label>Name:</label>
</td>
<td> <input type="text" name="tf1"></td>
</tr>
<tr>
<td>
<label>Passwoard:</label>
</td>
<td> <input type="password" name="tf2"></td>
</tr>
<tr>
<td>
<label>Email id:</label>
</td>
<td> <input type="text" name="tf3"></td>
</tr>
<tr>
<td>
<label>Phone no:</label>
</td>
<td> <input type="text" name="tf4"></td>
</tr>
<tr>
<td> <input type="button" value="check" onclick=validate()><input type="reset" value="close"><
</tr>

</table>
</form>
</div>
</div>

</body>
</html>
```

EXCEUTION:
Run with chrome browser
INPUT/OUTPUT



PRE LAB VIVA QUESTIONS

1.Write a program to design the scientific calculator and make event for each button using java script.
2.Write a JavaScript program for printing the days of a week?
3.Write a java script function which will take an array of numbers stored and find the second lowest and second greatest numbers, respectively.
4.Is JavaScript is scripting language?

POST LAB VIVA QUESTIONS:

1.How to create the text field?
2.How to retrieve the form data?
3.What is the purpose of writing document.getElementById ('anumber').value?
4.How to create an array in JavaScript?

EXPERIMENT-5.a

OBJECTIVE:

Developing a web page style using javascript and css.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Google Form</title>
<link rel="stylesheet" href="google.css">
<style>
body{
background-color: black;
}
.box{
background-color: white;
}
</style>
<script lang="javascript">
function validateform(){
var email=document.box.first.value;
var password=document.box.second.value;
// var email = form.box.first.value
// var password = form.box.second.value

if (email==null || email==""){
alert("Name can't be blank");
return false;
}else if(password.length<6){
alert("Password must be at least 6 characters long.");
return false;
}
}

</script>
</head>
<body>

<div class="box">
<div class="logo">

</div>
<h2>Sign In</h2>
```

```
<p>Use your Google Account</p>
<form na>
<div class="inputBox" >
<input type="email" name="first" required onkeyup="this.setAttribute('value', this.value);"  v
<label>Username</label>
</div>
<div class="inputBox">
<input type="text" name="second" required onkeyup="this.setAttribute('value', this.value);" va
<label>Password</label>
</div>
<input type="submit" name="sign-in" value="Sign In" onclick=validateform()>
</form>
</div>

</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week5a.png

PRE LAB VIVA QUESTIONS

1.Is JavaScript is scripting language?
2.What is object oriented language?
3.What is form validation?
4. Is it possible to set specific colors for table borders?

POST LAB VIVA QUESTIONS:

1. How do we validate the e-mail?
2. How to check the check box by default?
3. How to create the radio button group?
4. How to create the check box group?

EXPERIMENT-5.b

OBJECTIVE:

Develop a Script intractive form.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>JS</title>
</head>
<body>
<h3>Marks Report</h3>
<label>RollNo</label> <br>
<input type="text" id="rno"/> <br>

<label>Name</label> <br>
<input type="text" id="sna"/> <br>

<label>HTML</label> <br>
<input type="text" id="hm"/> <br>

<label>CSS</label> <br>
<input type="text" id="cm"/> <br>

<label>JavaScript</label> <br>
<input type="text" id="jm"/> <br>
<button onclick="getResult()">get result</button> <br> <br>

<output id="total"></output> <bR>
<output id="average"></output> <bR>
<output id="grade"></output> <bR>

<script>
function getResult()
{
let h,c,j,tot,avg,grd;
h = +hm.value;
c = +cm.value;
j = +jm.value;
tot = h+c+j;
avg = tot/3;
if(h>39 && c>39 && j>39)
{
if(avg>=90)
grd="A+";
```

```
else if(avg>=80)
grd="A"
else if(avg>=70)
grd="B+"
else if(avg>=60)
grd="B"
else if(avg>=50)
grd="C"
else
grd="D";
} else
grd="Fail";

total.value = "Total Marks :"+tot;
average.value = "Average :"+avg+"%";
grade.value = "Grade :"+grd;
}
</script>
</body>
</html>
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

PRE LAB VIVA QUESTIONS

1. What is DOCTYPE tag?
2. How to create the HTML document?
3. How to create the text area in an HTML document?
4. How to create the submit button in an HTML document?

POST LAB VIVA QUESTIONS:

1.List out the different ways an HTML element can be accessed in a JavaScript code.
2.In how many ways a JavaScript code can be involved in an HTML file?
3. Name some of the JavaScript Frameworks
4.What is NaN in JavaScript?

EXPERIMENT-5.c

OBJECTIVE:

Data binding using ajax

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

Index.html:

```
<html>
<head>
<title>Email List Subscribe Form</title>
</head>
<body>
<h1>Email List Subscribe Form</h1>
<form action="" name="nameForm" id="nameForm" method="post">
<label for="firstName">First Name: </label>
<input type="text" name="firstName" id="firstName" /><br />
<label for="lastName">Last Name: </label>
<input type="text" name="lastName" id="lastName" /><br />
<label for="email">Email: </label>
<input type="text" name="email" id="email" /><br />
<input type="submit" value="Subscribe" />
</form>
<script src="script.js"></script>
</body>
</html>
```

Script.js:

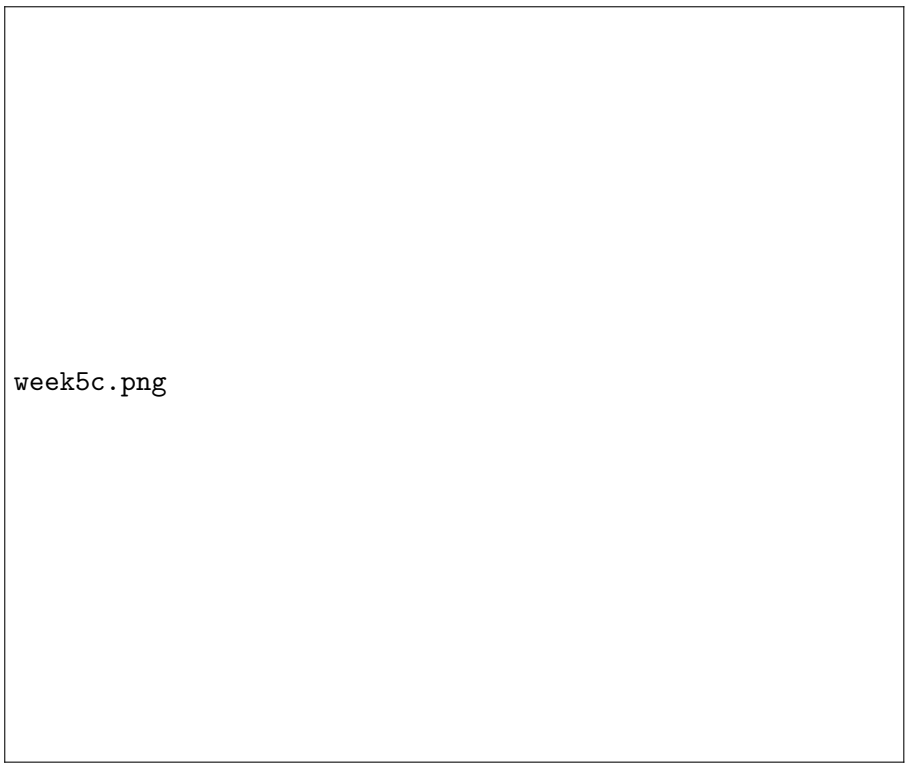
```
const APIURL = "http://localhost:3000";
const subscribe = data => {
return fetch(`${APIURL}/subscribers`, {
method: "POST",
mode: "cors",
cache: "no-cache",
headers: {
"Content-Type": "application/json"
},
body: JSON.stringify(data)
}).then(response => response.json());
};
window.onload = () => {
const nameForm = document.forms.nameForm;
nameForm.method = "post";
nameForm.target = "_blank";
nameForm.action = "";
nameForm.addEventListener("submit", e => {
e.preventDefault();
```

```
const firstName = document.getElementById("firstName").value;
const lastName = document.getElementById("lastName").value;
const email = document.getElementById("email").value;
let errors = [];
if (!firstName) {
errors.push("First name is required.");
}
if (!lastName) {
errors.push("Last name is required.");
}
if (!email) {
errors.push("Email is required.");
}
if (!/[^@]+@[^\.]+\..+/.test(email)) {
errors.push("Email is invalid.");
}
if (errors.length > 0) {
alert(errors.join(" "));
return;
}
subscribe({
firstName,
lastName,
email
}).then(response => {
alert(`${response.firstName} ${response.lastName} has subscribed`);
});
});
};
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT



PRE LAB VIVA QUESTIONS

1.What is AJAX?
2.What are the real web applications of AJAX currently running in the market?
3.What are the important methods of XMLHttpRequest?
4.What is the role of the callback function in AJAX?

POST LAB VIVA QUESTIONS:

1.What are all the controls of Ajax?
2.What are all the features of Ajax?
3.What are the difference between AJAX and Javascript?
4.What is JSON in Ajax?

EXPERIMENT-6

OBJECTIVE:

React environment setup.

a) Setting up development environment.
b) Integration with Existing Apps.
c) Running on Device.
d) Debugging
e) Testing
f) Write source code using Typescript.

SOFTWARE NEEDED

Notepad and Crome Browser

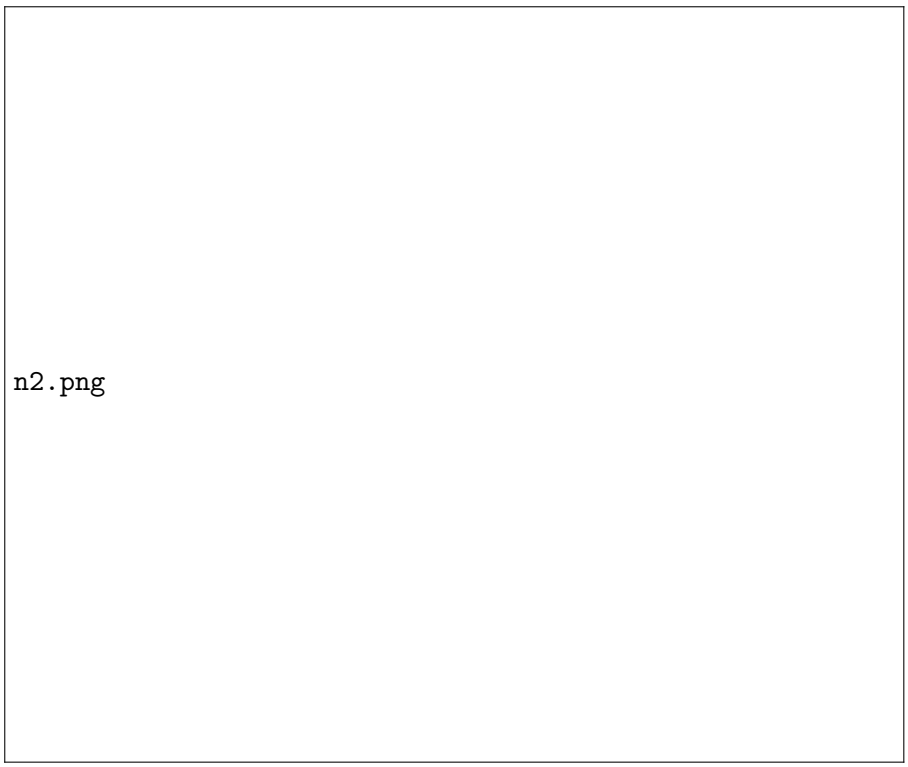
SOURCE CODE

Node js installation

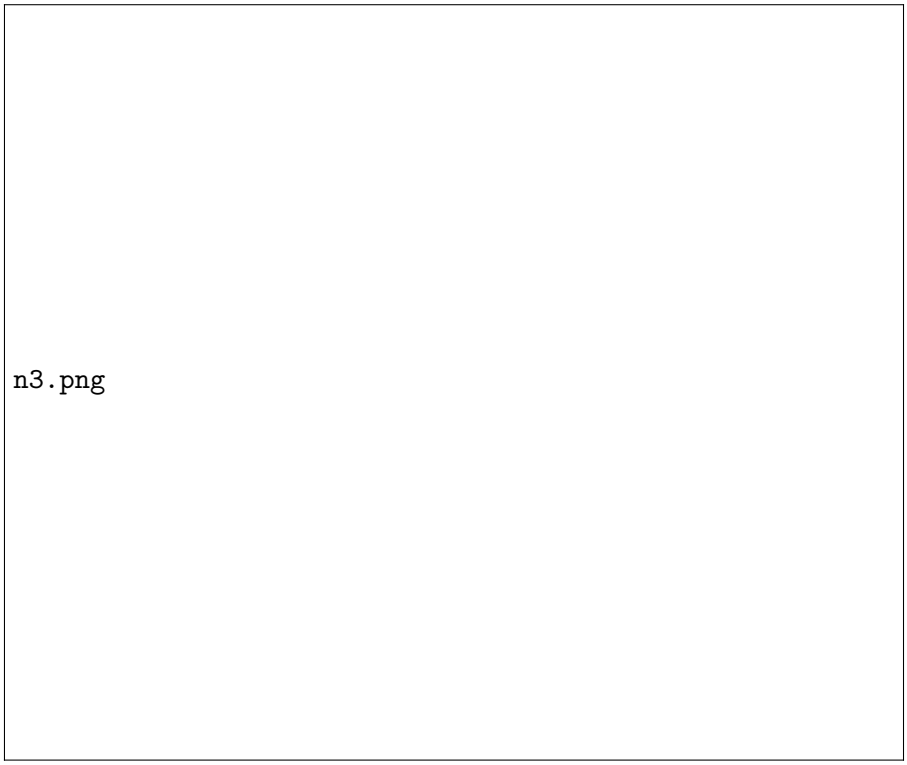
Step : 1

n1.png

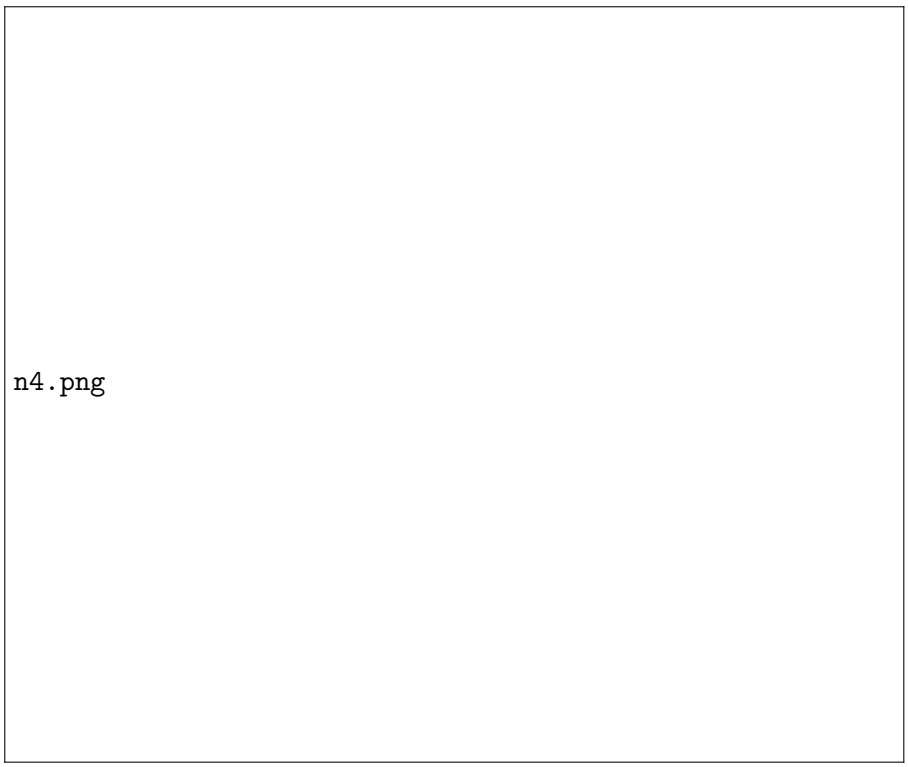
Step : 2



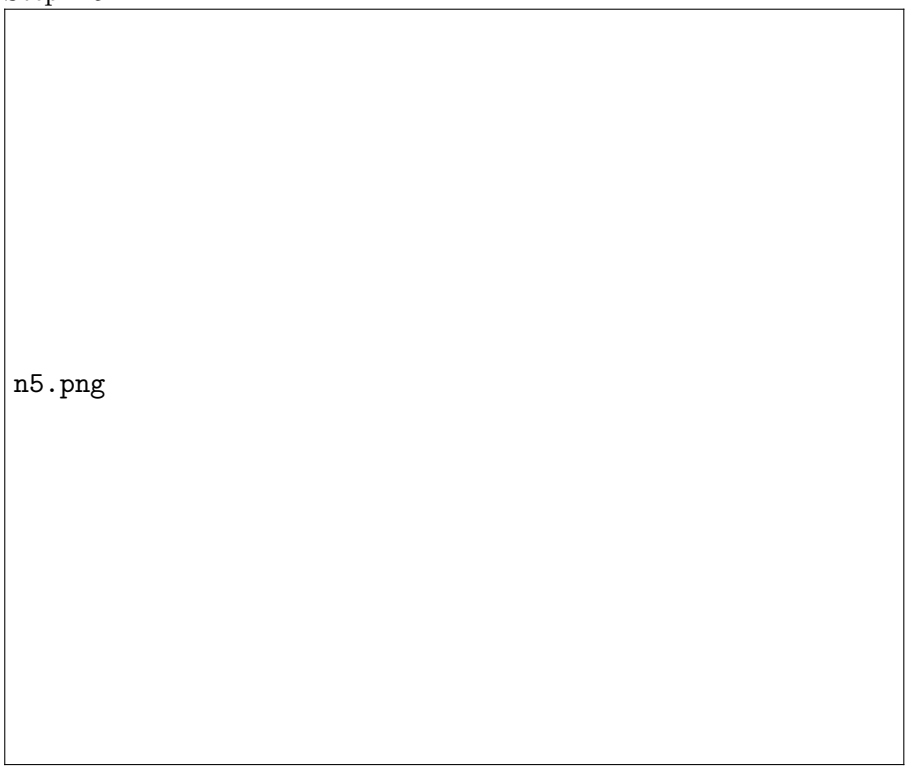
Step : 3



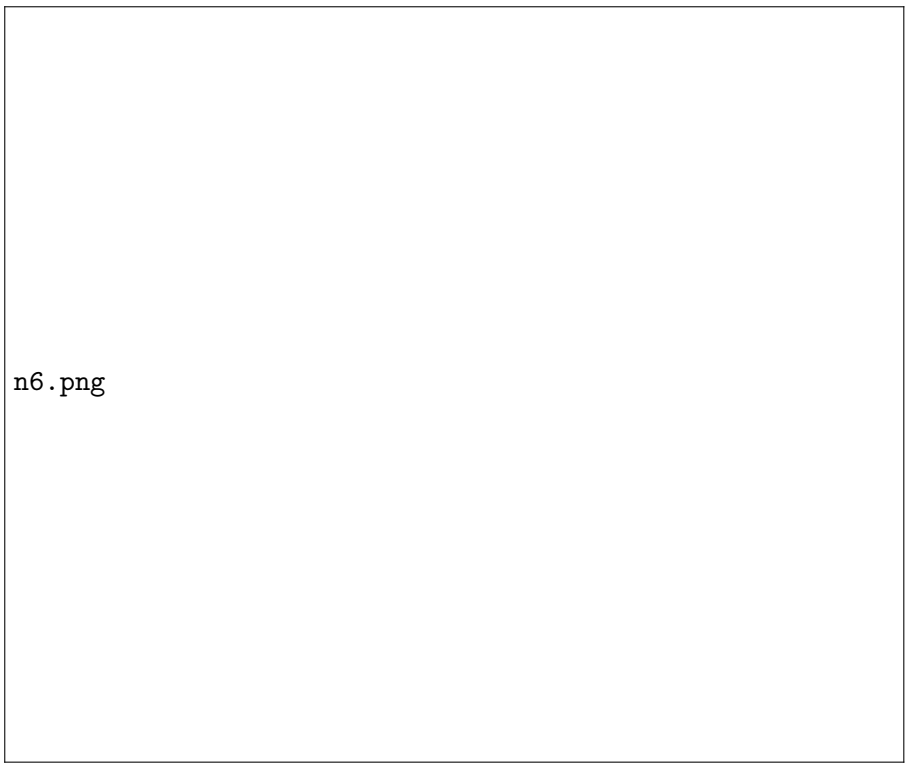
Step : 4



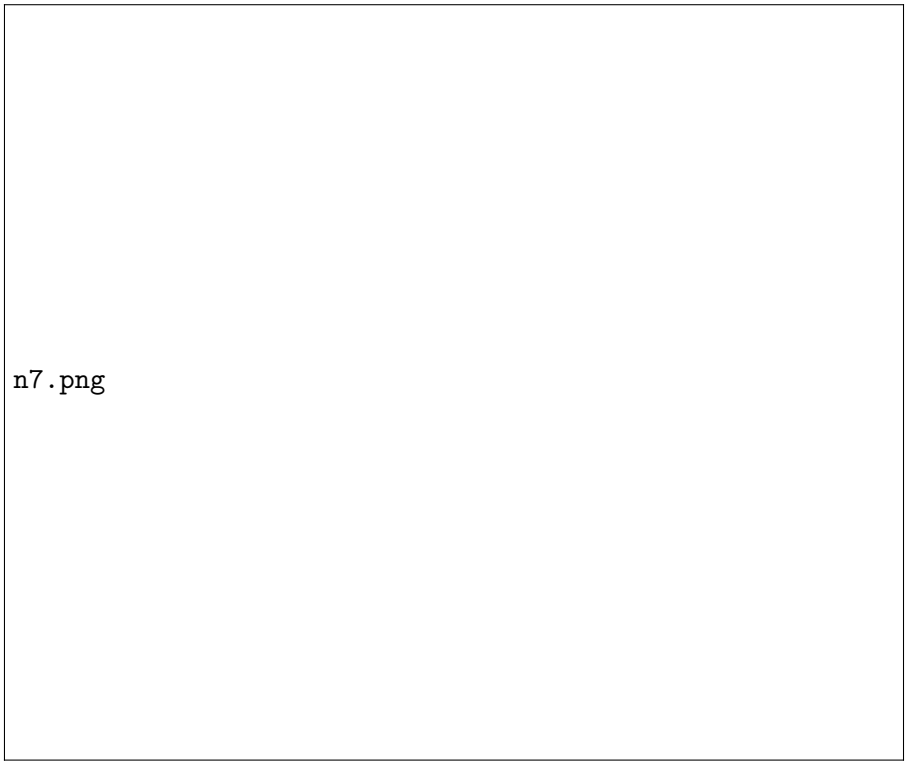
Step : 5



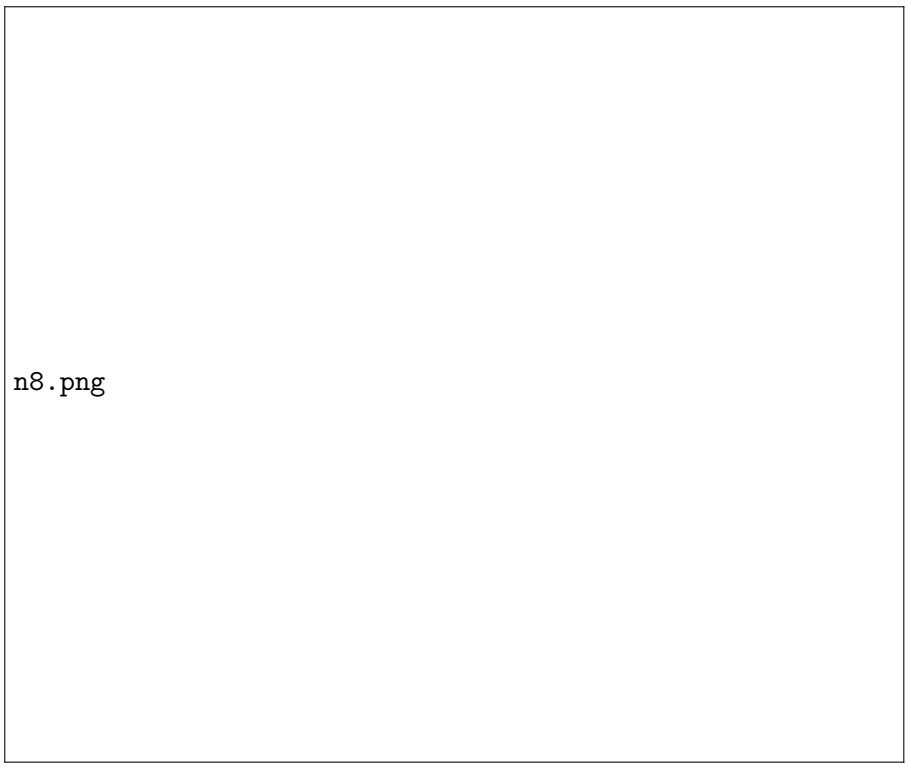
Step : 6



Step : 7



Step : 8



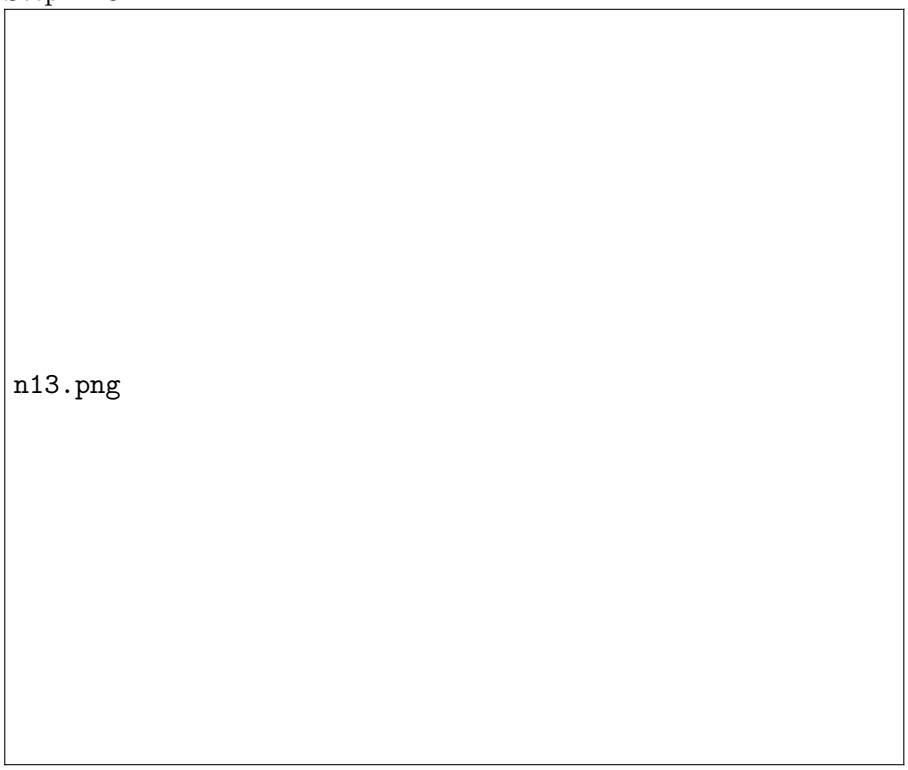
Step : 9

Step : 10

Step : 11

Step : 12

Step : 13

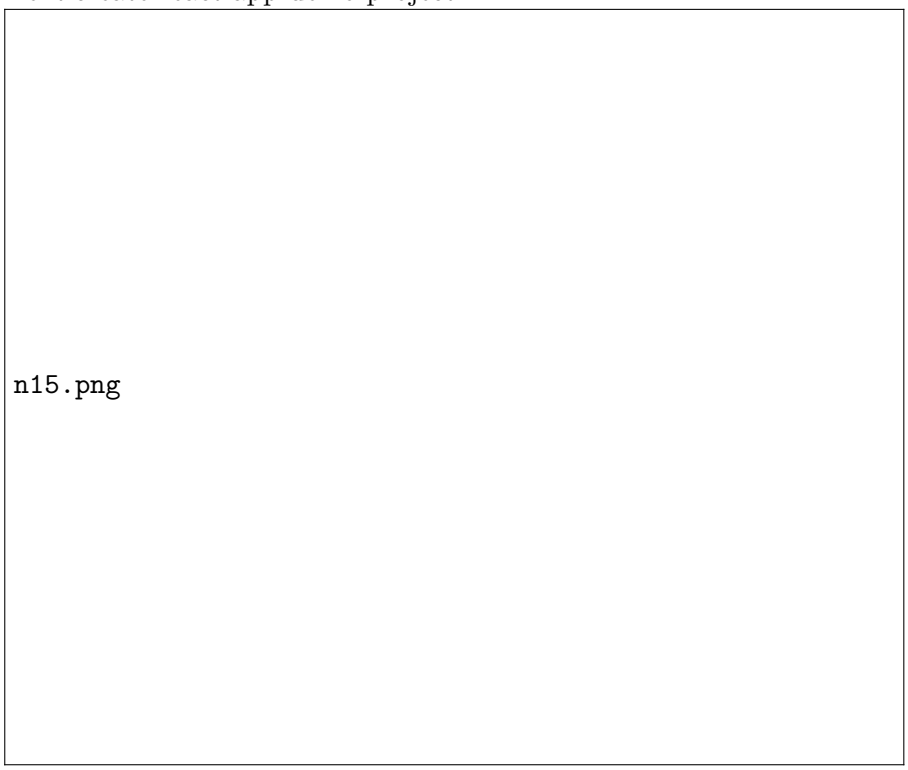


Step : 14

Open node.js command parompt
Type : npm install create-react-app –g

Step : 15

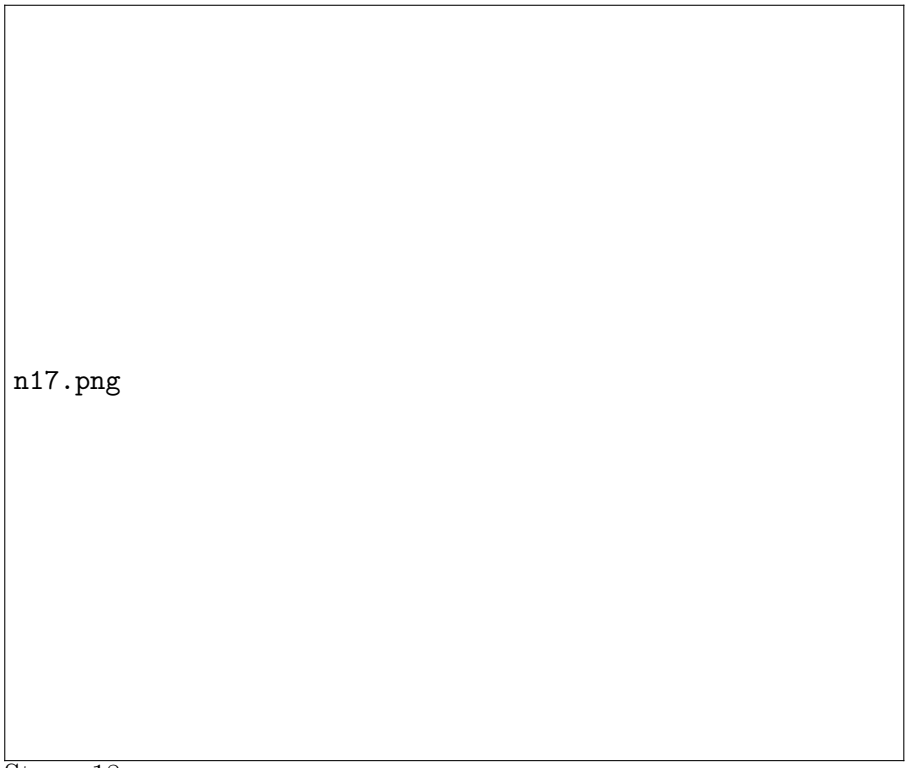
Next: md react enter
Next: md project-name enter
Next: create-reacct-app demo-project
Next:create-react-app demo-project



Step : 16

Step : 17

Next: cd demo-project enter
Next: npm start



Step : 18

n18.png

React Files & folders, How they work:
One project having 3 Folders and 4 files
1. node_modules
2. public

favicon.ico
index.html
logo192.png
logo512.png
manifest.json
robots.txt
3. src
App.css
App.js
App.test.js
index.css
index.js
logo.svg
reportWebVitals.js
setupTests.js
1. .gitignore
2.package.json
3.package-lock.json
4.README.MD

EXCEUTION:

Run with crome browser

PRE LAB VIVA QUESTIONS

1.What is React, and how is it different from other JavaScript frameworks?
2.What is JSX?
3.What is state in React?
4.What are props in React?

POST LAB VIVA QUESTIONS:

1.What language(s) is React made of?
2.How do you embed two components in one component?
3.What are react component lifecycle methods?
4.How React component lifecycle methods help in building interfaces?

WEEK -7: PROGRAMMING WITH REACT

OBJECTIVE:

a) Basics Interactive examples.
b) Function Components and Class Components
c) React Native Fundamental, Handling Text Input
d) Using a scroll View, using List View.
e) Platform Specific Code

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
a)To implement a basic interactive example.

import React from 'react';
// import ReactDOM from 'react-dom/client';

function Car() {
return <h2>Hi, I am a Car!</h2>;
}

// const root = ReactDOM.createRoot(document.getElementById('root'));
// root.render(<Car />);
export default Car;

b) Function Components and Class Components \\
\textbf{Functional component}
Step1:  Create folder called component in src
Step2:  In component folder create file called Bh.js (file extension .js only)
Step3:  Bh.js
import React from ‘react’ ;
function Bh()
{
return <h1> welcome to bhavani </h1>;
}
export default Bh;
Step5:   App.js file   open and edit the file.  (  i.e remove all the components  in <div> <di
Code
import React,{ Component } from 'react';
import logo from './logo.svg';
import './App.css';
import Bh from './component/Bh‘;
class App extends Component  {
render()
{  return (    <div className="App">
<Bh />
</div>  );
}
```

```
}
export default App;

\textbf{Class component }
Step1 : Welcome.js            ( file created in component folder)
import React,{ Component } from 'react';
class Welcome extends Component
{
render()
{
return   <h1> welcome  to class component </h1> ;
}
}
export default Welcome;


Step 2 : App.js ( these two lines are modifications )
import React,{ Component } from 'react';
import logo from './logo.svg';
import './App.css';
import Greet from './component/Greet‘
import Bh from './component/Bh‘
import Welcome from './component/Welcome‘
class App extends Component
{
render()
{
return (    <div className="App">
<Bh />        <Welcome />
</div>  );
}
}
export default App;

c)Handaling text input on react.
Ans:
import React, { Component } from 'react'

class Counter extends Component {

constructor(props) {
super(props)

this.state = {
Count: 0
}
}

increment(){
this.setState({
Count: this.state.Count + 1
})
```

```
console.log(this.state.Count)
}

render() {
return (
<div>
<div>Count - {this.state.Count}</div>
<button onClick={() => this.increment()}>Increment</button>
</div>
)
}
}

export default Counter
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

PRE LAB VIVA QUESTIONS

1.What is React?
2.What are the features of React?
3.List some of the major advantages of React.
4.What are the limitations of React?

POST LAB VIVA QUESTIONS:

1.How different is React's ES6 syntax when compared to ES5?
2.How is React different from Angular?
3.What is the purpose of render() in React.
4.What is a state in React and how is it used?

WEEK -8: BUILD A DRUNKEN SNAKE GAME USING HOOKS

OBJECTIVE:

a) Introduction and scaffolding the project.
b) Components, Props and Styles.
c) State and Lifecycle Events.
d) Extended Game Functionality.
e) Finishing up and Deployment

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
import React, {Component} from "react";
import "./App.css"
const  HEIGHT = 10;
const  WIDTH  = 10;
// mapping keycode  for changing direction
const LEFT  = 37;
const UP    = 38;
const RIGHT = 39;
const DOWN  = 40;
const STOP  = 32; /* [space] used for pause */

const getRandom = () => {
return  {
x: Math.floor(Math.random() *WIDTH),
y: Math.floor(Math.random() *HEIGHT)
}
}
const emptyRows = () => [...Array(WIDTH)].map((_) => [...Array(HEIGHT)].map((_)=> 'grid-
item'));
const increaseSpeed = (speed) => speed - 10 *(speed > 10)
const initialState = {
rows: emptyRows(),
snake: [getRandom()],
food: getRandom(),
direction: STOP,
speed: 400,
}
class App extends Component {

constructor() {
super();
this.state = initialState;
}
componentDidMount() {
setInterval(this.moveSnake, this.state.speed);
document.onkeydown = this.changeDirection;
```

```
}

componentDidUpdate() {
this.isCollapsed();
this.isEaten();
}

moveSnake = () => {
let snakeCopy = [...this.state.snake];
let head  =  {...snakeCopy[snakeCopy.length-1]};
switch (this.state.direction) {
case LEFT:  head.y += -1; break;
case UP:    head.x += -1; break;
case RIGHT: head.y += 1;  break;
case DOWN:  head.x += 1;  break;
default: return;
}
/* keep the value within range of 0 to HEIGHT */
head.x += HEIGHT * ((head.x<0)-(head.x>=HEIGHT));
head.y += WIDTH * ((head.y<0)-(head.y>=WIDTH));

snakeCopy.push(head);
snakeCopy.shift()
this.setState({
snake: snakeCopy,
head: head
});
this.update();
}

isEaten() {
let snakeCopy  = [...this.state.snake];
let head  =  {...snakeCopy[snakeCopy.length-1]};
let food = this.state.food;
if ((head.x === food.x) &&(head.y === food.y)) {
snakeCopy.push(head);
this.setState({
snake: snakeCopy,
food: getRandom(),
speed: increaseSpeed(this.state.speed)
});
}
}

update() {
let newRows = emptyRows();
this.state.snake.forEach(element => newRows[element.x][element.y] = 'snake')
newRows[this.state.food.x][this.state.food.y] = 'food';
this.setState({rows: newRows});
}

isCollapsed = () => {
```

```
let snake = this.state.snake;
let head  = {...snake[snake.length-1]}
for (let i=0; i<snake.length-3; i++) {
if ((head.x === snake[i].x) &&(head.y === snake[i].y)) {
this.setState(initialState);
alert(`game over: ${snake.length*10}`)
}
}
}
changeDirection = ({keyCode}) => {
let direction = this.state.direction;
switch (keyCode) {
case LEFT:
direction = (direction === RIGHT)? RIGHT: LEFT;
break;
case RIGHT:
direction = (direction === LEFT)? LEFT: RIGHT;
break;
case UP:
direction = (direction === DOWN)? DOWN: UP;
break;
case DOWN:
direction = (direction === UP)? UP: DOWN;
break;
case STOP:
direction = STOP;
break;
default:
break;
}
this.setState({
direction: direction
});
}
render() {
const displayRows = this.state.rows.map((row, i) => row.map((value, j) =>  <div name={`${i}=${
return (
<div className="a">
<center><h1><u> Snake  Game </u></h1>

<h2>press "space" to pause the game.</h2>
<h2>press "arrow keys" to change direction/ unpause.</h2>
</center>
<div className="snake-container">
<div className="grid">{displayRows}</div>
</div>
</div>
)
}
}  export default App;
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

week9.png

PRE LAB VIVA QUESTIONS

1.What is JSX?
2.How is React different from Angular?
3.Differentiate between states and props.
4.What are the different phases of React component's lifecycle?

POST LAB VIVA QUESTIONS:

1.How can you embed two or more components into one?
2.How can you update the state of a component?
3.How do you create an event in React?
4.What do you understand by refs in React?

WEEK-9: PHP SESSIONS BOX React FOR DATA VISUALIZATION

OBJECTIVE:

a) Introduction and scaffolding the Project.
b) Pages and Layout.
c) Working with an API, CSS-in-JS.
d) Dynamic Pages and React Hooks.
e) Custom React Hooks, Dynamic CSS-in-JS.
f) Finishing up and Deployment.
g) Optimization and PWA.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
//File App.js
import './App.css';
import BarChart from './BarChart';
import LineChart from './LineChart';

function App() {
return (
<div className="App">
<header className="App-header">


<div class="container">
<div class="item">
<LineChart />
</div>
<div class="item">
<BarChart />
</div>
</div>
</header>
</div>
);
}

export default App;

//File index.js
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import App from './App';
import reportWebVitals from './reportWebVitals';
```

```
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
<React.StrictMode>
<App />
</React.StrictMode>
);

// If you want to start measuring performance in your app, pass a function
// to log results (for example: reportWebVitals(console.log))
// or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals
reportWebVitals();
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

PRE LAB VIVA QUESTIONS

1.What do you know about controlled and uncontrolled components?
2.What were the major problems with MVC framework?
3.Explain Flux.
4.What is Redux?

POST LAB VIVA QUESTIONS:

1.What are the three principles that Redux follows?
2.List down the components of Redux.
3.How do you modularize code in React?
4.List some of the cases when you should use Refs.

WEEK-10: CHAT APPLICATION

OBJECTIVE:

a) Firebase Environment. Introduction and Scaffolding the project.
b) Private and Public pages, Context API.
c) Creating Side bar and Dashboard
d) Creating and displaying Chat Rooms.
e) Creating Layout for Chat page.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
import { CometChatUI } from "./cometchat-pro-react-ui-kit-master/CometChatWorkspace/src";
import React, { Component } from "react";
import { Switch, Redirect,Route } from "react-router-dom";
import log from "./log";

import user from "./user";
class App extends Component {

render() {

return (
<div style={{width: '800px', height:'800px' }}>
<CometChatUI />
<Switch>
<Redirect exact from="/" to="/log" />

<Route path="/log"  />
<Route path="/user" component={user} />
</Switch>
</div>
);
}
}
export default App;
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

PRE LAB VIVA QUESTIONS

1.How is Redux different from Flux?
2.Why do we need a Router in React?
3.What are different types of web development?

4.What is an event loop in Node JS?

POST LAB VIVA QUESTIONS:

1.Why are media queries used in CSS?
2.What are pseudo-classes?
3.What do you mean by CSS Selectors? Name a Few.
4.Explain W3C (World Wide Consortium).

WEEK -11: CHAT APPLICATION API RESPONSES

OBJECTIVE:

a) Context API Problem-solution for the chat messages.
b) Denormalization of the data to be stored in app.
c) Displaying chat feed for Interactive UI along with Real time user presence.

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
//File App.js
import React from "react";
import Chatbot from "react-chatbot-kit";

import config from "./chatbot/config";
import ActionProvider from "./chatbot/ActionProvider";
import MessageParser from "./chatbot/MessageParser";

import "./App.css";

function App() {
return (
<div className="App">
<div style={{ maxWidth: "300px" }}>
<Chatbot
config={config}
actionProvider={ActionProvider}
messageParser={MessageParser}
/>
</div>
</div>
);
}

export default App;

  //File index.js
import React from 'react';
import ReactDOM from 'react-dom';
import './index.css';
import App from './App';
import * as serviceWorker from './serviceWorker';

ReactDOM.render(
<React.StrictMode>
<App />
</React.StrictMode>,
document.getElementById('root')
```

```
);

// If you want your app to work offline and load faster, you can change
// unregister() to register() below. Note this comes with some pitfalls.
// Learn more about service workers: https://bit.ly/CRA-PWA
serviceWorker.unregister();
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

PRE LAB VIVA QUESTIONS

1.What is a chat API?
2.What is chat UI?
3.What are different types of chat APIs
4.State the difference between a web developer and a software developer?

POST LAB VIVA QUESTIONS:

1.What is the purpose of render() in React.
2.What is arrow function in React? How is it used?
3.What is an event in React?
4.Explain the lifecycle methods of React components in detail.

WEEK -12: DATABASES HANDLING

OBJECTIVE:

a) Role Based Access.
b) Messages Likes and deletion.
c) File and Audio Chat Messages.
d) Extended Chat Features and Deployment

SOFTWARE NEEDED

Notepad and Crome Browser

SOURCE CODE

```
 //File App.js
import './App.css';

function App() {
return (
<div>
<h2>hello</h2>
</div>
);
}

export default App;

 //File Index.js
import React from 'react';
import ReactDOM from 'react-dom';
import './index.css';
import App from './Components/App';
import reportWebVitals from './reportWebVitals';

ReactDOM.render(
<React.StrictMode>
<App />
</React.StrictMode>,
document.getElementById('root')
);

// If you want to start measuring performance in your app, pass a function
// to log results (for example: reportWebVitals(console.log))
// or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals
reportWebVitals();
```

EXCEUTION:

Run with crome browser

INPUT/OUTPUT

PRE LAB VIVA QUESTIONS

1.List some of the cases when you should use Refs.
2.How do you modularize code in React?
3.What do you know about controlled and uncontrolled components?
4.What are Higher Order Components(HOC)?

POST LAB VIVA QUESTIONS:

1.How are forms created in React?
2.What can you do with HOC?
3.What were the major problems with MVC framework?
4.What are the three principles that Redux follows?