**INP Practical Problem Statements:**

1. Design a Registration Form for Covid vaccine using HTML5 and inline/external/internal CSS.

Index.html:

<!DOCTYPE html>

<html>

<head>

<title>COVID-19 Vaccine Registration</title>

<link rel="stylesheet" type="text/css" href="styles.css">

</head>

<body>

<h1>COVID-19 Vaccine Registration</h1>

<div class="container">

<form action="#" method="post" enctype="multipart/form-data">

<label for="photo">Upload Photo:</label>

<input type="file" id="photo" name="photo" accept="image/\*" required>

<label for="name">Full Name:</label>

<input type="text" id="name" name="name" required>

<label for="email">Email:</label>

<input type="email" id="email" name="email" required>

<label for="dob">Date of Birth:</label>

<input type="date" id="dob" name="dob" required>

<label for="aadhaar">Aadhaar Card:</label>

<input type="text" id="aadhaar" name="aadhaar" required pattern="[0-9]{12}" title="Aadhaar card should be 12 digits long">

<label for="vaccineType">Select Vaccine Type:</label>

<select id="vaccineType" name="vaccineType">

<option value="Pfizer">Pfizer</option>

<option value="Moderna">Moderna</option>

<option value="Johnson & Johnson">Johnson & Johnson</option>

<option value="AstraZeneca">AstraZeneca</option>

</select>

<input type="submit" value="Register">

</form>

</div>

</body>

</html>

Style.css:

body {

font-family: Arial, sans-serif;

background-color: #f0f0f0;

text-align: center;

margin: 0;

padding: 0;

}

h1 {

background-color: #007acc;

color: #fff;

padding: 20px;

}

.container {

width: 400px;

margin: 0 auto;

background-color: #fff;

padding: 20px;

border-radius: 5px;

box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

}

label {

display: block;

margin-top: 10px;

}

input[type="text"],

input[type="email"],

input[type="date"],

input[type="text"]:valid,

select {

width: 80%;

padding: 10px;

margin-top: 5px;

margin-bottom: 10px;

border: 1px solid #ccc;

border-radius: 5px;

}

input[type="file"] {

margin-top: 5px;

margin-bottom: 10px;

}

input[type="submit"] {

background-color: #007acc;

color: #fff;

padding: 10px 20px;

border: none;

border-radius: 5px;

cursor: pointer;

}

input[type="submit"]:hover {

background-color: #00578b;

}

Main index.html:

<!DOCTYPE html>

<html>

<head>

    <title>COVID-19 Vaccine Registration</title>

    <link rel="stylesheet" type="text/css" href="styles.css">

    <style>

        /\* Internal CSS \*/

        .container {

            background-color: #f0f0f0;

            text-align: center;

            margin: 0;

            padding: 0;

        }

    </style>

</head>

<body>

    <h1>COVID-19 Vaccine Registration</h1>

    <div class="container">

        <form action="#" method="post">

            <label for="photo">Upload Photo:</label>

            <input type="file" id="photo" name="photo" accept="image/\*" required>

            <label for="name">Full Name:</label>

            <input type="text" id="name" name="name" required>

            <label for="email">Email:</label>

            <input type="email" id="email" name="email" required>

            <label for="dob">Date of Birth:</label>

            <input type="date" id="dob" name="dob" required>

            <label for="aadhaar">Aadhaar Card:</label>

            <input type="text" id="aadhaar" name="aadhaar" required pattern="[0-9]{12}" title="Aadhaar card should be 12 digits long">

            <label for="vaccineType">Select Vaccine Type:</label>

            <select id="vaccineType" name="vaccineType">

                <option value="Pfizer">Pfizer</option>

                <option value="Moderna">Moderna</option>

                <option value="Johnson & Johnson">Johnson & Johnson</option>

                <option value="AstraZeneca">AstraZeneca</option>

            </select>

            <input type="submit" value="Register">

        </form>

    </div>

</body>

</html>

Style.css:

/\* styles.css \*/

h1 {

    background-color: #007acc;

    color: #fff;

    padding: 20px;

}

.container {

    width: 400px;

    margin: 0 auto;

    background-color: #fff;

    padding: 20px;

    border-radius: 5px;

    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

}

label {

    display: block;

    margin-top: 10px;

}

input[type="text"],

input[type="email"],

input[type="date"],

input[type="text"]:valid,

select {

    width: 80%;

    padding: 10px;

    margin-top: 5px;

    margin-bottom: 10px;

    border: 1px solid #ccc;

    border-radius: 5px;

}

input[type="file"] {

    margin-top: 5px;

    margin-bottom: 10px;

}

input[type="submit"] {

    background-color: #007acc;

    color: #fff;

    padding: 10px 20px;

    border: none;

    border-radius: 5px;

    cursor: pointer;

}

input[type="submit"]:hover {

    background-color: #00578b;

}

1. Design a Course Registration Form using HTML5 and inline/external/internal CSS.

Index.html:

<!DOCTYPE html>

<html>

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

</style>

    <div class="header" style="background-color: rgb(238, 188, 253);">

        <center><img src="sfitlogo.png" alt="sfit logo" height="100px" width="100px"></center>

        <h2><center>St. Francis Institute of Technology</center></h2>

        <p><center>Mount Poinsur, Borivali West, Mumbai, Maharashtra 400103</center></p>

                 <p><center><b>Phone:</b>   022     2892    8585

                    <b>Email:</b> sfedu@sfit.ac.in

                    <b>Website:</b> https://www.sfit.ac.in/</center></p>

                </div>

    <title>Course Registration Form</title>

    <link rel="stylesheet" type="text/css" href="styles.css">

    <style>

        /\* Internal CSS \*/

        .center {

            display: flex;

            justify-content: center;

            align-items: center;

            min-height: 100vh;

            flex-direction: column;

        }

    </style>

</head>

<body>

    <div class="center">

        <h1>Course Registration</h1>

        <div class="container">

            <form action="#" method="post">

                <label for="name">Full Name:</label>

                <input type="text" id="name" name="name" required style="width: 90%; padding: 10px; border: 1px solid #ccc; border-radius: 5px; margin-top: 5px; margin-bottom: 10px;">

                <label for="email">Email:</label>

                <input type="email" id="email" name="email" required style="width: 90%; padding: 10px; border: 1px solid #ccc; border-radius: 5px; margin-top: 5px; margin-bottom: 10px;">

                <label for="phone">Phone Number:</label>

                <input type="tel" id="phone" name="phone" required pattern="[0-9]{10}" title="Phone number should be 10 digits" style="width: 90%; padding: 10px; border: 1px solid #ccc; border-radius: 5px; margin-top: 5px; margin-bottom: 10px;">

                <label for="dob">Date of Birth:</label>

                <input type="date" id="dob" name="dob" required style="width: 90%; padding: 10px; border: 1px solid #ccc; border-radius: 5px; margin-top: 5px; margin-bottom: 10px;">

                <label for="course">Select Course:</label>

                <select id="course" name="course" style="width: 90%; padding: 10px; border: 1px solid #ccc; border-radius: 5px; margin-top: 5px; margin-bottom: 10px;">

                    <option value="Mathematics">Computer Science</option>

                    <option value="Science">Information Technology</option>

                    <option value="History">EXTC</option>

                    <option value="Computer Science">Mechanical</option>

                    <option value="Computer Science">Electrical</option>

                </select>

                <label for="message">Additional Comments:</label>

                <textarea id="message" name="message" rows="4" style="width: 90%; padding: 10px; border: 1px solid #ccc; border-radius: 5px; margin-top: 5px; margin-bottom: 10px;"></textarea>

                <input type="submit" value="Register" style="background-color: #007acc; color: #fff; padding: 10px 20px; border: none; border-radius: 5px; cursor: pointer;">

            </form>

        </div>

    </div>

</body>

</html>

Style.css:

/\* styles.css \*/

h1 {

    background-color: #007acc;

    color: #fff;

    padding: 20px;

}

.container {

    width: 400px;

    background-color: #fff;

    padding: 20px;

    border-radius: 5px;

    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

    text-align: left;

}

label {

    display: block;

    margin-top: 10px;

}

input[type="text"],

input[type="email"],

input[type="tel"],

input[type="date"],

select,

textarea {

    width: 90%;

    padding: 10px;

    margin-top: 5px;

    margin-bottom: 10px;

    border: 1px solid #ccc;

    border-radius: 5px;

}

input[type="submit"] {

    background-color: #007acc;

    color: #fff;

    padding: 10px 20px;

    border: none;

    border-radius: 5px;

    cursor: pointer;

}

input[type="submit"]:hover {

    background-color: #00578b;

}

1. Design a personal profile using HTML5 and internal/external/inline CSS.

Index.html:

<!DOCTYPE html>

<html>

<head>

    <title>My Personal Profile</title>

    <link rel="stylesheet" type="text/css" href="styles.css">

</head>

<body>

    <header>

        <h1>My Personal Profile</h1>

        <img src="C:\Users\VINAY\Pictures\IMG\_20220815\_181144.jpg" width="120" height="150">

    </header>

    <section id="about">

        <h2>About Me</h2>

        <p>Add an inspirational quote here.</p>

    </section>

    <section id="personal-details">

        <h2>Personal Details</h2>

        <ul>

            <li>Name: Your Name</li>

            <li>Address: Your Address</li>

            <li>Mobile Number: Your Phone Number</li>

            <li>Email: <a href="mailto:your@email.com">your@email.com</a></li>

            <li>LinkedIn: <a href="https://www.linkedin.com/in/yourprofile">LinkedIn Profile</a></li>

        </ul>

    </section>

    <section id="academic-qualifications">

        <h2>Academic Qualifications</h2>

        <table border=|>

            <tr>

                <th>Qualification</th>

                <th>School/College</th>

                <th>Passing Year</th>

                </tr>

                <tr>

                <td>SSC</td>

                <td>OLHS, Sahar</td>

                <td>2019</td>

                </tr>

                <tr>

                <td>HSC</td>

                <td>Sathaye College</td>

                <td>2021</td>

                </tr>

                <tr>

                <td>Degree</td>

                <td>SFIT, Borivali</td>

                <td>Present</td>

                </tr>

        </table>

    </section>

    <section id="skills">

        <h2>Skills</h2>

        <ul>

            <li>Technical Skills:

                <ul>

                    <li>Programming Languages: Java, Python</li>

                    <li>Web Development: HTML, CSS, JavaScript</li>

                </ul>

            </li>

            <li>Non-technical Skills:

                <ul>

                    <li>Communication</li>

                    <li>Problem Solving</li>

                </ul>

            </li>

        </ul>

    </section>

    <section id="internships">

        <h2>Internships</h2>

        <p>Internship 1: Description of the first internship.</p>

        <p>Internship 2: Description of the second internship.</p>

    </section>

    <section id="projects">

        <h2>Projects</h2>

        <video controls width="400">

            <source src="project\_video.mp4" type="video/mp4">

            Your browser does not support the video tag.

        </video>

    </section>

    <section id="certifications">

        <h2>Certifications</h2>

        <img src="certification\_image\_1.jpg" alt="Certification 1">

        <img src="certification\_image\_2.jpg" alt="Certification 2">

    </section>

    <section id="hobbies">

        <h2>Hobbies</h2>

        <ul>

            <li>Reading</li>

            <li>Hiking</li>

            <li>Photography</li>

        </ul>

    </section>

    <section id="social-responsibility">

        <h2>Social Responsibility</h2>

        <p>Description of social responsibility activities.</p>

    </section>

    <section id="achievements">

        <h2>Achievements</h2>

        <ul>

            <li>Achievement 1: Description of the first achievement.</li>

            <li>Achievement 2: Description of the second achievement.</li>

        </ul>

    </section>

    <section id="references">

        <h2>References</h2>

        <p>References available upon request.</p>

    </section>

</body>

</html>

Style.css:

/\* styles.css \*/

body {

    font-family: Arial, sans-serif;

    background-color: #f0f0f0;

    margin: 0;

    padding: 0;

    text-align: left;

}

header {

    background-color: #007acc;

    color: #fff;

    padding: 20px;

    text-align: center;

}

section {

    background-color: #fff;

    padding: 20px;

    margin: 20px;

    border-radius: 5px;

    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

}

h1, h2 {

    font-size: 24px;

    color: #007acc;

}

ul, table {

    list-style: none;

    padding: 0;

}

ul li {

    margin: 5px 0;

}

a {

    text-decoration: none;

    color: #007acc;

}

a:hover {

    text-decoration: underline;

}

1. Design a homepage of National Park website using HTML5 and CSS. Show logo of National park, Quote related to travelling, History of SGNP and Gallery of images. Design at least one additional page to show the information about spots to be visited. Make use of anchor tag to show the image click event.
2. Design a homepage of National Park website using HTML5 and CSS. Show logo of National park, History of SGNP, Do’s and Don’ts and Feedback from visitors. Design at least one additional page to show the information about spots to be visited. Make use of anchor tag to show the image click event.

Index.html:

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=<device-width>, initial-scale=1.0">

    <title>Document</title>

</head>

<body><nav style="display: flex; align-items: center; justify-content: center; background-color: aquamarine;">

    <div clas="navbar" style="margin-right: 250px;"><img src="https://sgnp.maharashtra.gov.in/Images/logo/logosgnp.png"></div>

    <div class="h" style="display: block; justify-content: space-between;" >

     <ul style="list-style-type: none;">

         <li><h1 style=" font-size: 50px; background-color: rgba(44, 168, 44, 0.858); padding: 25px; border-radius: 25px; color: aliceblue; margin-right: 100px; ">SGNP - Sanjay Gandhi National Park</h1></li>

     </ul>

    </div>

</nav>

<div style="background-color: rgb(250, 109, 226); padding: 5px;">

    <center><h2>"Travel - It's a thing that you buy and it makes you rich"</h2></center>

</div>

    <div style="background-color: aquamarine; padding: 5px;">

        <h3>About Us: The Sanjay Gandhi National Park (SGNP) is a protected area located in Mumbai, India.

            It encompasses diverse ecosystems, including dense forests, rocky terrain, and the famous Kanheri Caves,

            making it a haven for nature enthusiasts and history buffs alike.</h3>

    </div>

    <div style="text-align: center; justify-content: center">

        <h2>Come Explore & Experience with us...</h2>

    </div>

    <div style="display: flex;">

    <div style="display: block; width:250px; justify-content: space-between; padding: 10px; text-align: center;">

        <div style="background-color: antiquewhite; padding: 5px; border: 10px solid yellowgreen; margin: 5px;">

          <a href="https://sgnp.maharashtra.gov.in/1215/History-of-SGNP">  <h3>History</h3></a>

        </div>

        <div style="background-color: antiquewhite; padding: 5px; border: 10px solid yellowgreen; margin: 5px;">

           <a href="onlinebooking.html"><h3>Online Booking</h3></a>

        </div>

        <div style="background-color: antiquewhite; padding: 5px; border: 10px solid yellowgreen; margin: 5px;">

            <a href="https://sgnp.maharashtra.gov.in/1233/How-to-Reach-us"><h3>Directions</h3></a>

        </div>

        <div style="background-color: antiquewhite; padding: 5px; border: 10px solid yellowgreen; margin: 5px;">

           <a href="https://sgnp.maharashtra.gov.in/1115/Photo"><h3>Gallery</h3></a>

        </div>

        <div style="background-color: antiquewhite; padding: 5px; border: 10px solid yellowgreen; margin: 5px;">

            <a href="mcq.html"><h3>Do's & Don't</h3></a>

        </div>

        <div style="background-color: antiquewhite; padding: 5px; border: 10px solid yellowgreen; margin: 5px;">

            <a href="https://sgnp.maharashtra.gov.in/1114/Contact-Us"><h3>Contact Us</h3></a>

        </div>

    </div>

    <div class="places" style="display: flex; justify-content: space-between; padding: 5px;">

        <table style="border:0px; margin-left:auto; margin-right:auto">

            <tr>

            <td>

            <a href="https://sgnp.maharashtra.gov.in/1231/Kanheri-Caves"><img src="https://sgnp.maharashtra.gov.in/Images/explore/Caves-of-Kanheri.png" height=250 width=300></a>

            </td>

            <td>

            <a href="https://sgnp.maharashtra.gov.in/1217/Butterfly-Garden"><img src="https://sgnp.maharashtra.gov.in/Images/explore/Butterfly-Garden.png" height=250 width=300></a>

            </td>

            <td>

            <a href="https://sgnp.maharashtra.gov.in/1115/Photo"><img src="https://sgnp.maharashtra.gov.in/Images/explore/Cycling-Tours.png" height=250 width=300></a>

            </td>

            <td>

            <a href="https://sgnp.maharashtra.gov.in/1218/Nature-Trails"><img src="https://sgnp.maharashtra.gov.in/Images/explore/nature-treks-Trails.png" height=250 width=300></a>

            </td>

            </tr>

            <tr>

            <td>

            <a href="https://sgnp.maharashtra.gov.in/1219/Activities#MiniTrain"><img src="https://sgnp.maharashtra.gov.in/Images/explore/minitrain.png" height=250 width=300></a>

            </td>

            <td>

            <a href="https://sgnp.maharashtra.gov.in/1219/Activities#GandhiTekdi"><img src="https://sgnp.maharashtra.gov.in/Images/explore/Gandhhi-Tekdi.png" height=250 width=300></a>

            </td>

            <td>

            <a href="https://sgnp.maharashtra.gov.in/1232/Star-Gazing"><img src="https://sgnp.maharashtra.gov.in/Images/explore/Star-Gazing.png" height=250 width=300></a>

            </td>

            <td>

            <a href="boating.html"><img src="https://sgnp.maharashtra.gov.in/Images/explore/Recreational-boating.png" height=250 width=300></a>

            </td>

            </tr>

            </table>

    </div>

    </div>

</body>

</html>

<style>

    body{

        background-color: rgb(167, 157, 219);

    }

   .places.img{

        padding: 25px;

        margin-right: 50px;

        width: 250px;

        height: 250px;

        justify-content: space-between;

    }

    a{

        text-decoration: none;

    }

    a:link {

  color: rgba(44, 168, 44, 0.858);

}

/\* visited link \*/

a:visited {

  color: green;

}

/\* mouse over link \*/

a:hover {

  color: hotpink;

}

/\* selected link \*/

a:active {

  color: blue;

}

</style>

1. Write a Menu driven program in JavaScript to carry out the following in order to demonstrate the use of control structures -

* To find greatest among three numbers.
* To display even numbers less than 20.
* To calculate area of a triangle.
* To find if the entered year is a leap year or not
* To display a table of number n.
* To find the entered number is a perfect number or not.

<html>

<body>

<script>

console.log(`1. To find greatest among three numbers.

1. To display even numbers less than 20.
2. To calculate area of a triangle.
3. To find if the entered year is a leap year or not.
4. To display a table of number n.
5. To find the entered number is a perfect number or not`)

var ch = Number(prompt("Enter your choice"))

switch(ch) {

case 1 : var a, b, c;

a=Number(prompt("Enter 1st no. : "));

b=Number(prompt("Enter 2nd no. : "));

c=Number(prompt("Enter 3rd no. : "));

if (a>b && a>c) {

console.log("Largest no. is "+a) }

else if (b>a && b>c) {

console.log("Largest no. is "+b) }

else {

console.log("Largest no. is "+c) }

break;

case 2 : var i;

for(i=0;i<20;i++) {

if(i%2==0) {

console.log("Even nos. less than 20 is "+i)

}}

break;

case 3 : var base, height;

base=Number(prompt("Enter base : "));

height=Number(prompt("Enter height : "));

area=1/2\*base\*height;

console.log("Area of triangle is : "+area)

break;

case 4 : var year

year=Number(prompt("Enter a year : "));

if ((year%4=== 0 && year%100!== 0) || year%400 === 0) {

console.log(`${year} is a leap year.`); }

else {

console.log(`${year} is not a leap year.`); }

break;

case 5 : var n

n=Number(prompt("Enter a no. : "));

console.log(`Table of ${n} is : `);

for (let i = 1; i <= 10; i++) {

console.log(`${n} x ${i} = ${n \* i}`); }

break;

case 6 : var num

num = Number(prompt("Enter a number: "));

let sum = 0;

for (let i = 1; i < num; i++) {

if (num % i === 0) {

sum += i;

} }

if (sum === num) {

console.log(`${num} is a perfect number.`);

}

else {

console.log(`${num} is not a perfect number.`);

}

break;

}

</script>

</body>

</html>

1. Write a Menu driven program in JavaScript to carry out the following in order to demonstrate the use of arrow functions/anonymous function-
2. to accept an array of subject marks of a student and calculate its average.
3. to display Fibonacci series.
4. to check whether the entered string is palindrome or not.

<html>

<body>

<script>

console.log(`1. Average of Subject Marks

2. Fibonacci Series

3. Palindrome`);

var ch = parseInt(prompt("Enter a choice : "));

switch (ch) {

case 1 : var a = [];

for (i=0;i<5;i++){

    a[i]=parseInt(prompt("Enter marks : "));

}

var average = (a) => { var s=0;

    for (i=0;i<5;i++) {

s=s+a[i];

}

var avg = s/5;

console.log("Total : "+s+"  "+"Average : "+avg);

}

average (a);

break;

case 2 :

var n = parseInt(prompt("Enter a number : "));

var fibonacci = (n) => {

    const fibonacci = [0, 1];

    for (i=2;i<n;i++) {

    const nextfibonacci = fibonacci[i-1]+fibonacci[i-2];

    fibonacci.push(nextfibonacci);

  }

  console.log(fibonacci);

}

fibonacci(n);

break;

case 3 :

var string = prompt("Enter a string : ")

var palindrome = (string) => {

const len = string.length;

for (i=0;i<len/2;i++) {

    string[i];}

    if (string[i]==string[len-1-i]) {

        console.log("It is a palindrome");

    }     else {

        console.log("It is not a palindrome");

    }

}

palindrome(string);

}

</script>

</body>

</html>

1. Write a Menu driven program in JavaScript to carry out the following in order to demonstrate the use of classes and inheritance -
2. (a) Create a class ‘accholder’ with following attribute as ‘accnum’, ‘name’, ‘age’, and ‘balance’.

(b) Print details of two employees using display function.

1. (a) Create a parent class “Calculator” with attributes length, width.

(b) Create one derived class named “rectArea” from “calculator” with attribute radius to calculate and display area of a rectangle. Use super keyword to call parent’s constructor.

(c) Create derived class “circleArea” from “rectArea” to calculate and display area of a circle.

1. (a) Create a class “CheckNum” with attributes num1 and num2.

(b) Create a derived class “CheckNeonSpy” from “CheckNum”. Define methods CheckNeon() and CheckSpy().

<html>

<body>

<script>

console.log(`1.a) Create a class ‘accholder’ with following attribute as ‘accnum’, ‘name’, ‘age’, and ‘balance’.

1.b) Print details of two employees using display function.

2.a) Create a parent class “Calculator” with attributes length, width.

2.b) Create one derived class named “rectArea” from “calculator” with attribute radius to calculate and display area of a rectangle. Use super keyword to call parent’s constructor.

2.c) Create derived class “circleArea” from “rectArea” to calculate and display area of a circle.

3.a) Create a class “CheckNum” with attributes num1 and num2.

3.b) Create a derived class “CheckNeonSpy” from “CheckNum”. Define methods CheckNeon() and CheckSpy().

`)

var ch =Number(prompt("Enter Your Choice: "));

switch(ch){

case 1:

class Accholder{

constructor(accnum,name,age,balance){

this.accnum = accnum;

this.name = name;

this.age = age;

this.balance = balance;

}

display(){

console.log("Account Number: "+this.accnum);

console.log("Name: "+this.name);

console.log("Age: "+this.age);

console.log("Balance: "+this.balance);

}               }

    var obj1 = new Accholder(123456789123,"Vinay",20,20000000);

    obj1.display();

    var obj2 = new Accholder(924456749423,"Stalen",21,30000000);

    obj2.display();

break;

case 2:{

class Calculator{

    constructor(length,width){

        this.length = length;

        this.width = width;

}               }

class rectArea extends Calculator{

    constructor(length,width,radius){

        super(length,width);

        this.radius = radius;

}

displayAreaRect(){

var area = this.length\*this.width;

 console.log("Area of the Reactangle is: "+area);

 }                  }

 class circleArea extends rectArea{

    displayAreaCircle(){

 var res = 3.14\*this.radius\*this.radius;

 console.log("Area of the Circle is: "+res);

 }                  }

var obj1 = new circleArea(2,2,2);

obj1.displayAreaRect();

obj1.displayAreaCircle();

break;

}

case 3:{

class CheckNum{

constructor(num1,num2){

    this.num1 = num1;

    this.num2 = num2;

}               }

class CheckNeonSpy extends CheckNum{

constructor(num1,num2){

    super(num1,num2);

}

CheckNeon(){

    var res = 0;

    var rem = 0;

    var org = this.num1;

    var sqr = this.num1\*this.num1;

       while(sqr != 0 ){

        rem = sqr%10;

        res = res + rem;

        sqr = Math.floor(sqr/10);

       }

        if(res == org){

           console.log("Entered Number, "+org+" is a Neon Number.");

         }

         else{

            console.log("Entered Number, "+org+" is not a Neon Number.");

         }

       }

    CheckSpy(){

        var res = 0;

        var res1 = 1;

        var rem = 0;

        var org = this.num2;

        var num = this.num2;

        while(num != 0 ){

            rem = num%10;

            res = res + rem;

            res1 = res1\*rem;

            num = Math.floor(num/10);

        }

        if(res == res1){

           console.log("Entered Number, "+org+" is a Spy Number.");

        }

        else{

           console.log("Entered Number, "+org+" is not a Spy Number.");

        }

        }

    }

    var obj1 = new CheckNeonSpy(9,1124);

        obj1.CheckNeon();

        obj1.CheckSpy();

        break;

    }

    }

</script>

</body>

</html>

1. Write a Menu driven program in JavaScript to carry out the following in order to demonstrate the use of classes and inheritance –
2. Create a class ‘student’ with following attribute as ‘Student\_name’, ‘roll\_no’, ‘age’, and ‘branch’. Print details of two students using display function.

<html>

<body>

<script>

class Student {

    constructor(student\_name, roll\_no, age, branch) {

        this.student\_name = student\_name;

        this.roll\_no = roll\_no;

        this.age = age;

        this.branch = branch;

    }

    display() {

        console.log(`Student Name: ${this.student\_name}`);

        console.log(`Roll Number: ${this.roll\_no}`);

        console.log(`Age: ${this.age}`);

        console.log(`Branch: ${this.branch}`);

    }

}

// Create two instances of the Student class

const student1 = new Student('Alice', '101', 20, 'Computer Science');

const student2 = new Student('Bob', '102', 22, 'Mechanical Engineering');

// Display details of the students

console.log('Student 1 Details:');

student1.display();

console.log('\nStudent 2 Details:');

student2.display();

</script>

</body>

</html>

1. Create a react app “INP\_batch2”.
2. Create a function component. Show the Use HTML5 tags ( paragraph, heading, table, image etc.).
3. Create a class component. Show the Use HTML5 tags ( paragraph, heading, table, image etc.).

**src/App.js (Functional Component):**

import React from 'react';

function FunctionalComponent() {

return (

<div>

<h1>Functional Component</h1>

<p>This is a functional component.</p>

<table>

<thead>

<tr>

<th>Name</th>

<th>Age</th>

</tr>

</thead>

<tbody>

<tr>

<td>John</td>

<td>25</td>

</tr>

<tr>

<td>Alice</td>

<td>22</td>

</tr>

</tbody>

</table>

<img src="your-image-url.jpg" alt="Image Description" />

</div>

);

}

function App() {

return (

<div className="App">

<FunctionalComponent />

</div>

);

}

export default App;

**src/App.js (Class Component):**

import React, { Component } from 'react';

class ClassComponent extends Component {

render() {

return (

<div>

<h1>Class Component</h1>

<p>This is a class component.</p>

<table>

<thead>

<tr>

<th>Name</th>

<th>Age</th>

</tr>

</thead>

<tbody>

<tr>

<td>Bob</td>

<td>28</td>

</tr>

<tr>

<td>Eve</td>

<td>24</td>

</tr>

</tbody>

</table>

<img src="your-image-url.jpg" alt="Image Description" />

</div>

);

}

}

function App() {

return (

<div className="App">

<ClassComponent />

</div>

);

}

export default App;

1. Design a Single Page Website in React using React Router. Make us of heading, paragraph, bgcolor, color, font, table, image tags to display contents on the webpage.
2. WAP to perform following file operations using Node.js.
3. Access b) open c) Append d) Read e) delete f) rename g) copy
4. Set, get and delete the cookie with express

**npm install –save cookie-parser**

node -v

npm -v

npm init

npm install express

npm install nodemon

Output => nodemon filename.js

//To set a cookie//

var express = require('express');

var app = express();  
app.get('/’,

function(req, res){

   res.cookie('name', 'express').send('Cookie set'); //Sets name = express

});  
app.listen(3000);

//To delete cookie//

var express = require('express');

var app = express();

app.get('/clear\_cookie\_foo’,

function(req, res){

   res.clearCookie('foo');

   res.send('cookie foo cleared');

});

app.listen(3000);