SDJ INTERNATIONAL COLLEGE

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Roll No:-014
Division:- A

I N D E X

Sr. No.	Date	Particulars	Page No	Signature
1.	20/09/22	**Create a database named with 'mydb', Create a collection named 'employees', Insert 15 documents in it.**	3	
2.	20/09/22	**Write a MongoDB query to displays all documents from the employees collection.**	5	
3.	20/09/22	**Write a MongoDB query to displays name, joining date and salary of all documents from the employees collection.**	5	
4.	20/09/22	**Write a MongoDB query to displays first name, last name and email id of all documents from the employees collection whose salary is more than 20000.**	5	
5.	20/09/22	**Write a MongoDB query to displays first name, last name, email id and contact number of all documents from the employees collection whose salary is 20000 and working as an 'Web Developer'.**	5	
6.	20/09/22	**Write a MongoDB query to displays all documents from the employees collection whose first character of their first name is 'K'.**	6	
7	20/09/22	**Write a MongoDB query to displays all documents from the employees collection in the ascending order of their birth year.**	6	
8	20/09/22	**Write a MongoDB query to displays top 5 documents from the employees collection earning highest**	6	
9	20/09/22	**Write a MongoDB query to remove all the documents whose pincode is 395001.**	6	

10	20/09/22	**Write a MongoDB query to displays all documents from the employees collection born on or before 1990.**	7	
11	20/09/22	**Install Nodejs, Create React one react application with "Myfirstapp" name and Run it.**	7	
12	20/09/22	**Write a React program to create Header, Navbar using Bootstrap.**	9	
13	20/09/22	**Write a react program to create Form with Name, address, Gender, Subjects (dropdown box), Hobbies (check box) submit the form and alert the inputted data.**	11	
14	20/09/22	**Write a React program to count button click event using 'useState' hook.**	13	
15	20/09/22	**Write a React program to create Timer using 'useEffect' hook.**	15	
16	20/09/22	**Create Single page application (Website) using Angular js.**	19	

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1) Create a database named with ‘mydb’, Create a collection named ‘employees’, Insert 15 documents in it.

Code :

```
use mydb

db.createCollection("employees")

db.employees.insert({Emp_no:101, name:{fname:"John",lname:"Dhawan"},
email_id:"john@gmail.com", contact_no : 9909909900, designation : "Web developer",
birth_date :  new Date("1994-02-12"), j_date : "01/03/2010", salary : 45000,
department:{name :"production",description:"Developing websites"}, address :
{landmark:"12,Sai Bagh Society",state:"gujarat",city:"surat",pincode:395001}});

db.employees.insert({Emp_no:102, name:{fname:"Sakshi",lname:"Patel"},
email_id:"sakshi@gmail.com", contact_no : 9988998877, designation : "Sales Executive",
birth_date : new Date("1990-10-22"), j_date : "24/06/2017", salary : 25000, department:{name
:"sales",description:"Selling products"}, address : {landmark:"203,Megha Flats
,adajan",state:"gujarat",city:"surat",pincode:395003}});

 db.employees.insert({Emp_no:103, name:{fname:"Raj",lname:"Patel"},
email_id:"raj@gmail.com", contact_no : 9988123447, designation : "Production Manager",
birth_date : new Date("1993-10-02"), j_date : "20/02/2020", salary : 20000, department:{name
:"production",description:"Managing products"}, address : {landmark:"B-12,Shakti Nagar
,adajan",state:"gujarat",city:"surat",pincode:395003}});

db.employees.insertMany([{Emp_no:104, name:{fname:"Harsh",lname:"Shah"},
email_id:"harsh@gmail.com", contact_no : 9909912345, designation : "Web developer",
birth_date : new Date("1990-09-02"), j_date : "25/03/2012", salary : 20000, department:{name
:"production",description:"Developing design"}, address : {landmark:"103,Arihant
Society",state:"gujarat",city:"surat",pincode:395001}},

{Emp_no:105, name:{fname:"Harshvi",lname:"Shah"}, email_id:"harshvishah@gmail.com",
contact_no : 9909988778, designation : "Web developer", birth_date : new Date("1994-05-
22"), j_date : "11/07/2012", salary : 18000, department:{name
:"production",description:"Developing design"}, address : {landmark:"Gurukul Nagar, Adajan
",state:"gujarat",city:"surat",pincode:395003}}
```

]);

db.employees.insertMany([{Emp_no:106, name:{fname:"Rohan",lname:"Gadhvi"}, email_id:"rohan@gmail.com", contact_no : 9909925525, designation : "Software developer", birth_date : new Date("1994-09-30"), j_date : "18/11/2015", salary : 40000, department:{name :"production",description:"Developing software structure"}, address : {landmark:"11,Sai Villa",state:"Gujarat",city:"Ahmedabad",pincode:396003}},

{Emp_no:107, name:{fname:"Kirti",lname:"Patel"}, email_id:"kirti@gmail.com", contact_no : 9906622778, designation : "Software developer", birth_date : new Date("1991-02-20"), j_date : "10/11/2019", salary : 28000, department:{name :"production",description:"Developing logic"}, address : {landmark:"102,Gandhismruti Bhavan ",state:"gujarat",city:"surat",pincode:395001}}

]);

db.employees.insertMany([{Emp_no:108, name:{fname:"Krunal",lname:"Shah"}, email_id:"krunal@gmail.com", contact_no : 7907925525, designation : "Manager", birth_date : "03/09/1986" new Date("1991-02-20"), j_date : "19/12/2010", salary : 30000, department:{name :"Sales",description:"Managing sales of goods"}, address : {landmark:"8,Sai Rudra Villa",state:"Gujarat",city:"Ahmedabad",pincode:396001}},

{Emp_no:109, name:{fname:"Rekha",lname:"Garg"}, email_id:"rekha@gmail.com", contact_no : 9906622665, designation : "Salesman", birth_date : new Date("1991-02-20"), j_date : "10/11/2020", salary : 16000, department:{name :"sales",description:"Selling products"}, address : {landmark:"A-11,Hilltop Residency,adajan ",state:"gujarat",city:"surat",pincode:395005}},

{Emp_no:110, name:{fname:"Rishi",lname:"Patel"}, email_id:"rishi@gmail.com", contact_no : 9906622665, designation : "Web developer", birth_date : new Date("1995-02-04"), j_date : "21/01/2019", salary : 20000, department:{name :"production",description:"Developing logic for websites"}, address : {landmark:"301,Sai Ashish Residency",state:"gujarat",city:"surat",pincode:395001}}

]);

2) . Write a MongoDB query to displays all documents from the employees collection.

Code :

```
db.employees.find().pretty()
```

3) Write a MongoDB query to displays name, joining date and salary of all documents from the employees collection.

Code :

```
db.employees.find({},{name:1,j_date:1,salary:1,_id:0}).pretty()
```

4) Write a MongoDB query to displays first name, last name and email id of all documents from the employees collection whose salary is more than 20000.

Code :

```
db.employees.find({"salary":{$gt : 20000}},{name:1,email_id:1,_id:0}).pretty()
```

```
db.employees.find({"salary":{$gt : 20000}},{name:1,email_id:1,salary:1,_id:0}).pretty()
```

5) Write a MongoDB query to displays first name, last name, email id and contact number of all documents from the employees collection whose salary is 20000 and working as an 'Web Developer'.

Code :

```
db.employees.find({$and:[{"salary":{$eq:20000}},{"designation":"Web developer"}]},{name:1,email_id:1,salary:1,desgination:1,contact_no:1,_id:0}).pretty()
```

6) Write a MongoDB query to displays all documents from the employees collection whose first character of their first name is 'K'.

Code :

```
db.employees.find({"name.fname" :{$regex: /^K/}}).pretty()

db.employees.find({"name.fname" :{$regex: /^k/i}}).pretty()

db.employees.find({"name.fname" :{$regex: /^k/i}},{name:1,_id:0}).pretty()
```

7) Write a MongoDB query to displays all documents from the employees collection in the ascending order of their birth year.

Code :

```
db.employees.aggregate([ {"$project" : { "Emp_no" : 1, "birth_date" :1, "year"
:{"$year":"$birth_date"} }}, {"$sort":{"year":1}}, {"$project":{ "Emp_no":1, "birth_date":1,"_id":0
}}, ])
```

8) Write a MongoDB query to displays top 5 documents from the employees collection earning highest.

Code :

```
db.employee.aggregate([{$group : {_id : null, salary_maximum : {$max : "$salary"}}}])
```

9) Write a MongoDB query to remove all the documents whose pincode is 395001.

Code :

```
db.employees.deleteMany({"address.pincode":395001})

db.employees.find({},{"Emp_no":1,"name":1,"address":1,"_id":0}).pretty()
```

10) Write a MongoDB query to displays all documents from the employees collection born on or before 1990.

Code :

```
db.employees.find({"birth_date":{$lte : new Date('1990-12-31')}},{"Emp_no":1,"birth_date":1,"_id":0}).pretty()
```

11) Install Nodejs, Create React one react application with “Myfirstapp” name and Run it

Code :

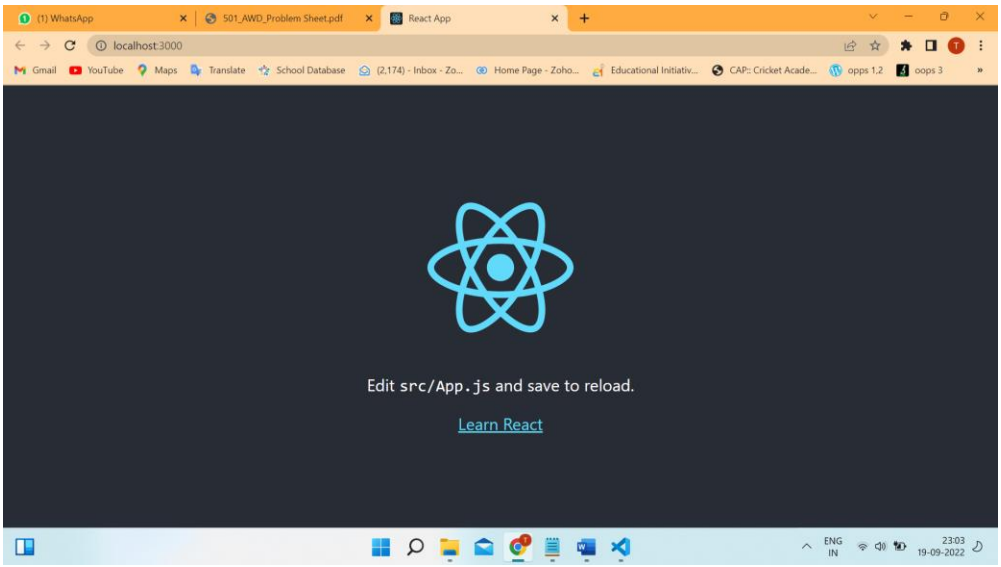
```
npx create-react-app myfirstapp

cd myfirstapp

npm start
```

App.js

```
import logo from './logo.svg';
import './App.css';
function App() {
  return (
    <div className="App">
      <header className="App-header">
        <img src={logo} className="App-logo" alt="logo" />
        <p>
          Edit <code>src/App.js</code> and save to reload.
```

```
        </p>
        <a
          className="App-link"
          href="https://reactjs.org"
          target="_blank"
          rel="noopener noreferrer"
        >
          MyFirstapp
        </a>
      </header>
    </div>
  );
}
export default App;
```

Screenshot :



12) Write a React program to create Header, Navbar using Bootstrap

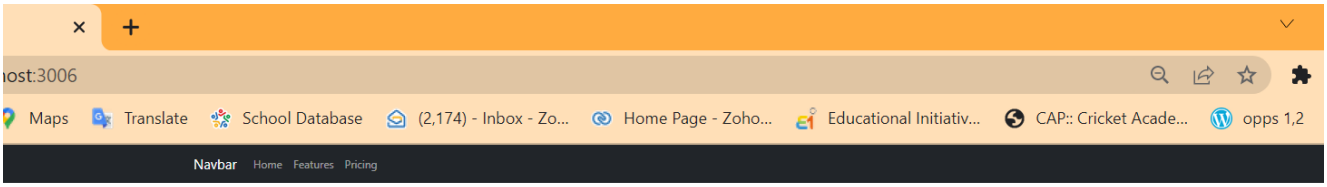
Code :

App.js :

```
import logo from './logo.svg';
import './App.css';
import 'bootstrap/dist/css/bootstrap.min.css';
import Container from 'react-bootstrap/Container';
import Nav from 'react-bootstrap/Nav';
import Navbar from 'react-bootstrap/Navbar';


function ColorSchemesExample() {
  return (
    <>
      <Navbar bg="dark" variant="dark">
        <Container>
          <Navbar.Brand href="#home">Navbar</Navbar.Brand>
          <Nav className="me-auto">
            <Nav.Link href="#home">Home</Nav.Link>
            <Nav.Link href="#features">Features</Nav.Link>
            <Nav.Link href="#pricing">Pricing</Nav.Link>
          </Nav>
        </Container>
      </Navbar>
```

```
      <br />
      </>
  );
}
export default ColorSchemesExample;
```

Screenshot :



13) Write a react program to create Form with Name, address, Gender, Subjects (dropdown box), Hobbies (check box) submit the form and alert the inputted data.

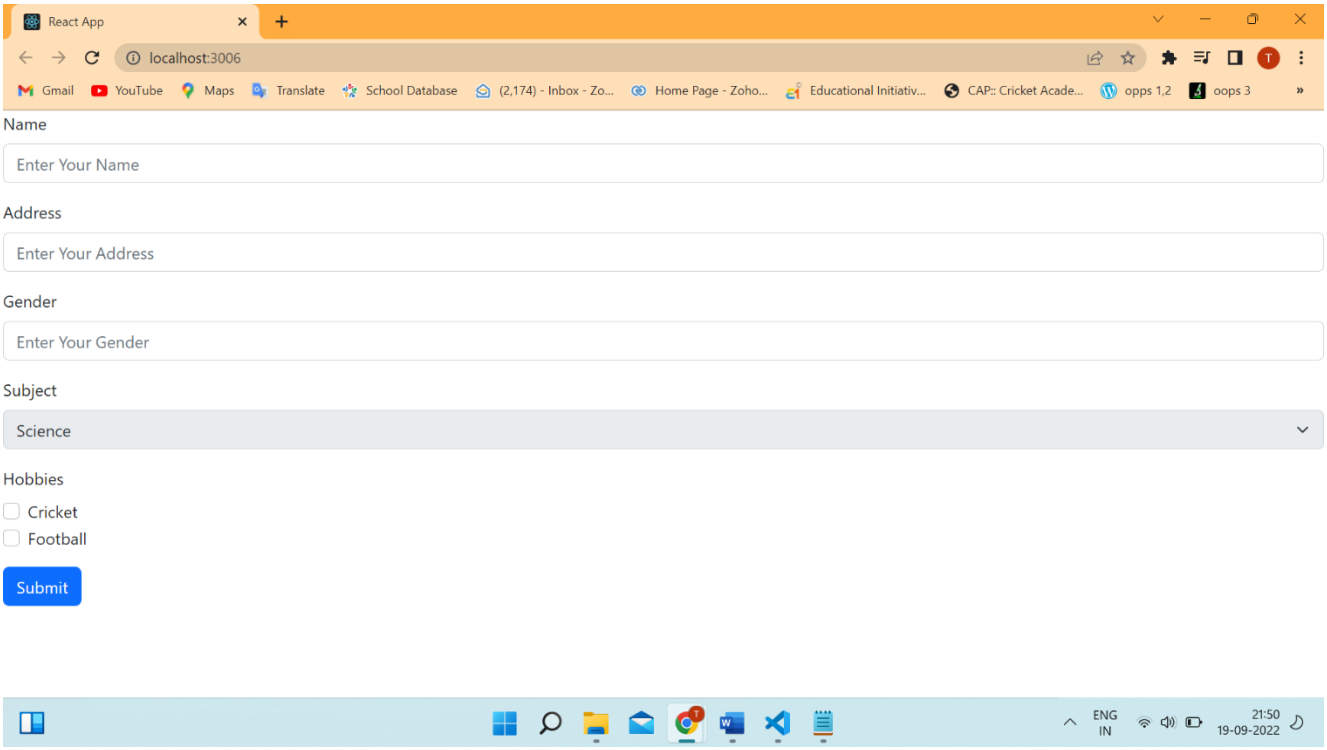
Code :

App.js :

```
function BasicExample() {
  return (
<Form>
    <Form.Group className="mb-3" controlId="formBasicName">
      <Form.Label>Name</Form.Label>
      <Form.Control type="name" placeholder="Enter Your Name" />

    </Form.Group>

    <Form.Group className="mb-3" controlId="formBasicAddress">
      <Form.Label>Address</Form.Label>
      <Form.Control type="address" placeholder="Enter Your Address" />
    </Form.Group>

    <Form.Group className="mb-3" controlId="formBasicGender">
      <Form.Label>Gender</Form.Label>
      <Form.Control type="gender" placeholder="Enter Your Gender" />
    </Form.Group>
```

```
      <Form.Group className="mb-3">
        <Form.Label>Subject</Form.Label>
        <Form.Select disabled>
          <option>Science</option>
        </Form.Select>
      </Form.Group>

      <Form.Group className="mb-3">
      <Form.Label>Hobbies</Form.Label>
        <Form.Check type="checkbox" label="Cricket" />
        <Form.Check type="checkbox" label="Football" />
      </Form.Group>

      <Button variant="primary" type="submit">
        Submit
      </Button>

    </Form>
  );
}

export default BasicExample;
```

Screenshot :



14) Write a React program to count button click event using ‘useState’ hook.

Code :

Count.js

```
import React, { useState } from "react";
import ReactDOM from "react-dom";
import "../src/App.css";
function App() {
    // State to store count value
    const [count, setCount] = useState(0);
    // Function to increment count by 1
    const incrementCount = () => {
        // Update state with incremented value
```

```
        setCount(count + 1);
    };
    return (
        <div className="app">
            <button onClick={incrementCount}>Click Here</button>
            {count}
        </div>
    );
}
const rootElement = document.getElementById("root");
ReactDOM.render(<App />, rootElement);

export default App;
```

Screenshot :

15) Write a React program to create Timer using ‘useEffect’ hook.

Code :

CountDownTimer.js :-

```
import React from 'react';
import DateTimeDisplay from './DateTimeDisplay';
import { useCountdown } from '../src/useCountdown';const ExpiredNotice = () => {
  return (
    <div className="expired-notice">
      <span>Expired!!!</span>
      <p>Please select a future date and time.</p>
    </div>
  );
};const ShowCounter = ({ days, hours, minutes, seconds }) => {
  return (
    <div className="show-counter">
      <a
        href="https://tapasadhikary.com"
        target="_blank"
        rel="noopener noreferrer"
        className="countdown-link"
      >
        <DateTimeDisplay value={days} type={'Days'} isDanger={days <= 3} />
        <p>:</p>
```

```
      <DateTimeDisplay value={hours} type={'Hours'} isDanger={false} />

      <p>:</p>

      <DateTimeDisplay value={minutes} type={'Mins'} isDanger={false} />

      <p>:</p>

      <DateTimeDisplay value={seconds} type={'Seconds'} isDanger={false} />

    </a>    </div>

  );

};const CountdownTimer = ({ targetDate }) => {

  const [days, hours, minutes, seconds] = useCountdown(targetDate);  if (days + hours +
minutes + seconds <= 0) {

    return <ExpiredNotice />;

  } else {

    return (

      <ShowCounter

        days={days}

        hours={hours}

        minutes={minutes}

        seconds={seconds}

      />

    );

  }

};export default CountdownTimer;
```

DateTimeDisplay.js :-

```
import React from 'react';const DateTimeDisplay = ({ value, type, isDanger }) => {
  return (
    <div className={isDanger ? 'countdown danger' : 'countdown'}>
      <p>{value}</p>
      <span>{type}</span>
    </div>
  );
};export default DateTimeDisplay;
```

useCountdown.js :-

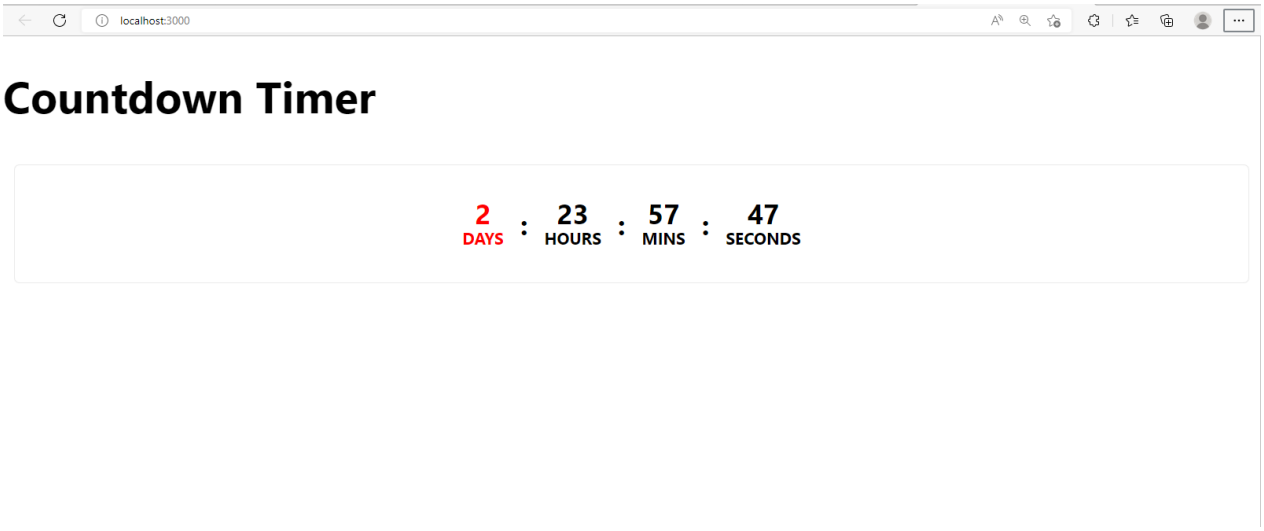
```
import { useEffect, useState } from 'react';const useCountdown = (targetDate) => {
  const countDownDate = new Date(targetDate).getTime();  const [countDown,
setCountDown] = useState(
    countDownDate - new Date().getTime()
  );  useEffect(() => {
    const interval = setInterval(() => {
      setCountDown(countDownDate - new Date().getTime());
    }, 1000);    return () => clearInterval(interval);
  }, [countDownDate]);  return getReturnValues(countDown);
};const getReturnValues = (countDown) => {
  // calculate time left
  const days = Math.floor(countDown / (1000 * 60 * 60 * 24));
```

```
  const hours = Math.floor(
    (countDown % (1000 * 60 * 60 * 24)) / (1000 * 60 * 60)
  );
  const minutes = Math.floor((countDown % (1000 * 60 * 60)) / (1000 * 60));
  const seconds = Math.floor((countDown % (1000 * 60)) / 1000);  return [days, hours,
minutes, seconds];
};export { useCountdown };
```

App.js :-

```
import React from 'react';
import CountdownTimer from './CountdownTimer';
import './App.css';
export default function App() {
  const THREE_DAYS_IN_MS = 3 * 24 * 60 * 60 * 1000;
  const NOW_IN_MS = new Date().getTime();
  const dateTimeAfterThreeDays = NOW_IN_MS + THREE_DAYS_IN_MS;
  return (
    <div>
      <h1>Countdown Timer</h1>
      <CountdownTimer targetDate={dateTimeAfterThreeDays} />
    </div>
  );
}
```

Screenshot :



16) Create Single page application (Website) using Angular js.

Code :

Index.html :

```
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Single page web app using Angularjs</title>
  <script src="//ajax.googleapis.com/ajax/libs/angularjs/1.3.3/angular.min.js"></script>
  <script src="//cdnjs.cloudflare.com/ajax/libs/angular.js/1.3.3/angular-route.min.js">  </script>
<script src="script.js"></script>
</head>
```

```
<body ng-app="single-page-app">
  <div ng-controller="cfgController">
  <div>


        <ul>
       <li><a href="#/">Home</a></li>
       <li><a href="#/about">About us</a></li>
      </ul>
</nav>
</div>
  <br/>
  <div ng-view>

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

Script.js

```
var app=angular.module('single-page-app',['ngRoute']);
app.config(function($routeProvider){
    $routeProvider
```

```
        .when('/',{
            templateUrl: 'home.html'
        })
        .when('/about',{
            templateUrl: 'about.html'
        });
});
app.controller('cfgController',function($scope){


});
```