



Rayat Shikshan Sanstha's
**R. B. Narayanrao Borawake College,
Shrirampur**
(AUTONOMOUS)

National Education Policy

(Affiliated to Savitribai Phule Pune University)

Two Years Degree Program in Computer Science
(Faculty of Science and Technology)
Syllabi under Autonomy and National Education Policy

M. Sc. (Computer Science) Part-I
Practical Assignment Lab Book

**Choice Based Credit System [CBCS] Syllabus for National
Education Policy to be implemented from Academic Year 2023-
2024**

CS-MJ-517P Database and Web Technology**Assignment Completion Sheet****Name of the student:-----****Roll No----****INDEX**

Sr. No	Practical Assignments	Sign
1	Create an Employee collection with mentioned fields Employee (eno,ename,salary,desig,dept:{deptno,deptname,location},project: {pname,hrs}) 1. Insert 5 documents in Employee collection. 2. Display all the documents from Employee collection. 3. Display all the documents from Employee collection. 4. Display all employees whose name starts with "S". 5. Display all Employee with the designation "Manager". 6. Display all employees with salary >50000 and salary <80000. 7. Update no. of hrs to 7 for pname=_____.	
2	Create a Neo4j Library Database 1. List all readers who have recommended either book "... " or " " or " 2. List the readers who haven't recommended any book 3. List the authors who have written a book that has been read / issued by maximum number of readers. 4. List the names of books recommended by " " And read by atleast one reader.	
3	Write an HTML 5 program for student registration for college admission.	
4	Create an HTML5 program for the following input type a) Date time b) email input type c) search input type	
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6	Create a 3D text, apply appropriate font, style, color. Use: Hover in the style selector so that the 3D effects appear only when you hover over the text	
7	Write a CSS3 script for change the background color of Three heading on mouseover.	
8	Write a bootstrap application to display thumbnails of the images	
9	Create a container add row inside it and add 3 columns inside row using Bootstrap	
10	Create a button with different style (Secondary, Primary, Success) using Bootstrap.	
11	Create Contact Form on Bootstrap. (First Name, Last Name, Email, Comment).	
12	Create a container add row inside it and add 3 columns inside row using Bootstrap.	

Date:**Signature of In charge****Head****External Examiner****Internal Examiner**

Assignment 1

Title:- Create an Employee collection with mentioned fields
Employee (eno,ename,salary,desig,dept:{deptno,deptname,location},project:{pname,hrs})

1. Insert 5 documents in Employee collection.

```
db.Employee.insertMany([
  {
    _id: 1,
    eno: '1',
    ename: 'Manish',
    salary: '500000',
    designation: 'Manager',
    dept: { deptno: '001', deptname: 'development', location: 'shrirampur' },
    project: { hrs: '24' }
  },
  {
    _id: 2,
    eno: '2',
    ename: 'Madan',
    salary: '500000',
    designation: 'developer',
    dept: { deptno: '001', deptname: 'development', location: 'pune' },
    project: { pname: 'Google', hrs: '24' }
  },
  {
    _id: 3,
    eno: '3',
    ename: 'Ram',
    salary: '400000',
    designation: 'software tester',
    dept: { deptno: '003', deptname: 'development', location: 'mumbai' },
    project: { hrs: '48' }
  },
  {
    _id: 4,
    eno: '4',
    ename: 'Om',
    salary: '450000',
    designation: 'Data Analyst',
    dept: { deptno: '002', deptname: 'data science', location: 'pune' },
    project: { pname: 'flipkart', hrs: '24' }
  },
  {
    _id: 5,
    eno: '5',
```

```
    ename: 'Sai',  
    salary: '550000',  
    designation: 'Data Analyst',  
    dept: { deptno: '001', deptname: 'data science', location: 'pune' },  
    project: { pname: 'bloodbank', hrs: '24' }  
  }  
)]
```

2. Display all the documents from Employee collection.

```
db.Employee.find().pretty()
```

3. Display all the documents from Employee collection.

```
db.Employee.find({});
```

4. Display all employees whose name starts with “S”.

```
db.Employee.find({ ename: /^S/ });
```

5. Display all Employee with the designation “Manager”.

```
db.Employee.find({ desig: "Manager" });
```

6. Display all employees with salary >50000 and salary <80000.

```
db.Employee.find({ salary: { $gt: 50000, $lt: 80000 } });
```

7. Update no. of hrs to 7 for pname=_____.

```
db.Employee.update({ "project.pname": "ProjectA" }, { $set: { "project.hrs": 7 } });
```

Assignment 2

Title:- Create a Neo4j Library Database

- 1.List all readers who have recommended either book “...” or “... ” or “...”**
- 2.List the readers who haven’t recommended any book**
- 3.List the authors who have written a book that has been read / issued by maximum number of readers.**
- 4.List the names of books recommended by “.....” And read by at least one reader.**

```
CREATE (r:Reader {name: 'Reader1'})
```

```
CREATE (b1:Book {title: 'Book1'})
```

```
CREATE (b2:Book {title: 'Book2'})
```

```
CREATE (b3:Book {title: 'Book3'})
```

```
CREATE (a:Author {name: 'Author1'})
```

```
CREATE (r)-[:RECOMMENDED]->(b1)
```

```
CREATE (r)-[:RECOMMENDED]->(b2)
```

```
CREATE (r)-[:RECOMMENDED]->(b3)
```

```
CREATE (a)-[:WROTE]->(b1)
```

```
CREATE (a)-[:WROTE]->(b2)
```

```
CREATE (a)-[:WROTE]->(b3)
```

- 1.List all readers who have recommended either book “...” or “... ” or “...”**

```
MATCH (reader:Reader)-[:RECOMMENDED]->(book:Book) WHERE book.title IN  
['Book1','Book2', 'Book3']
```

```
RETURN reader.name
```

- 2.List the readers who haven’t recommended any book**

```
MATCH (reader:Reader) WHERE NOT (reader)-[:RECOMMENDED]->(:Book)
```

```
RETURN reader.name
```

- 3.List the authors who have written a book that has been read / issued by maximum number of readers.**

```
MATCH (author:Author)-[:WROTE]->(book:Book)<-[:RECOMMENDED]-(reader:Reader)  
WITH author, book, COUNT(DISTINCT reader) AS readersCount
```

ORDER BY readersCount DESC

LIMIT 1

RETURN author.name

4. List the names of books recommended by “.....” And read by at least one reader.

MATCH (:Reader {name: 'Reader1'})-[:RECOMMENDED]->(book:Book)<-[:RECOMMENDED]-
(reader:Reader)

RETURN DISTINCT book.title

Assignment 3

Title:- Write an HTML 5 program for student registration for college admission.

3. Write an HTML 5 program for student registration for college admission.

```
<!DOCTYPE html>
<html lang="en">

<head>

  <title>Student Registration</title>

</head>

<body>

  <h2>Student Registration Form</h2>

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

    <label for="name">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>Gender:</label>

    <input type="radio" id="male" name="gender" value="male" required>

    <label for="male">Male</label>

    <input type="radio" id="female" name="gender" value="female" required>

    <label for="female">Female</label>

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

    <select id="course" name="course" required>

      <option value="engineering">Engineering</option>

      <option value="business">Business Administration</option>

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

    </select>

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

  </form>

</body>

</html>
```

Assignment 4

Title:- Create an HTML5 program for the following input type

4. Create an HTML5 program for the following input type

- a) **Date time**
- b) **email input type**
- c) **search input type**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML5 Input Types</title>
</head>
<body>
  <h2>Date Time Input Type</h2>
  <label for="datetime">Select a date and time:</label>
  <input type="datetime-local" id="datetime" name="datetime">
  <hr>
  <h2>Email Input Type</h2>
  <label for="email">Enter your email:</label>
  <input type="email" id="email" name="email">
  <hr>
  <h2>Search Input Type</h2>
  <label for="search">Search:</label>
  <input type="search" id="search" name="search">
</body>
</html>
```


Assignment 5

Title:- Create a web page that shows use of transition properties, transition delay and duration effect.

5.Create a web page that shows use of transition properties, transition delay and duration effect.

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>Transition Example</title>

  <style>

    body {

      font-family: Arial, sans-serif;

      margin: 0;

      padding: 0;

      display: flex;

      justify-content: center;

      align-items: center;

      height: 100vh;

      background-color: #f4f4f4;

    }

    .transition-box {

      width: 100px;

      height: 100px;

      background-color: #3498db;

      transition: background-color 0.5s ease, width 0.5s ease;

    }

  </style>

</head>

<body>

  <div class="transition-box">

    <div>Transition Example</div>

  </div>

</body>

</html>
```

```
.transition-box:hover {  
    background-color: #e74c3c;  
    width: 150px;  
}  
</style>  
</head>  
<body>  
    <div class="transition-box"></div>  
</body>  
</html>
```

Assignment 6

Title:- Create a 3D text, apply appropriate font, style, color. Use: Hover in the style selector so that the 3D effects appear only when you hover over the text

6. Create a 3D text, apply appropriate font, style, color. Use: Hover in the style selector so that the 3D effects appear only when you hover over the text

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>3D Text Effect on Hover</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      background-color: #f4f4f4;
      margin: 0;
    }
    .three-d-text {
      font-size: 2em;
      font-family: 'Impact', sans-serif;
      color: #3498db;
      position: relative;
      transition: text-shadow 0.3s ease;
    }
  </style>
</head>
<body>
  <div class="three-d-text">
    3D Text Effect on Hover
  </div>
</body>
</html>
```

```
.three-d-text:hover {  
    text-shadow: 5px 5px 5px #e74c3c;  
}  
</style>  
</head>  
<body>  
    <div class="three-d-text">Hover Me</div>  
</body>  
</html>
```

Assignment 7

Title:- Write a CSS3 script for change the background color of Three heading on mouseover.

7. Write a CSS3 script for change the background color of Three heading on mouseover.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Change Background Color on Hover</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 20px;
    }
    h1, h2, h3 {
      padding: 10px;
      margin: 5px;
      cursor: pointer;
      transition: background-color 0.3s ease;
    }
    h1:hover, h2:hover, h3:hover {
      background-color: #3498db;
      color: #fff;
    }
  </style>
```

</head>

<body>

<h1>Heading 1</h1>

<h2>Heading 2</h2>

<h3>Heading 3</h3>

</body>

</html>

Assignment 8

Title :-Write a bootstrap application to display thumbnails of the images

8. Write a bootstrap application to display thumbnails of the images

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>Image Thumbnails with Bootstrap</title>

  <link href=https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css
rel="stylesheet">

</head>

<body>

  <div class="container mt-5">

    <h2 class="mb-4">Image Thumbnails</h2>

    <div class="row">

      <div class="col-md-4">

        <div class="card">

          

          <div class="card-body">

            <h5 class="card-title">Image 1</h5>

            <p class="card-text">Description for Image 1.</p>

          </div>

        </div>

      </div>

      <div class="col-md-4">

        <div class="card">

          
```

```
<div class="card-body">
  <h5 class="card-title">Image 2</h5>
  <p class="card-text">Description for Image 2.</p>
</div>
</div>
</div>
<div class="col-md-4">
  <div class="card">
    
    <div class="card-body">
      <h5 class="card-title">Image 3</h5>
      <p class="card-text">Description for Image 3.</p>
    </div>
  </div>
</div>
</div>
</div>
</body>
</html>
```


Assignment 9

Title :- Create a container add row inside it and add 3 columns inside row using Bootstrap

9. Create a container add row inside it and add 3 columns inside row using Bootstrap

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>Bootstrap Container, Row, and Columns</title>

  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">

</head>

<body>

  <div class="container mt-5">

    <h2>Bootstrap Container, Row, and Columns</h2>

    <div class="row">

      <div class="col-md-4">

        <div class="card">

          <div class="card-body">

            <h5 class="card-title">Column 1</h5>

            <p class="card-text">Content for column 1.</p>

          </div>

        </div>

      </div>

      <div class="col-md-4">

        <div class="card">
```

```

        <div class="card-body">
            <h5 class="card-title">Column 2</h5>
            <p class="card-text">Content for column 2.</p>
        </div>
    </div>
</div>
<div class="col-md-4">
    <div class="card">
        <div class="card-body">
            <h5 class="card-title">Column 3</h5>
            <p class="card-text">Content for column 3.</p>
        </div>
    </div>
</div>
</div>
</div>
<script>
</body>
</html>

```

Assignment 10

Title :- Create a button with different style (Secondary, Primary, Success) using Bootstrap

10. Create a button with different style (Secondary, Primary, Success) using Bootstrap

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>Bootstrap Button Styles</title>

  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">

</head>

<body>

  <div class="container mt-5">

    <h2>Bootstrap Button Styles</h2>

    <button type="button" class="btn btn-primary">Primary Button</button>

    <button type="button" class="btn btn-secondary">Secondary Button</button>

    <button type="button" class="btn btn-success">Success Button</button>

  </div>

</body>

</html>
```

Assignment 11

Title :-Create Contact Form on Bootstrap. (First Name, Last Name, Email, Comment).

11. Create Contact Form on Bootstrap. (First Name, Last Name, Email, Comment).

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Contact Form</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
</head>
<body>
  <div class="container mt-5">
    <h2>Contact Us</h2>
    <form>
      <!-- First Name -->
      <div class="mb-3">
        <label for="firstName" class="form-label">First Name:</label>
        <input type="text" class="form-control" id="firstName" name="firstName"
required>
      </div>
      <div class="mb-3">
        <label for="lastName" class="form-label">Last Name:</label>
        <input type="text" class="form-control" id="lastName" name="lastName"
required>
      </div>
```

```
<div class="mb-3">
  <label for="email" class="form-label">Email:</label>
  <input type="email" class="form-control" id="email" name="email" required>
</div>
<div class="mb-3">
  <label for="comment" class="form-label">Comment:</label>
  <textarea class="form-control" id="comment" name="comment" rows="4"
required></textarea>
</div>
<button type="submit" class="btn btn-primary">Submit</button>
</form>
</div>
</body>
</html>
```

Assignment 12

Title :-Create a container add row inside it and add 3 columns inside row using BootStrap

8.Create a container add row inside it and add 3 columns inside row using BootStrap

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>Bootstrap Container, Row, and Columns</title>

  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">

</head>

<body>

  <div class="container mt-5">

    <h2>Bootstrap Container, Row, and Columns</h2>

    <div class="row">

      <div class="col-md-4">

        <div class="card">

          <div class="card-body">

            <h5 class="card-title">Column 1</h5>

            <p class="card-text">Content for column 1.</p>

          </div>

        </div>

      </div>

      <div class="col-md-4">

        <div class="card">

          <div class="card-body">
```

```
        <h5 class="card-title">Column 2</h5>
        <p class="card-text">Content for column 2.</p>
    </div>
</div>
</div>
<div class="col-md-4">
    <div class="card">
        <div class="card-body">
            <h5 class="card-title">Column 3</h5>
            <p class="card-text">Content for column 3.</p>
        </div>
    </div>
</div>
</div>
</div>
</div>
</body>
</html>
```