



CET-223

Web Technologies

Experiment # 19

Experiment Title

Building an Application with React JS

Assessment of CLO(s): 04

Performed on _____

Student Name:			
Roll No.		Group	
Semester		Session	

Total (Max)	Performance (03)	Viva (03)	File (04)	Total (10)
Marks Obtained				
Remarks (if any)				

Experiment evaluated by

Instructor's Name	Engr. Bilal Iqbal		
Date		Signature	

Objective:

In this lab, you will learn how to build a simple React application using the concepts of props and useState. The app will consist of a text box where users can enter text, and two buttons:

1. "Convert to Uppercase" – Converts the entered text to uppercase.
2. "Convert to Lowercase" – Converts the entered text to lowercase.

Step 1: Setup React App:

Create a new React app using the following command:

```
npx create-react-app react-text-transform
```

Navigate into your project folder:

```
cd react-text-transform
```

Step 2: Creating the Components:

Create a new file called TextBox.js in the src folder. This will be the component where we handle the text transformation logic using useState and props.

```
import React, { useState } from 'react';

function TextBox() {
  const [text, setText] = useState(''); // State to hold the entered text

  const handleUppercase = () => {
    setText(text.toUpperCase()); // Convert text to uppercase
  };

  const handleLowercase = () => {
    setText(text.toLowerCase()); // Convert text to lowercase
  };

  return (
    <div>
      <input
        type="text"
        className="form-control mb-3"
        value={text}
        onChange={(e) => setText(e.target.value)} // Update state with input text
        placeholder="Enter text here"
      />
      <button className="btn btn-primary me-2" onClick={handleUppercase}>
        Convert to Uppercase
      </button>
      <button className="btn btn-secondary" onClick={handleLowercase}>
        Convert to Lowercase
      </button>
    </div>
  );
}

export default TextBox;
```

Now create the main App component that will hold the structure of the application.

```
import React, { useState } from 'react';
import TextBox from './TextBox'; // Importing the TextBox component
function App() {
  return (
    <div className="container text-center mt-5">
      <h1>Text Transformer App</h1>
      <TextBox />
    </div>
  );
}
export default App;
```

Step 3: Running the Application:

```
npm start
```

Lab Tasks:

Enhance the Text Transformer app using Bootstrap for better design (e.g., buttons, layout, spacing) and add one of the following features:

1. **Clear Text** button to reset the input.
2. Display **Character Count** as the user types.