Assignment 15

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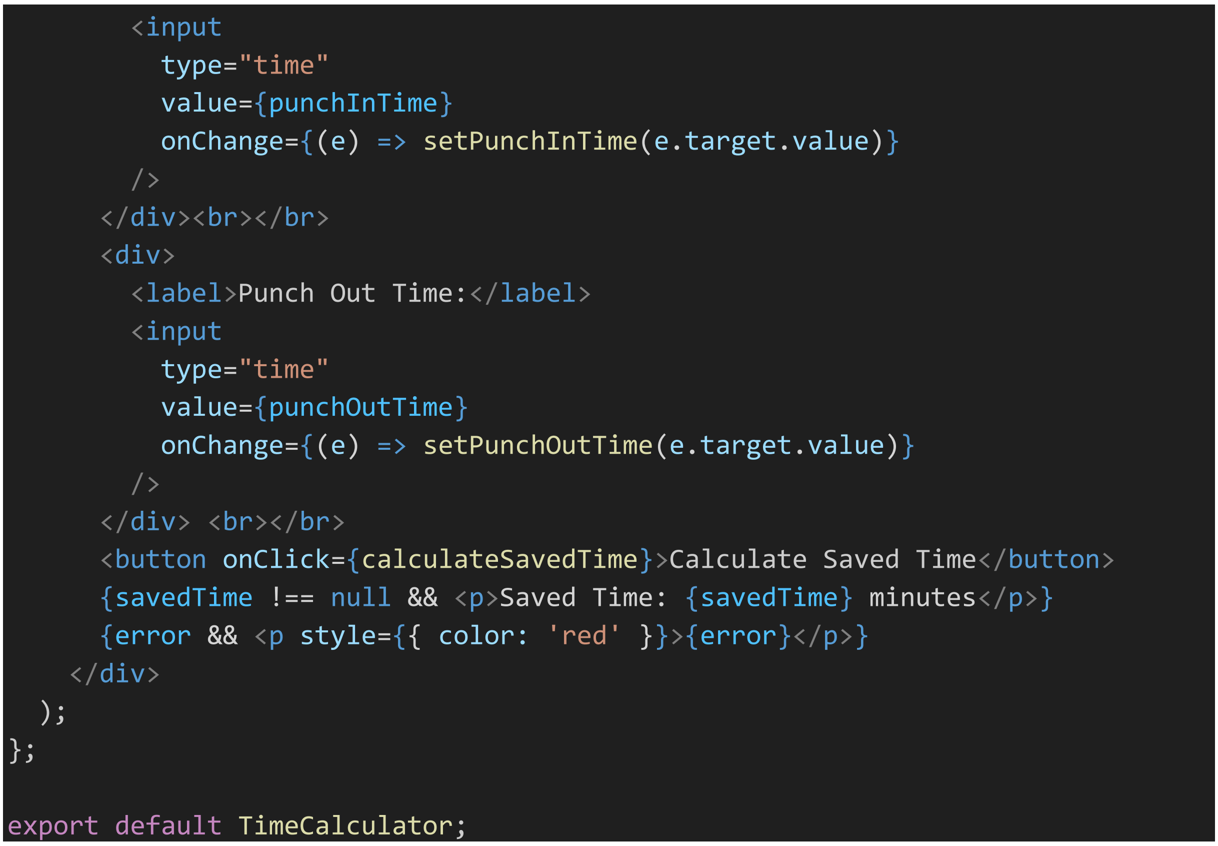
Q1. Design a React application to calculate the time saved by an employee. The application must look like this:

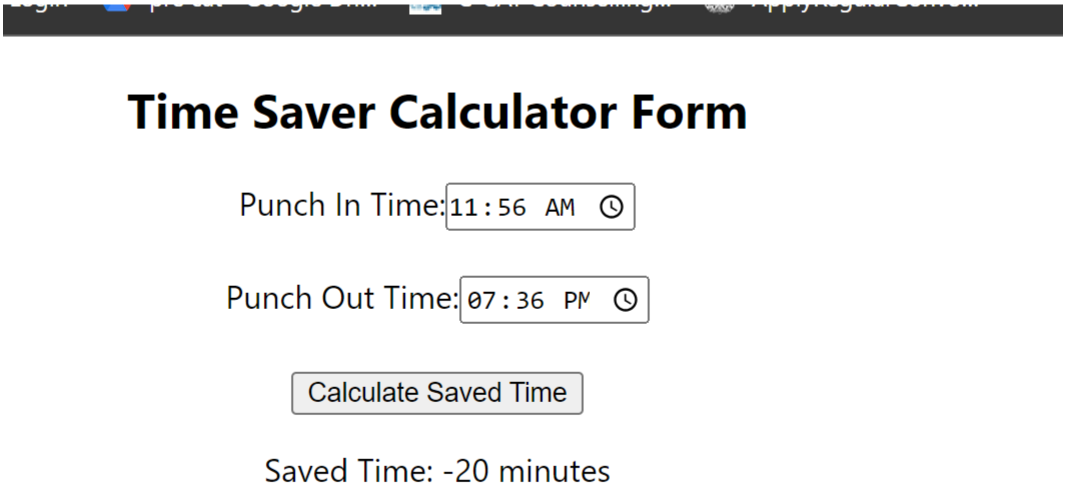
Saved Time= {Punch out time -Punch in Time} - 8 hours. Display the saved time in minutes. Handle the necessary exceptions that could occur.

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

const TimeCalculator = () => {
  const [punchInTime, setPunchInTime] = useState('');
  const [punchOutTime, setPunchOutTime] = useState('');
  const [savedTime, setSavedTime] = useState(null);
  const [error, setError] = useState('');

  const calculateSavedTime = () => {
    try {
      const punchIn = new Date(`2023-01-01T${punchInTime}`);
      const punchOut = new Date(`2023-01-01T${punchOutTime}`);

      if (isNaN(punchIn) || isNaN(punchOut)) {
        throw new Error('Invalid time format. Please use HH:mm.');
      }

      const timeDifference = punchOut - punchIn - 8 * 60 * 60 * 1000; // Subtract 8 hours in milliseconds
      const savedMinutes = Math.floor(timeDifference / (60 * 1000));

      setSavedTime(savedMinutes);
      setError('');
    } catch (err) {
      setError(err.message);
      setSavedTime(null);
    }
  };

  return (
    <div>
      <h2>Time Saver Calculator Form</h2>
      <div>
        <label>Punch In Time:</label>
```



```
        <input
          type="time"
          value={punchInTime}
          onChange={(e) => setPunchInTime(e.target.value)}
        />
      </div><br></br>
      <div>
        <label>Punch Out Time:</label>
        <input
          type="time"
          value={punchOutTime}
          onChange={(e) => setPunchOutTime(e.target.value)}
        />
      </div> <br></br>
      <button onClick={calculateSavedTime}>Calculate Saved Time</button>
      {savedTime !== null && <p>Saved Time: {savedTime} minutes</p>}
      {error && <p style={{ color: 'red' }}>{error}</p>}
    </div>
  );
};

export default TimeCalculator;
```

output:



Time Saver Calculator Form

Punch In Time: 11:56 AM

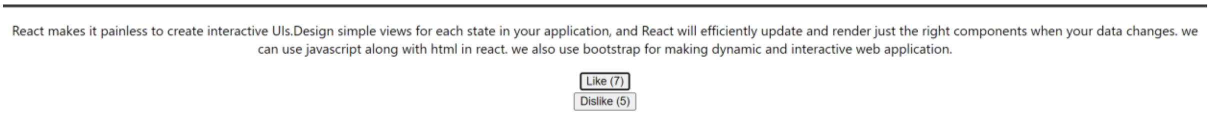
Punch Out Time: 07:36 PM

Saved Time: -20 minutes

Q2. Create a react application to display a paragraph of text under which there are two buttons like and dislike.When the user clicks the button, the number of likes and dislikes should be shown near the button. When the user clicks the button, increment the respective counter.

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

const LikeDislike=()=>{
    const [like,setLike]=useState(0);
    const [dislike,setDisLike]= useState(0);

    const handleLike=()=>{
        setLike(like+1);
    }

    const handleDislike=()=>{
        setDisLike(dislike+1);
    }

    return(
        <div>
            <p>
            React makes it painless to create interactive UIs.Design simple
views for each state in your application,
            and React will efficiently update and render just the right
components when your data changes.
            we can use javascript along with html in react.
            we also use bootstrap for making dynamic and interactive web
application.
            </p>

            <button onClick={handleLike}>Like ({like})</button> <br></br>
            <button onClick={handleDislike}>Dislike ({dislike})</button>
        </div>
    )
}

export default LikeDislike;
```

output:

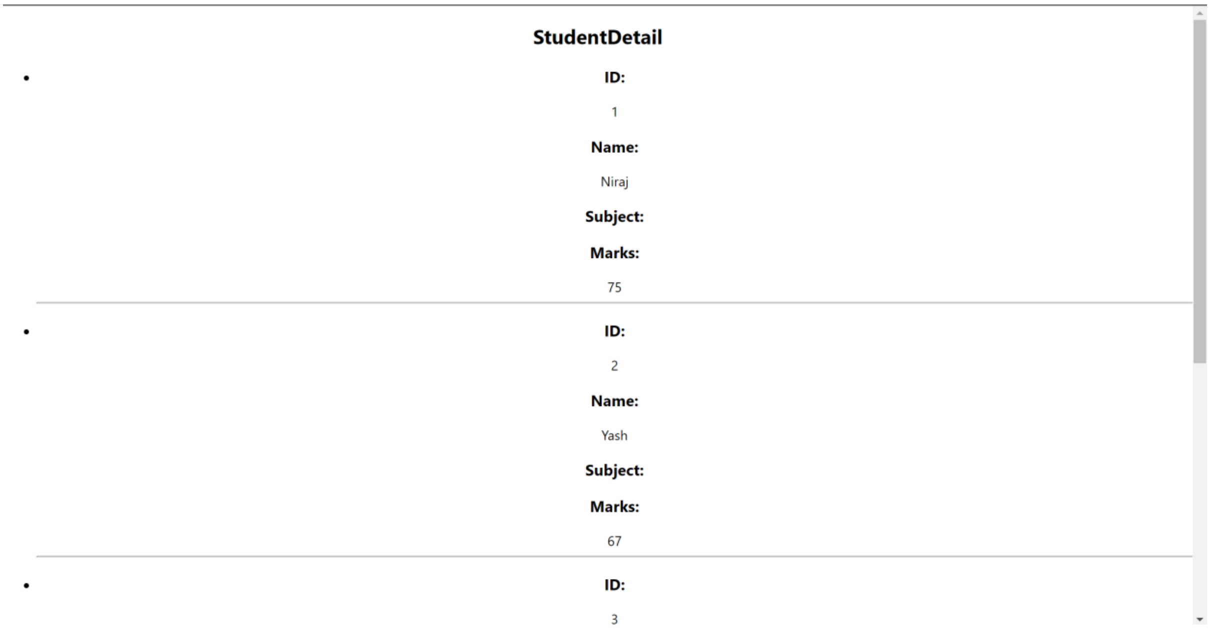


React makes it painless to create interactive UIs.Design simple views for each state in your application, and React will efficiently update and render just the right components when your data changes. we can use javascript along with html in react. we also use bootstrap for making dynamic and interactive web application.

Q3. Write a react program to display an array of marks , Display the details of each student such as Id, Name etc.

```
import React from 'react'

function StudentDetail() {
    const studentmarks=[
        {id:1, name:'Niraj', marks:75},
        {id:2, name:'Yash', marks:67},
        {id:3, name:'tejas', marks:85},
        {id:4, name:'Sorubh', marks:87},
    ]
  return (
    <div>
        <h2>StudentDetail</h2>
        <ul>
        {studentmarks.map((student) => (
          <li key={student.id}>
            <h3>ID:</h3> {student.id}
            <h3>Name:</h3> {student.name}
            <h3>Subject:</h3> {student.subject}
            <h3>Marks:</h3> {student.marks}
            <hr />
          </li>
        ))}
      </ul>

    </div>
  )
}

export default StudentDetail
```

output:



StudentDetail

- ID:

  1

  Name:

  Niraj

  Subject:

  Marks:

  75
- ID:

  2

  Name:

  Yash

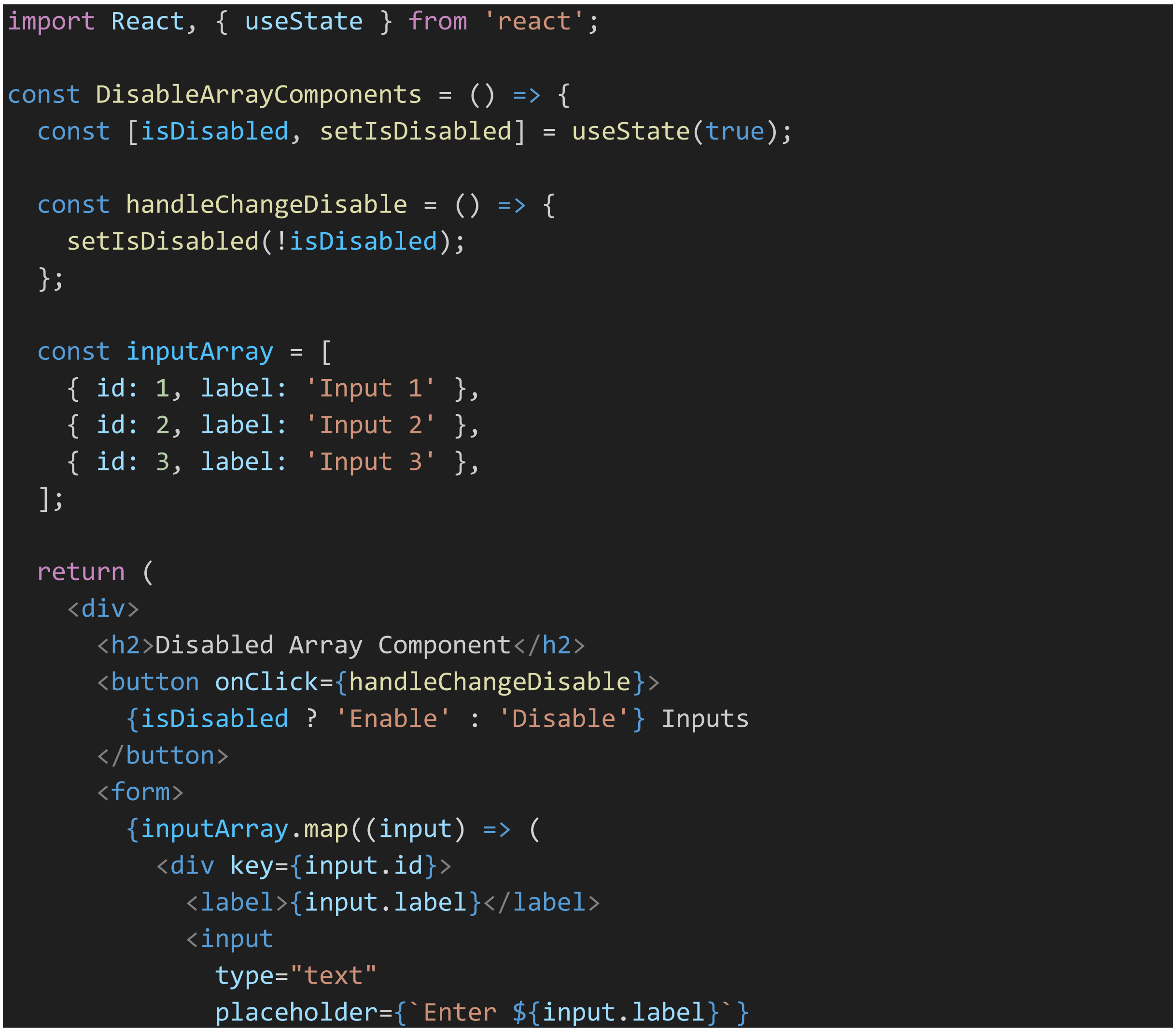
  Subject:

  Marks:

  67
- ID:

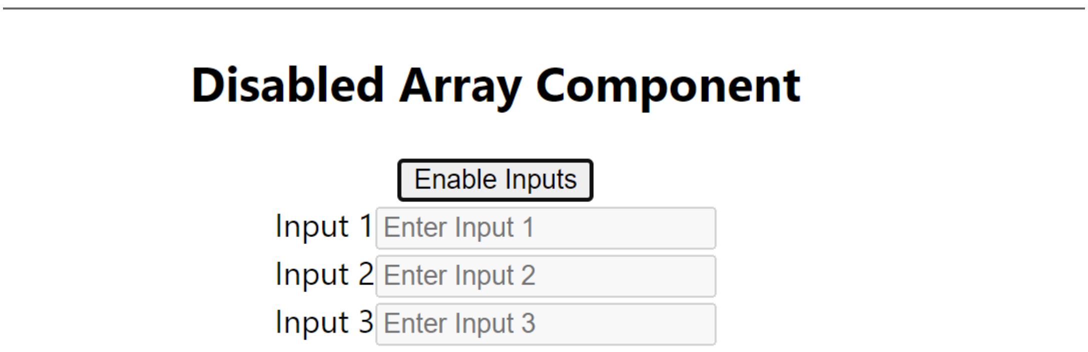
  3

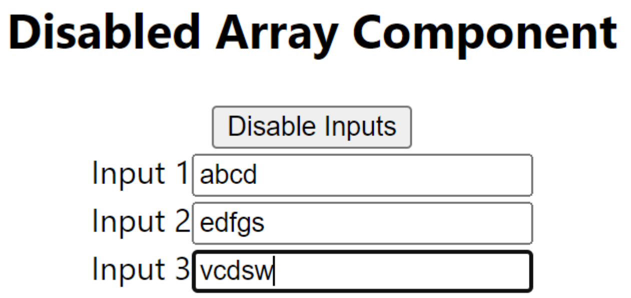
Q4. Using react, demonstrate how array can be disabled in a component.



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

const DisableArrayComponents = () => {
  const [isDisabled, setIsDisabled] = useState(true);

  const handleChangeDisable = () => {
    setIsDisabled(!isDisabled);
  };

  const inputArray = [
    { id: 1, label: 'Input 1' },
    { id: 2, label: 'Input 2' },
    { id: 3, label: 'Input 3' },
  ];

  return (
    <div>
      <h2>Disabled Array Component</h2>
      <button onClick={handleChangeDisable}>
        {isDisabled ? 'Enable' : 'Disable'} Inputs
      </button>
      <form>
        {inputArray.map((input) => (
          <div key={input.id}>
            <label>{input.label}</label>
            <input
              type="text"
              placeholder={`Enter ${input.label}`}
              disabled={isDisabled}
            />
          </div>
        ))}
      </form>
    </div>
  );
};

export default DisableArrayComponents;
```

output:


Disabled Array Component
Enable Inputs
Input 1
Enter Input 1
Input 2
Enter Input 2
Input 3
Enter Input 3


Disabled Array Component
Disable Inputs
Input 1
abcd
Input 2
edfgs
Input 3
vcdsw