LEVEL 1: TASK 2:

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

function App() {
  // Color changing button state
  const [buttonColor, setButtonColor] = useState('bg-blue-500');
  const colors = ['bg-blue-500', 'bg-green-500', 'bg-red-500', 'bg-purple-500'];

  // Time-based greeting state
  const [greeting, setGreeting] = useState('');

  // Calculator state
  const [num1, setNum1] = useState('');
  const [num2, setNum2] = useState('');
  const [sum, setSum] = useState<number | null>(null);

  // Handle button color change
  const changeColor = () => {
    const currentIndex = colors.indexOf(buttonColor);
    const nextIndex = (currentIndex + 1) % colors.length;
    setButtonColor(colors[nextIndex]);
  };

  // Calculate time-based greeting
  useEffect(() => {
    const updateGreeting = () => {
      const hour = new Date().getHours();
      let message = '';
      if (hour < 12) message = 'GOOD MORNING...!';
```

```jsx
    else if (hour < 18) message = 'GOOD AFTERNOON...!';

    else message = 'GOOD EVENING...!';

    setGreeting(message);

  };


  updateGreeting();

  const interval = setInterval(updateGreeting, 60000); // Update every minute

  return () => clearInterval(interval);

}, []);


// Handle calculation

const calculateSum = () => {

  const result = Number(num1) + Number(num2);

  setSum(result);

};


return (

  <div className="min-h-screen bg-gray-100 p--8">

    <div className="max-w-md mx-auto space-y-8">

      {/* Color Changing Button */}

      <div className="bg-white p-6 rounded-lg shadow-md">

        <h2 className="text-xl font-bold mb-4">Color Changing Button</h2>

        <button

          onClick={changeColor}

          className={`${buttonColor} text-white px-4 py-2 rounded hover:opacity-90 transition-colors`}

        >

          Click to Change Color

        </button>

      </div>
```

```jsx
{/* Time-based Greeting */}
<div className="bg-white p-6 rounded-lg shadow-md">
  <h2 className="text-xl font-bold mb-4">Time-based Greeting</h2>
  <button
    onClick={() => alert(greeting)}
    className="bg-indigo-500 text-white px-4 py-2 rounded hover:bg-indigo-600"
  >
    Show Greeting
  </button>
</div>

{/* Calculator */}
<div className="bg-white p-6 rounded-lg shadow-md">
  <h2 className="text-xl font-bold mb-4">Simple Calculator</h2>
  <div className="space-y-4">
    <div>
      <input
        type="number"
        value={num1}
        onChange={(e) => setNum1(e.target.value)}
        placeholder="Enter first number"
        className="w-full p-2 border rounded"
      />
    </div>
    <div>
      <input
        type="number"
        value={num2}
```

```jsx
          onChange={(e) => setNum2(e.target.value)}

          placeholder="Enter second number"

          className="w-full p-2 border rounded"

        />

      </div>

      <button

        onClick={calculateSum}

        className="bg-green-500 text-white px-4 py-2 rounded hover:bg-green-600"

      >

        Calculate

      </button>

      {sum !== null && (

        <div className="mt-2 text-lg font-semibold">

          Result: {sum}

        </div>

      )}

      </div>

    </div>

   </div>

  </div>

 );

}


export default App;
```