NAME: SAMYAK MEHTA
SECTION: B
REG. NO: 201900325
ASSIGNMENT 6

Create a calculator app using Angular which is capable of performing following operations:

1. Addition of two numbers
2. Subtraction of two numbers
3. Multiplication of two numbers
4. Division of two numbers
5. Factorial of a number
6. Checking if a given number is Prime or not

```html
<div class="container">
    <div class="main">
        <div class="Header">
            <h1>Calculator App</h1>
        </div>

        <div class="input_container">
            <input type="number" name="n1" [(ngModel)]="n1">
            <input type="number" name="n2" [(ngModel)]="n2">
        </div>

        <div class="button_container">
            <button class="btn" (click)="add()">Addition</button>
            <button class="btn" (click)="sub()">Subtraction</button>
            <button class="btn" (click)="mul()">Multiplication</button>
        </div>
        <div class="button_container">
            <button class="btn" (click)="divi()">Division</button>
            <button class="btn" (click)="fac()">Factorial</button>
            <button class="btn" (click)="prime()">Prime Checker</button>
        </div>

        <div class="ans">
            <div>
                Result:
            </div>
            <div>
                {{!n5 ? n3 : n4}}
            </div>
        </div>
    </div>
</div>

<router-outlet></router-outlet>
```

APP.COMPONENT.CSS

```css
.container {
  width: 90%;
  margin: auto;
}

h1 {
  text-transform: capitalize;
  font-style: italic;
}

.main {
  display: flex;
  align-items: center;
  justify-content: center;
  flex-direction: column;
  height: 100vh;
  background-color: #b5e6f7;
}

.input_container,
.button_container {
  display: flex;
  justify-content: space-around;
  width: 90%;
  padding: 1rem;
}

.input_container input {
  border: none;
  border-bottom: 1px solid black;
  padding: 10px;
  height: 20px;
  width: 8rem;
}

.input_container input:focus {
  outline: 0;
}
```

```css
.btn {
  border: 2px solid lightblue;
  background-color: rgba(97, 97, 247, 0.651);
  padding: 8px 30px;
  border-radius: 8px;
  font-size: 16px;
  cursor: pointer;
  min-width: 175px;
}

.btn:focus {
  outline: 0;
}

.btn:active {
  transform: scale(0.98);
}

.ans {
  display: flex;
  align-items: center;
  justify-content: center;
  font-size: 18px;
  text-transform: uppercase;
  font-style: italic;
  font-weight: 700;
  padding: 20px;
}

.ans div:nth-of-type(2) {
  min-width: 30px;
  margin-left: 10px;
}
```

APP.COMPONENT.TS

```typescript
import { Component } from '@angular/core';

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})

export class AppComponent {
  title = 'calculator-app';

  public n1: number;
  public n2: number;
  public n3: string;
  public n4: string;
  public n5: number;

  AppComponent() {
    this.n1 = 0;
    this.n2 = 0;
    this.n3 = "";
    this.n4 = "";
    this.n5 = 0;
  }

  add() {
    this.n5 = 0;
    if (this.n1 == NaN && this.n2 === NaN) {
      this.n3 = `0`;
      return;
    }
    this.n3 = `${this.n1} + ${this.n2} = ${this.n1 + this.n2}`;
  }

  sub() {
    this.n5 = 0;
    this.n3 = `${this.n1} - ${this.n2} = ${this.n1 - this.n2}`
  }

  mul() {
    this.n5 = 0;
    this.n3 = `${this.n1} * ${this.n2} = ${this.n1 * this.n2}`
  }
```

```javascript
  divi() {
    this.n5 = 0;
    this.n3 = `${this.n1} / ${this.n2} = ${this.n1 / this.n2}`
  }

  fac() {
    this.n5 = 0;
    let ans = 1;
    let n = this.n1;
    while (n != 1) {
      ans *= n;
      n--;
    }
    this.n3 = `${this.n1}! = ${ans}`;
  }

  prime(){
    let flag = true;
    this.n5 = 1;

    if (this.n1 === 1) {
      this.n4 = `0`;
      return;
    }

    for (let i = 2; i < this.n1; i++) {
      if (this.n1 % i == 0) {
        flag = false;
        break;
      }
    }

    if (flag === true) {
      this.n4 = `${this.n1} is a Prime Number`;
    } else {
      this.n4 = `${this.n1} is not a Prime Number`;
    }
  }
}
```
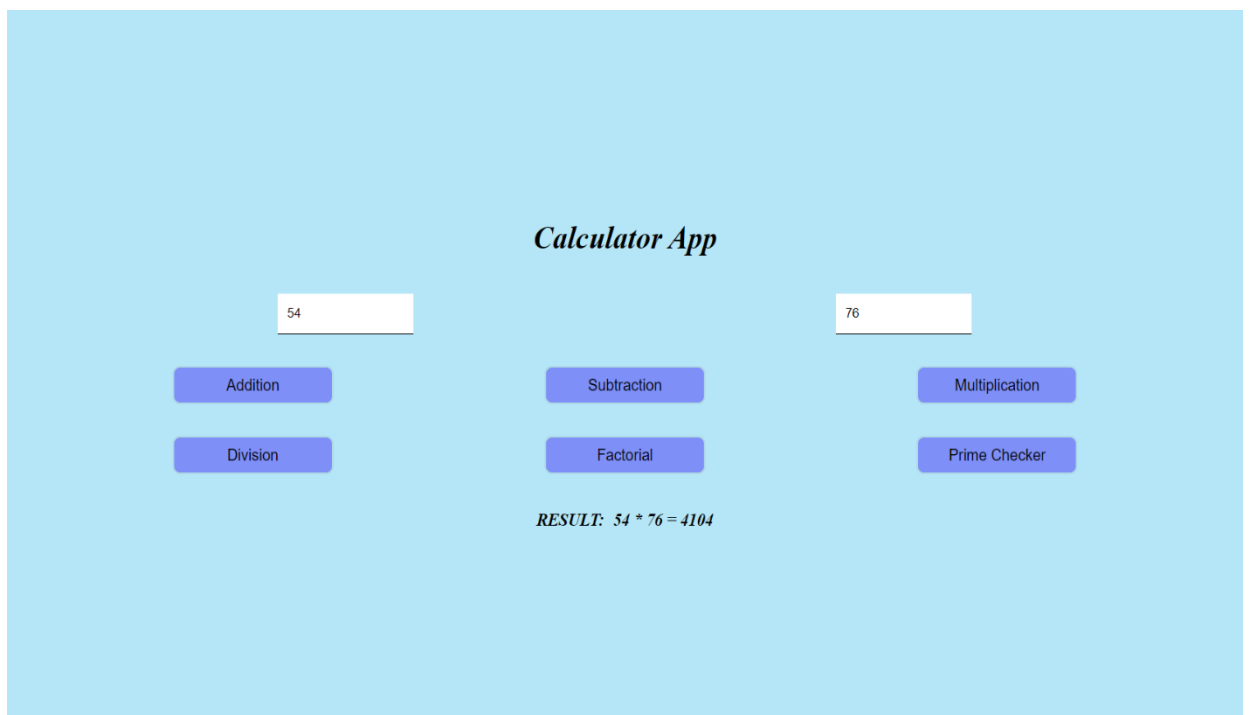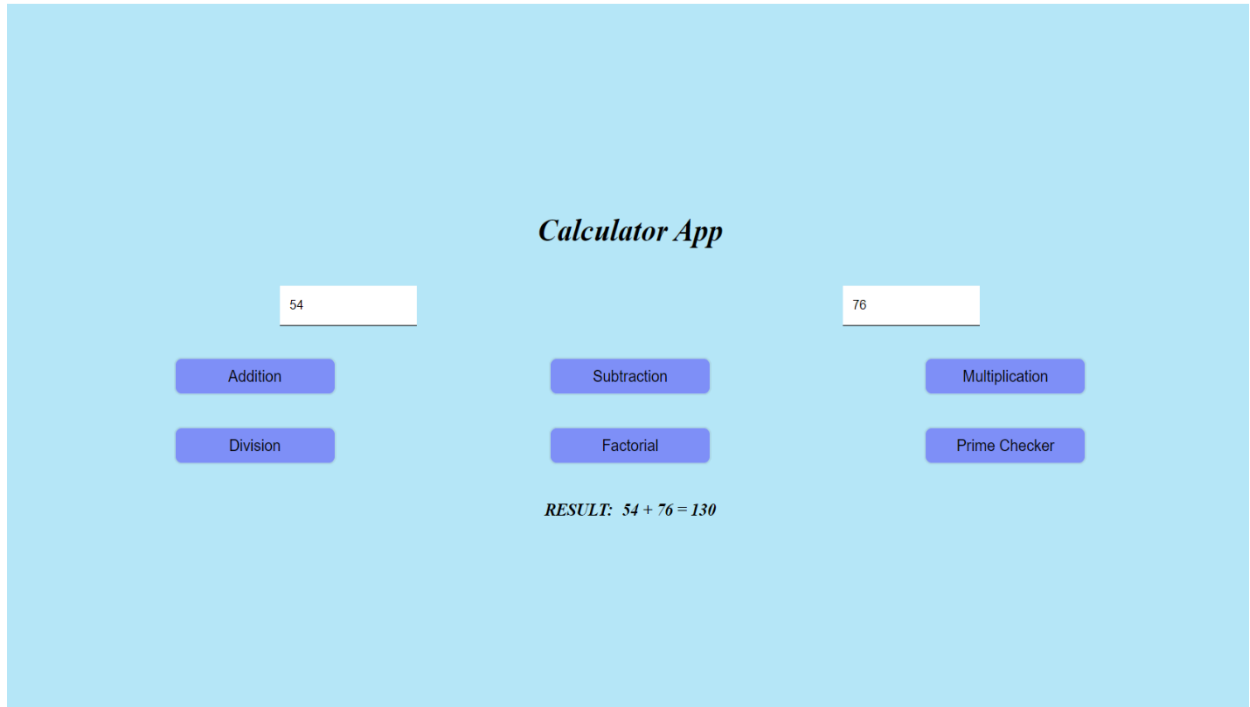
IMAGES:

Calculator App

54   76

Addition   Subtraction   Multiplication

Division   Factorial   Prime Checker

RESULT: 54 + 76 = 130

Calculator App

54   76

Addition   Subtraction   Multiplication

Division   Factorial   Prime Checker

*RESULT: 54 * 76 = 4104*

Calculator App

10	

Addition
Subtraction
Multiplication

Division
Factorial
Prime Checker

RESULT: 10! = 3628800

Calculator App

5	

Addition
Subtraction
Multiplication

Division
Factorial
Prime Checker

RESULT: 5 IS A PRIME NUMBER