LAB EXERCISE 04 – ANGULAR BASED APP

Code -

Calculator.component.css

```css
/* src/app/calculator/calculator.component.css */
.calculator {
    text-align: center;
    max-width: 300px;
    margin: 0 auto;
    border: 2px solid #ccc;
    border-radius: 10px;
    background-color: #f4f4f4;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);
    padding: 20px;
}

input[type="text"] {
    width: 100%;
    padding: 15px;
    margin-bottom: 10px;
    font-size: 20px;
    border: none;
    background-color: #d3e4e7;
    border-radius: 10px;
    box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
    text-align: right; /* Right-align the text in the display */
```

```css
  overflow: hidden; /* Hide overflowing text */
  white-space: nowrap; /* Prevent line breaks */
  text-overflow: ellipsis; /* Display an ellipsis (...) for overflow */
}

.buttons {
  display: grid;
  grid-template-columns: repeat(4, 1fr);
  gap: 10px;
}

button {
  padding: 20px 15px;
  font-size: 24px;
  border: none;
  border-radius: 10px;
  background-color: #5fafe4;
  color: #fff;
  cursor: pointer;
  transition: background-color 0.2s;
}

button:hover {
  background-color: #314e61;
}

button:active {
  background-color: #509acf;
```

```
    }
```

Calculator.component.html

```html
<!-- src/app/calculator/calculator.component.html -->
<div class="calculator">
  <input type="text" [value]="currentInput" disabled />
  <input type="text" [value]="result" disabled />
  <div class="buttons">
    <button *ngFor="let button of ['7', '8', '9', '/', '4', '5', '6', '*', '1', '2', '3', '-', 'C', '0',
'=', '+', 'AC']"
      (click)="onButtonPress(button)">{{ button }}</button>
  </div>
 </div>
```

Calculator.component.ts

```typescript
// src/app/calculator/calculator.component.ts
import { Component } from '@angular/core';

@Component({
  selector: 'app-calculator',
  templateUrl: './calculator.component.html',
  styleUrls: ['./calculator.component.css']
})
export class CalculatorComponent {
  currentInput = '';
```

```typescript
  result = '';

  onButtonPress(button: string) {
    if (button === '=') {
      this.calculateResult();
    } else if (button === 'C') {
      this.clearInput();
    } else if (button === 'AC') {
      this.clearAll();
    } else {
      this.currentInput += button;
    }
  }

  calculateResult() {
    try {
      this.result = eval(this.currentInput);
    } catch (e) {
      this.result = 'Error';
    }
  }

  clearInput() {
    this.currentInput = '';
    this.result = '';
  }

  clearAll() {
```

```
    this.currentInput = '';
    this.result = '';
  }
}
```

App.component.html

```html
<!-- src/app/app.component.html -->
<div>
  <h1>Simple Calculator</h1>
  <p>Welcome!</p>
  <app-calculator></app-calculator>
</div>
```

App.component.spec.ts

```typescript
import { TestBed } from '@angular/core/testing';
import { AppComponent } from './app.component';

describe('AppComponent', () => {
  beforeEach(() => TestBed.configureTestingModule({
    declarations: [AppComponent]
  }));

  it('should create the app', () => {
    const fixture = TestBed.createComponent(AppComponent);
    const app = fixture.componentInstance;
```

```typescript
    expect(app).toBeTruthy();
  });

  it(`should have as title 'calculator-app`, () => {
    const fixture = TestBed.createComponent(AppComponent);
    const app = fixture.componentInstance;
    expect(app.title).toEqual('calculator-app');
  });

  it('should render title', () => {
    const fixture = TestBed.createComponent(AppComponent);
    fixture.detectChanges();
    const compiled = fixture.nativeElement as HTMLElement;
    expect(compiled.querySelector('.content
span')?.textContent).toContain('calculator-app app is running!');
  });
});
```

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';
}
```

App.module.ts

```
import { NgModule } from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';

import { AppComponent } from './app.component';
import { CalculatorComponent } from './calculator/calculator.component';

@NgModule({
  declarations: [
    AppComponent,
    CalculatorComponent
  ],
  imports: [
    BrowserModule
  ],
  providers: [],
  bootstrap: [AppComponent]
})
export class AppModule { }
```

Output -