SCRIPTING LANGUAGE LAB -6

Calculator

Component.html code:

```html
<!DOCTYPE html>
<html>
  <head>
    <title>Calculator</title>
    <meta charset="UTF-8">
  </head>
  <body>
    <div id="bg">
      <h2>Simple Calculator</h2>
      <h3>First Number:{{num1}}</h3>
      <h3>Second Number:{{num2}}</h3>
      <br>
      <div id="bu">
        <button (click)="add()" id="a">Addition of two numbers</button>
        <button (click)="sub()" id="b">Subtraction of two numbers</button>
        <button (click)="mul()" id="c">Multiplication of two numbers</button>
        <button (click)="divi()" id="d">Division of two numbers</button>
        <button (click)="modu()" id="e">Modulus</button>
        <button (click)="facto()" id="f">Factorial of a number</button>
        <button (click)="primenum()" id="g">Checks Prime or Comosite number</button>
      </div>
      <div id="dis">
        <h4 *ngIf="check==0">Sum is {{sum}}</h4>
        <h4 *ngIf="check==1">Difference is {{dif}}</h4>
        <h4 *ngIf="check==2">Product is {{mult}}</h4>
        <h4 *ngIf="check==3">Quotient is {{quo}}</h4>
        <h4 *ngIf="check==4">Remainder is {{modulo}}</h4>
        <h4 *ngIf="check==5">Factorial of {{num1}} is {{fact1}}</h4>
        <h4 *ngIf="check==5">Factorial of {{num2}} is {{fact2}}</h4>
        <h4 *ngIf="flag1==0 && check==6">{{num1}} is Prime number</h4>
        <h4 *ngIf="flag1!=0 && check==6">{{num1}} is Composite number</h4>
        <h4 *ngIf="flag2==0 && check==6">{{num2}} is Prime number</h4>
        <h4 *ngIf="flag2!=0 && check==6">{{num2}} is Composite number</h4>
      </div>
    </div>
  </body>
</html>
```

Component.css Code:

```css
body
{
    font-size: 30px;
    font-family: 'Times New Roman';
}
#bg
{
    background-image: url("Images/background.jpg");
}
h2
{
    color: royalblue;
    font-size: 60px;
    font-family: 'Times New Roman';
    text-align: center;
}
h3
{
    color:rgb(53, 23, 245);
    font-size: 45px;
    text-align:center;
}
#bu
{
    border: 1px solid black;
    border-width: 1px;
    border-radius: 2px;
}
button
{
    background-color:teal;
    border:1px solid black;
    color:floralwhite;
    border-width: 1px;
    margin: 15px;
    padding: 20px;
    text-align: center;
    font-family: 'Times New Roman';
    font-size: 30px;
    display:block;
}
button:hover
{
    background-color:aqua;
    color:rgb(236, 130, 30);
}
#a
{
```

```css
    padding: 20px 80px;
}
#b
{
    padding: 20px 65px;
}
#c
{
    padding: 20px 48px;
}
#d
{
  padding: 20px 82px;
}
#e
{
  padding: 20px 177px;
}
#f
{
  padding: 20px 102px;
}
h4
{
    color:rgb(184, 2, 2);
    font-size: 50px;
    font-family: 'Times New Roman';
    text-align: center;
    position: relative;
    top: -500px;
    left: 250px;
}
```

Component.ts Code:

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

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'Calculator';
  num1=13;
  num2=10;
  sum={};
  dif={};
  mult={};
  quo={};
  modulo={};
  fact1=1;
  fact2=1;
  flag1=0;
  flag2=0;
  check={};
  add()
  {
    this.check=0;
    this.sum=this.num1+this.num2;
  }
  sub()
  {
    this.check=1;
    if(this.num1>this.num2)
    {
      this.dif=this.num1-this.num2;
    }
    else
    {
      this.dif=this.num2-this.num1;
    }
  }
  mul()
  {
    this.check=2;
    this.mult=this.num1*this.num2;
  }
  divi()
  {
    this.check=3;
    this.quo=this.num1/this.num2;
  }
```

```
modu()
{
  this.check=4;
  this.modulo=this.num1%this.num2;
}
facto()
{
  this.check=5;
  for(let i=0;i<=this.num1;i++)
  {
      if(i==0)
      {
        this.fact1*=1;
      }
      else if(i==1)
      {
        this.fact1*=1;
      }
      else
      {
        this.fact1*=i;
      }
  }
  for(let i=0;i<=this.num2;i++)
  {
      if(i==0)
      {
        this.fact2*=1;
      }
      else if(i==1)
      {
        this.fact2*=1;
      }
      else
      {
        this.fact2*=i;
      }
  }
}
primenum()
{
  this.check=6;
  for(let i=2;i<this.num1;i++)
  {
    if(this.num1%i==0)
    {
      this.flag1=1;
      break;
    }
  }
```

```
        for(let i=2;i<this.num2;i++)
        {
            if(this.num2%i==0)
            {
                this.flag2=1;
                break;
            }
        }
    }
}
```

Component.module.ts

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

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

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

Component.spec.ts

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

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

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

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

  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
 is running!');
  });
});
```
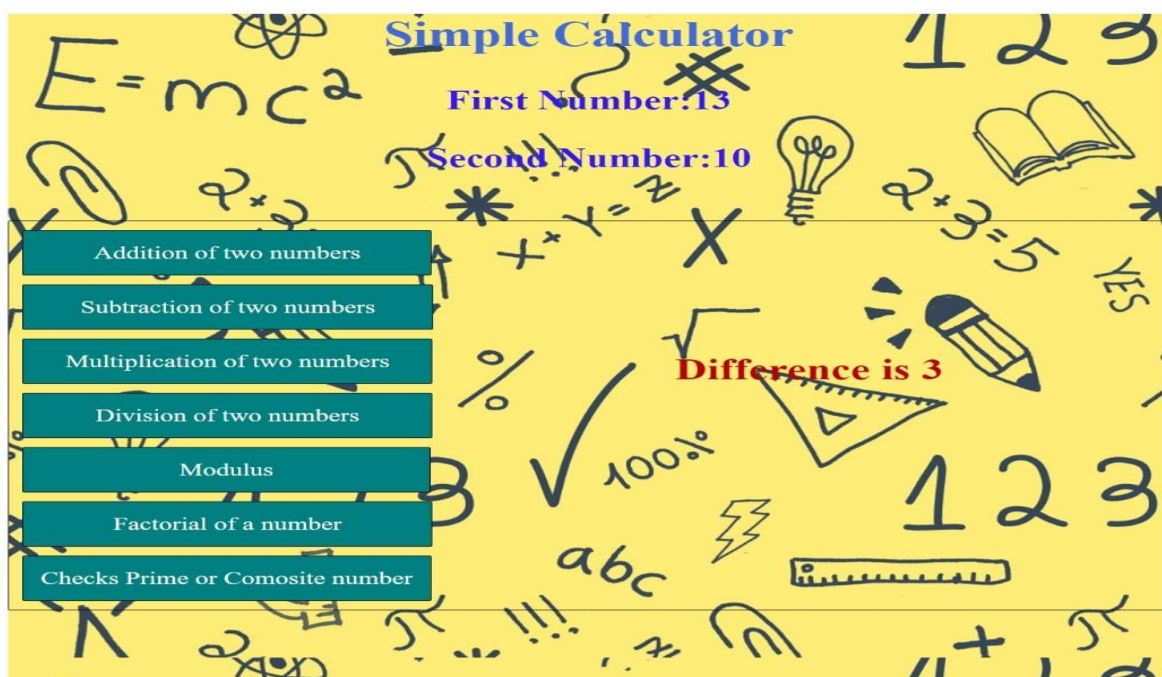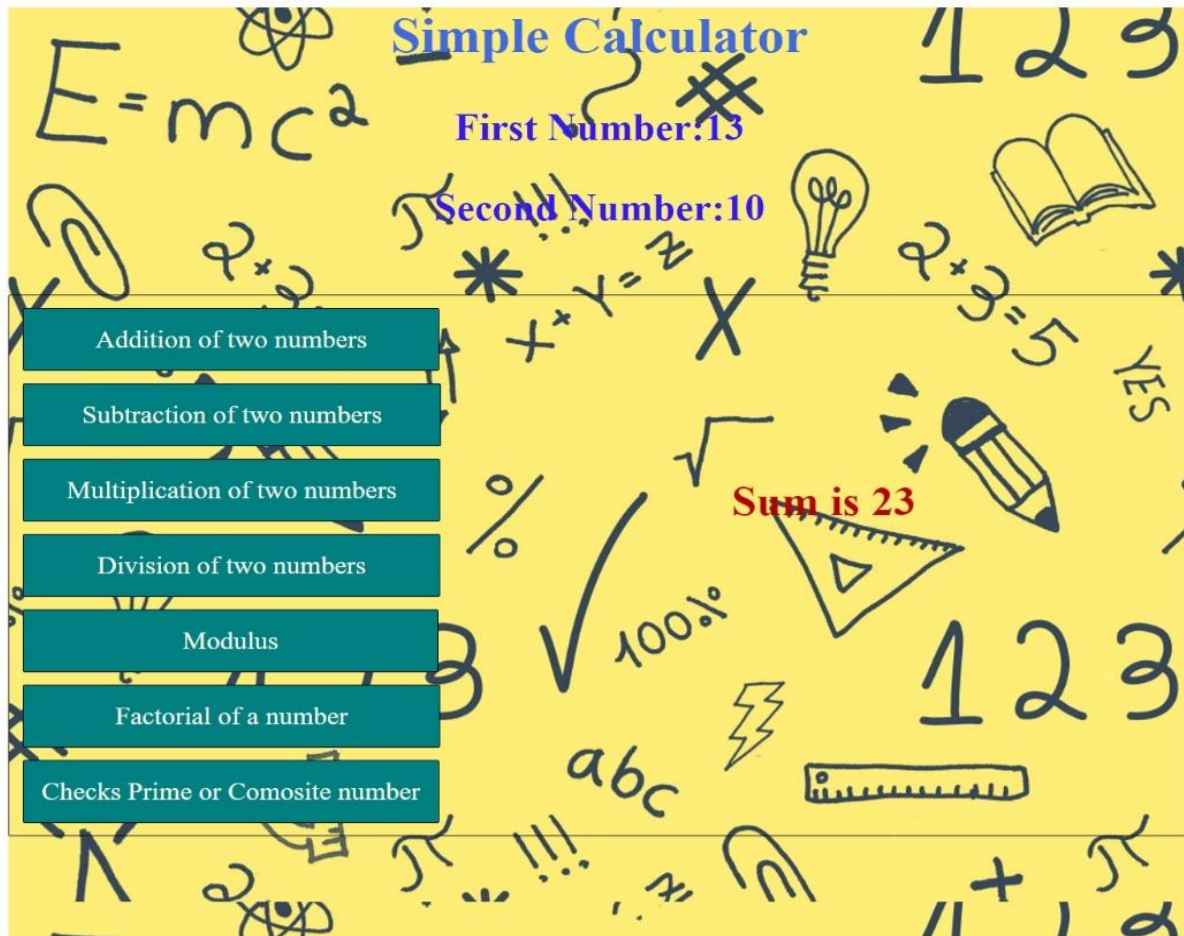
App:

Simple Calculator

First Number:13

Second Number:10

Addition of two numbers
Subtraction of two numbers
Multiplication of two numbers
Division of two numbers
Modulus
Factorial of a number
Checks Prime or Comosite number

Product is 130

Simple Calculator

First Number:13

Second Number:10

Addition of two numbers
Subtraction of two numbers
Multiplication of two numbers
Division of two numbers
Modulus
Factorial of a number
Checks Prime or Comosite number

Quotient is 1.3

Simple Calculator

First Number:13

Second Number:10

- Addition of two numbers
- Subtraction of two numbers
- Multiplication of two numbers
- Division of two numbers
- Modulus
- Factorial of a number
- Checks Prime or Comosite number

Remainder is 3

Simple Calculator

First Number:13

Second Number:10

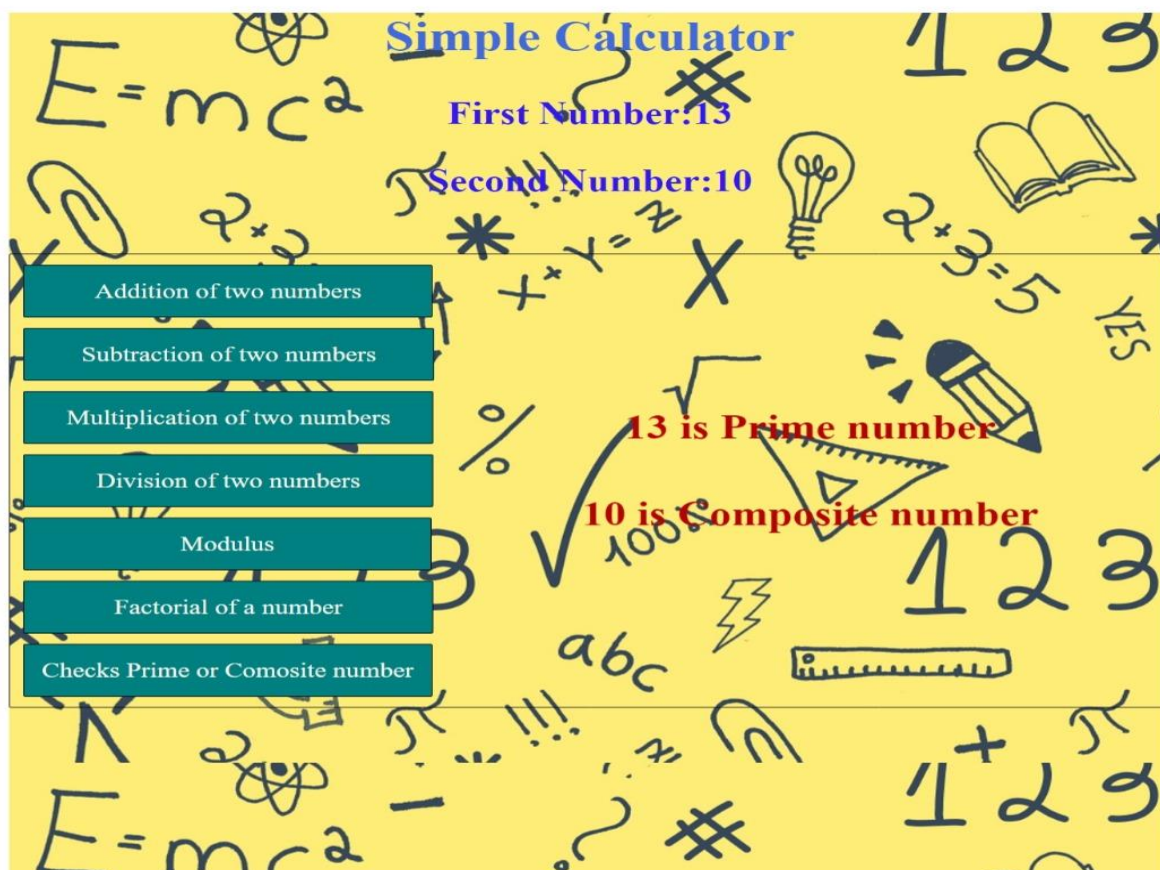- Addition of two numbers
- Subtraction of two numbers
- Multiplication of two numbers
- Division of two numbers
- Modulus
- Factorial of a number
- Checks Prime or Comosite number

13 is Prime number

10 is Composite number

Simple Calculator

First Number:13

Second Number:10

- Addition of two numbers
- Subtraction of two numbers
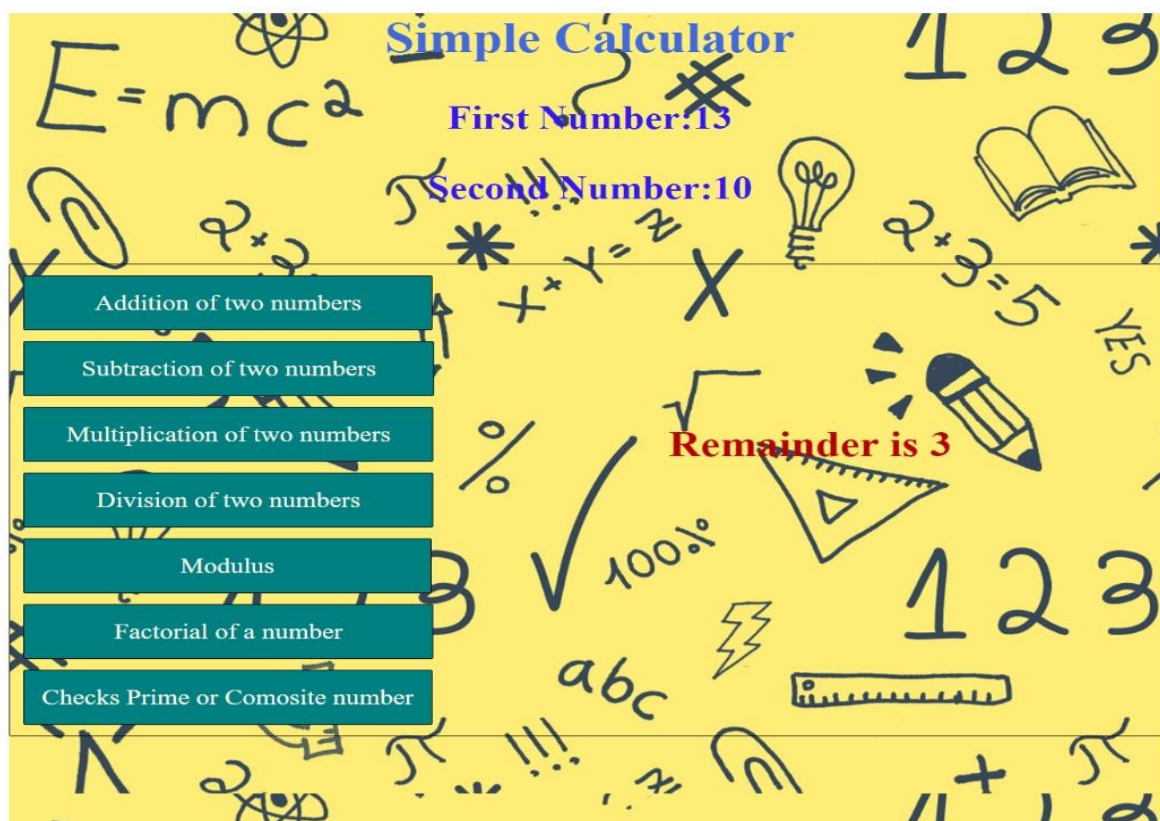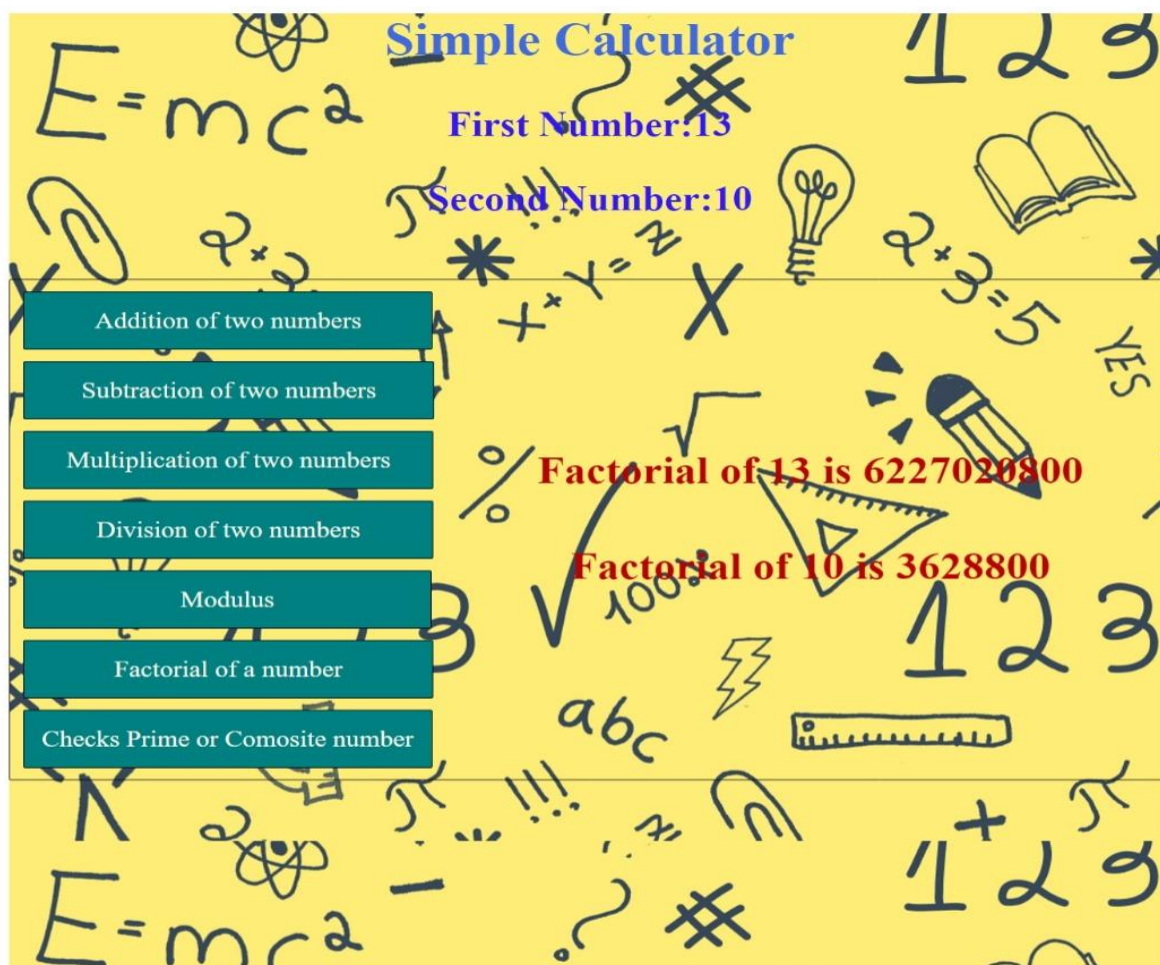- Multiplication of two numbers
- Division of two numbers
- Modulus
- Factorial of a number
- Checks Prime or Comosite number

Factorial of 13 is 6227020800

Factorial of 10 is 3628800

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