Web Development : Angular Assignment – 12

1.Create the application which contains one service named as Arithmetic. Arithmetic service contains two methods named as Add and Sub.
Both of this methods accepts two integers and perform addition and subtraction respectively. We have to create one child component named as Demo under app component which uses Arithmetic service using Dependency Injection. That methods from the service add and sub should be called from Demo component by passing some hardcoded values. And display the result of addition and subtraction inside Demo component.

src ▸ app ▸ TS arithmetic.service.ts ▸ ArithmeticService

```
1   import { Injectable } from '@angular/core';
2
3   @Injectable({
4     providedIn: 'root'
5   })
6   export class ArithmeticService {
7
8     constructor() { }
9
10    Add(num1:number,num2:number)
11    {
12      return num1+num2;
13    }
14    Sub(num1:number,num2:number)
15    {
16      return num1-num2;
17    }
18  }
```

src ▸ app ▸ TS app.module.ts ▸ ...

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

import { AppComponent } from './app.component';
import { ArithmeticService} from './arithmetic.service';
import { DemoComponent } from './demo/demo.component';

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

src ▸ app ▸ demo ▸ TS demo.component.ts ▸ DemoComponent

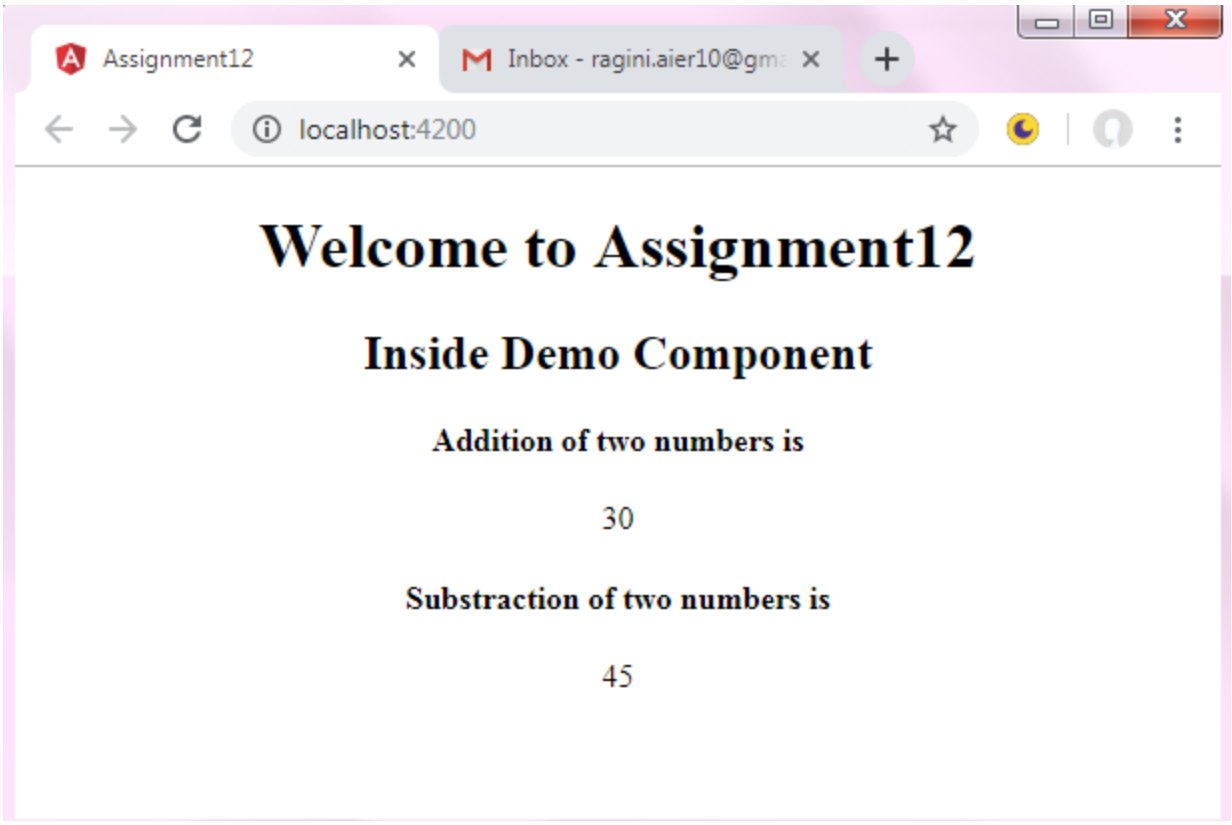
```ts
import { Component, OnInit } from '@angular/core';
import { ArithmeticService} from '../arithmetic.service'

@Component({
  selector: 'app-demo',
  templateUrl: './demo.component.html',
  styleUrls: ['./demo.component.css']
})
export class DemoComponent implements OnInit {

  public value1;
  public value2;

  constructor(private obj:ArithmeticService) { }

  ngOnInit()
  {
    this.value1 = this.obj.Add(10,20);
    this.value2 = this.obj.Sub(70,25);
  }
}

```

src ▸ app ▸ demo ▸ <> demo.component.html ▸ ...

```html
<h2>Inside Demo Component</h2>
<h4>Addition of two numbers is</h4>{{value1}}
<h4>Substraction of two numbers is</h4>{{value2}}

```

src ▸ app ▸ <> app.component.html ▸ div ▸ app-demo

```html
<!--The content below is only a placeholder and can be replaced.-->
<div style="text-align:center">
  <h1>
    Welcome to {{ title }}
  </h1>
  <app-demo></app-demo>
</div>

```


Assignment12
Inbox - ragini.aier10@gm
localhost:4200
Welcome to Assignment12
Inside Demo Component
Addition of two numbers is
30
Substraction of two numbers is
45

2. Create the application which contains two services named as Number and String. Number service contains one method named as ChkPrime() which accepts number and check whether that number is prime or not.
String service contains one method named as CountCapital() which counts number of capital characters and return its count.
We have to create two child component named as Child1 & Child2 under app component Child1 uses Number service & Child2 uses String service using Dependency Injection. Call both the methods from the respective components by passing some hardcoded values and display the result.

src ▸ app ▸ TS app.module.ts ▸ ...

```
1   import { BrowserModule } from '@angular/platform-browser';
2   import { NgModule } from '@angular/core';
3
4   import { AppComponent } from './app.component';
5   import { NumberService} from './number.service';
6   import { StringService} from './string.service';
7   import { Child1Component } from './child1/child1.component';
8   import { Child2Component } from './child2/child2.component';
9
10  @NgModule({
11    declarations: [
12      AppComponent,
13      Child1Component,
14      Child2Component
15    ],
16    imports: [
17      BrowserModule
18    ],
19    providers: [NumberService,StringService],
20    bootstrap: [AppComponent]
21  })
22  export class AppModule { }
```

src ▸ app ▸ TS number.service.ts ▸ NumberService

```ts
import { Injectable } from '@angular/core';

@Injectable({
  providedIn: 'root'
})
export class NumberService
{
  constructor() { }
  ChkPrime(num:number)
  {
    var i;
    var sum =0;
    for(i=1;i<= num/2;i++)
    {
      if(num % i == 0)
      {
        sum=sum+ i;
      }
    }
    if(sum == 1)
    {
      return num+" is Prime number";
    }
    else
    {
      return num+" is not Prime number";
    }
  }
}
```

src ▸ app ▸ child1 ▸ child1.component.html ▸ h4

```html
<h3>Inside child1 component</h3>
<h4>{{value1}}</h4>
<h4>{{value2}}</h4>

```

src ▸ app ▸ child1 ▸ TS child1.component.ts ▸ Child1Component

```ts
import { Component, OnInit } from '@angular/core';
import { NumberService} from '../number.service';

@Component({
  selector: 'app-child1',
  templateUrl: './child1.component.html',
  styleUrls: ['./child1.component.css']
})
export class Child1Component implements OnInit {
  value1;
  value2;
  constructor(private nobj:NumberService) { }

  ngOnInit()
  {
    this.value1=this.nobj.ChkPrime(11);
    this.value2=this.nobj.ChkPrime(26);
  }
}
```

src ▸ app ▸ TS string.service.ts ▸ StringService ▸ CountCapital

```ts
import { Injectable } from '@angular/core';

@Injectable({
  providedIn: 'root'
})
export class StringService {

  constructor() { }
  CountCapital(str:string)
  {
    var i,count =0;

    for(i=0;i<str.length;i++)
    {
      if(((str.charAt(i)) >= 'A') && ((str.charAt(i)) <= 'Z'))
      {
        count++;
      }
    }
      return count;
  }
}
```

src ▸ app ▸ child2 ▸ TS child2.component.ts ▸ Child2Component

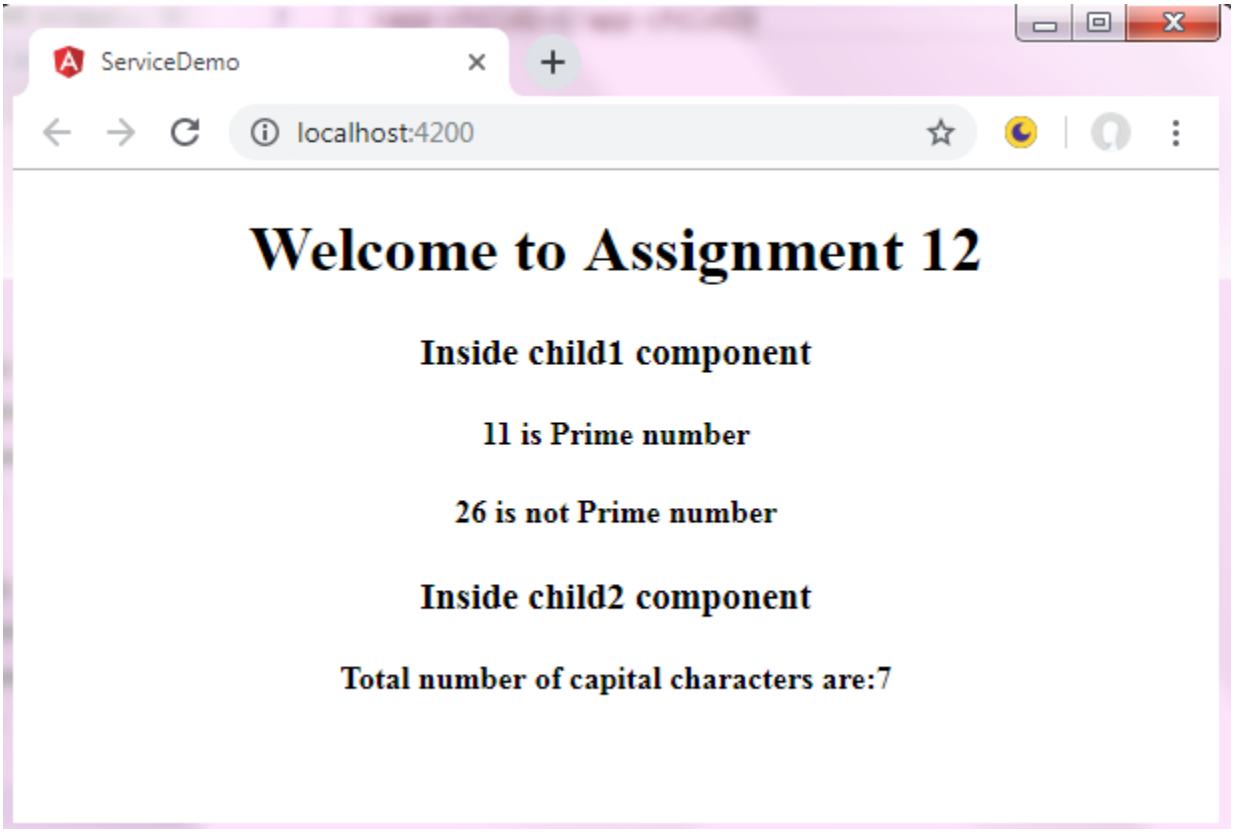
```ts
import { Component, OnInit } from '@angular/core';
import { StringService} from '../string.service';

@Component({
  selector: 'app-child2',
  templateUrl: './child2.component.html',
  styleUrls: ['./child2.component.css']
})
export class Child2Component implements OnInit {
  value;
  constructor(private sobj:StringService) { }

  ngOnInit()
  {
    this.value= this.sobj.CountCapital("Hello World INDIA");
  }
}

```

src ▸ app ▸ child2 ▸ child2.component.html ▸ ...

```
<h3>Inside child2 component</h3>
<h4>Total number of capital characters are:{{value}}</h4>
```

src ▸ app ▸ app.component.html ▸ div ▸ app-child2

```
<!--The content below is only a placeholder and can be replaced.-->
<div style="text-align:center">
  <h1>
    Welcome to {{ title }}
  </h1>
  <app-child1></app-child1>
  <app-child2></app-child2>
</div>
```



3. Create the application which contains two services named as Number and String.Number service contains one method named as ChkPrime() which accepts number and check whether that number is prime or not.
String service contains one method named as CountCapital() which counts number of capital characters and return its count.
We have to create one child component named as Child under app component uses Number service String service using Dependency Injection. Call both the methods from the components by passing some hardcoded values and display the result.

src ▸ app ▸ child ▸ TS child.component.ts ▸ ChildComponent ▸ ngOnInit

```
1   import { Component, OnInit } from '@angular/core';
2   import { NumberService } from '../number.service';
3   import { StringService } from '../string.service';
4
5   @Component({
6     selector: 'app-child',
7     templateUrl: './child.component.html',
8     styleUrls: ['./child.component.css']
9   })
10  export class ChildComponent implements OnInit
11   {
12     public val1;val2;iRet;
13    constructor(private nobj:NumberService,private sobj:StringService) { }
14
15    ngOnInit()
16    {
17      this.val1 = this.nobj.ChkPrime(7);
18      this.val2 = this.nobj.ChkPrime(16);
19      this.iRet = this.sobj.CountCapital("INDIA is my Country");
20    }
21  }
22
```

src ▸ app ▸ child ▸ <> child.component.html ▸ h4

```
1   <h3>Inside child component</h3>
2   <h4>{{val1}}</h4>
3   <h4>{{val2}}</h4>
4   <h4>{{iRet}}</h4>
```

src > app > TS number.service.ts > NumberService

```ts
import { Injectable } from '@angular/core';

@Injectable({
  providedIn: 'root'
})
export class NumberService
{
  constructor() { }
  ChkPrime(num:number)
  {
    var i;
    var sum =0;
    for(i=1;i<= num/2;i++)
    {
      if(num % i == 0)
      {
        sum=sum+ i;
      }
    }
    if(sum == 1)
    {
      return num+" is Prime number";
    }
    else
    {
      return num+" is not Prime number";
    }
  }
}
```

src ▸ app ▸ TS string.service.ts ▸ ...

```ts
import { Injectable } from '@angular/core';

@Injectable({
  providedIn: 'root'
})
export class StringService {

  constructor() { }
  CountCapital(str:string)
  {
    var i,count =0;

    for(i=0;i<str.length;i++)
    {
      if(((str.charAt(i)) >= 'A') && ((str.charAt(i)) <= 'Z'))
      {
        count++;
      }
    }
      return "Total number of capital letters in string:"+str+" are "+count;
  }
}
```