Assignment No 3

105AW_Harshal

1. Create one typescript application which contains one class named as Arithmetic. Arithmetic class contains three characteristics (Class data members) as Number1, Number2. Create one parametrised constructor which accept two values and assign it to Number1 and Number2.

In Arithmetic class we have to write four methods (Behaviours) as Addition, Subtraction, Multiplication and Division.

Addition method will add Number1, Number2 & return result.

Subtraction method will subtract Number1, Number2 & return result.

Multiplication method will multiply Number1, Number2 & return result.

Division method will divide Number1, Number2 & return result.

After designing the class create two objects of that class by providing some hardcoded value. Call all the methods by using both the objects.

```typescript
class Arithmetic
{
    No1:number;
    No2:number;

    constructor(a:number,b:number)
    {
        this.No1 = a;
        this.No2 = b;
    }

    Addition():number
    {
        var Ans:number = 0;
        Ans = this.No1 + this.No2;
        return Ans;
    }
```

```
        Substraction():number
        {
                var Ans:number = 0;
                Ans = this.No1 - this.No2;
                return Ans;
        }

        Multiplication():number
        {
                var Ans:number = 0;
                Ans = this.No1 * this.No2;
                return Ans;
        }

        Division():number
        {
                var Ans:number = 0;
                Ans = this.No1 / this.No2;
                return Ans;
        }
}

var obj = new Arithmetic(10,11);
var obj2 = new Arithmetic(51,21);

var Ret : number = 0;
Ret = obj.Addition();
console.log("Addition is : "+Ret);

Ret = obj.Substraction();
console.log("Substraction is : "+Ret);

Ret = obj.Multiplication();
console.log("Multiplication is : "+Ret);

Ret = obj.Division();
console.log("Division is : "+Ret);

console.log()

Ret = obj2.Addition();
```
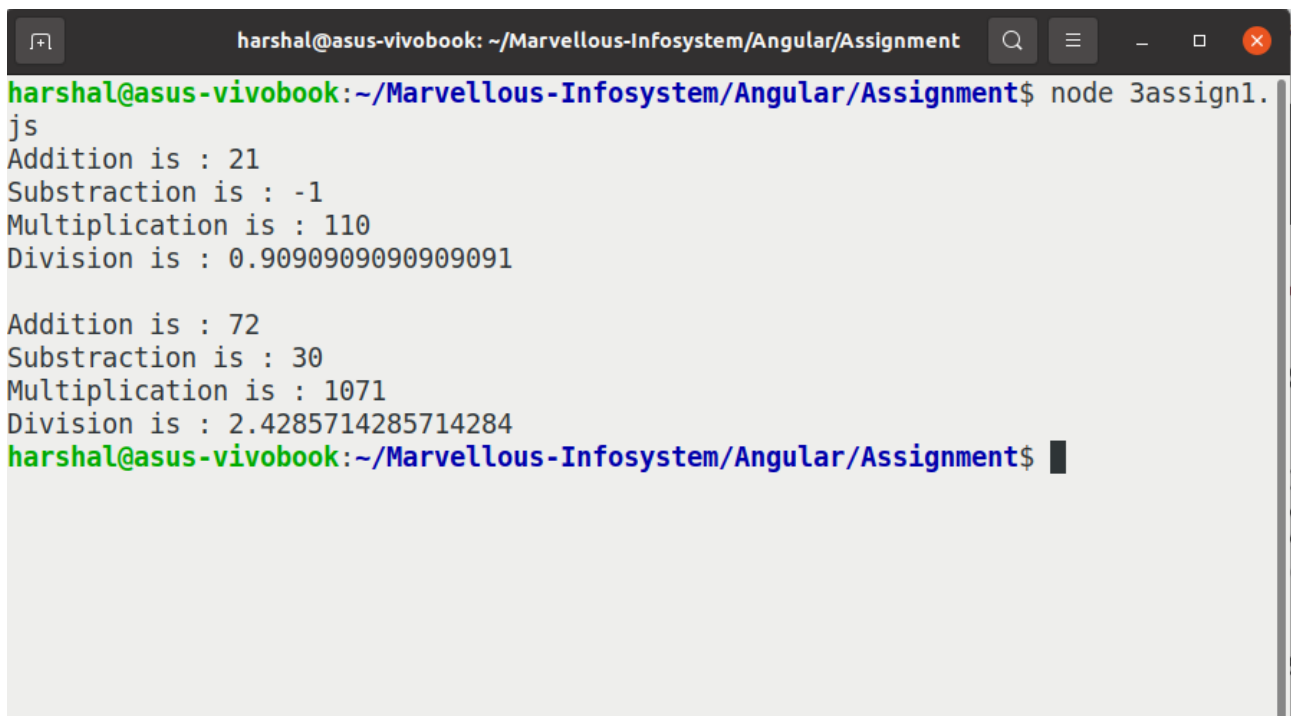
```javascript
console.log("Addition is : "+Ret);

Ret = obj2.Substraction();
console.log("Substraction is : "+Ret);

Ret = obj2.Multiplication();
console.log("Multiplication is : "+Ret);

Ret = obj2.Division();
console.log("Division is : "+Ret);
```

```
harshal@asus-vivobook: ~/Marvellous-Infosystem/Angular/Assignment

harshal@asus-vivobook:~/Marvellous-Infosystem/Angular/Assignment$ node 3assign1.
js
Addition is : 21
Substraction is : -1
Multiplication is : 110
Division is : 0.9090909090909091

Addition is : 72
Substraction is : 30
Multiplication is : 1071
Division is : 2.4285714285714284
harshal@asus-vivobook:~/Marvellous-Infosystem/Angular/Assignment$ 
```

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2. Create one typescript application which contains one class named as Circle.

Circle class contains two characteristics (Class data members) as Radius, PI.

Create one parametrised constructor which accept one value and assign it to Radius. Value of

PI member is set to 3.14.

In Circle class we have to one method (Behaviours) as Area which will return area of Circle. After designing the class create two objects of that class by providing some hardcoded value.

Call the method Area by using both the objects.

```typescript
class Circle
{
    radius:number;
    PI:number;

    constructor(a:number,b:number = 3.14)
    {
        this.radius = a;
        this.PI = b;
    }

    Area():number
    {
        var Ans:number = 0;
        Ans = this.PI * this.radius * this.radius;
        return Ans;
    }
}
var obj = new Circle(5);
var obj2 = new Circle(7);

var Ret : number = 0;
Ret = obj.Area();
console.log("Area of circle is : "+Ret);

Ret = obj2.Area();
console.log("Area of circle is : "+Ret);
```
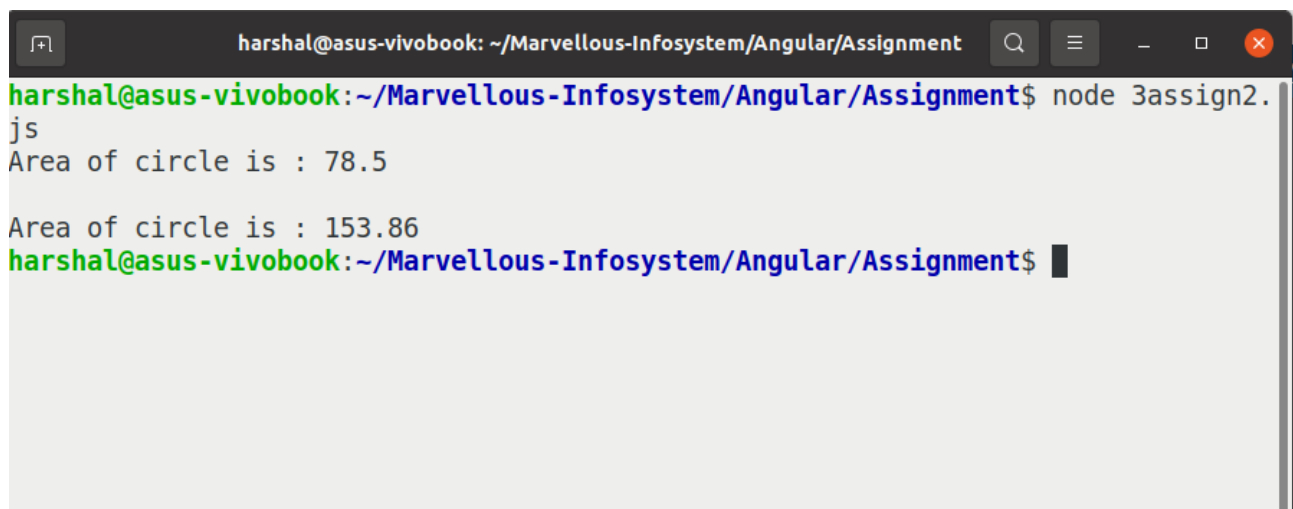


```
harshal@asus-vivobook: ~/Marvellous-Infosystem/Angular/Assignment

harshal@asus-vivobook:~/Marvellous-Infosystem/Angular/Assignment$ node 3assign2.
js
Area of circle is : 78.5

Area of circle is : 153.86
harshal@asus-vivobook:~/Marvellous-Infosystem/Angular/Assignment$
```

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3. Create one typescript application which contains one class named as Circlex which sill inherits above Circle class.

In CircleX class we have to write one method (Behaviours) as Circumference which will return circumference of circle.

After designing the class create two objects of that class by providing some hardcoded value. Call Circumference and Area methods by using both the objects.

```typescript
class Circle
{
radius:number;
PI:number;

constructor(a:number,b:number = 3.14)
{
this.radius = a;
this.PI = b;
}
Area():number
{
var Ans:number = 0;
Ans = this.PI * this.radius * this.radius;
return Ans;
}
}

class CircleX extends Circle
{
circumference():number
{
var Ans:number = 0;
Ans = 2 * this.PI * this.radius
return Ans;
}
}

var obj = new CircleX(5);
var obj2 = new CircleX(7);
```

```
var Ret : number = 0;
Ret = obj.Area();
console.log("Area of circle is : "+Ret);

console.log()

Ret = obj2.Area();
console.log("Area of circle is : "+Ret);

console.log()
console.log()

Ret = obj.circumference();
console.log("Circumference of circle is : "+Ret);

console.log()

Ret = obj2.circumference();
console.log("Circumference of circle is : "+Ret);
```
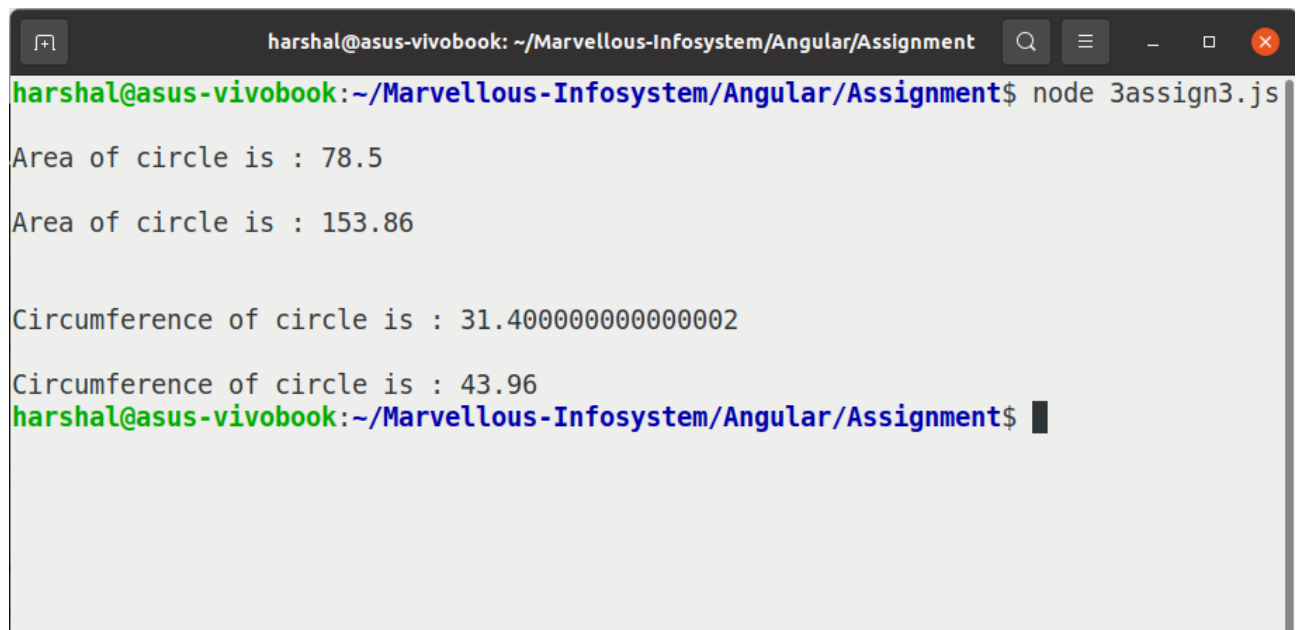
```
harshal@asus-vivobook:~/Marvellous-Infosystem/Angular/Assignment$ node 3assign3.js

Area of circle is : 78.5

Area of circle is : 153.86


Circumference of circle is : 31.400000000000002

Circumference of circle is : 43.96
harshal@asus-vivobook:~/Marvellous-Infosystem/Angular/Assignment$
```