

## Assignment 3 – 222A\_Samiksha

Q.1

```
C: > Users > admin > Desktop > typescript > TS assignment3_1.ts > ...
1
2 class Arithmetic
3 {
4     Number1 : number
5     Number2 : number
6
7     constructor(A: number , B : number)
8     {
9         this.Number1 = A
10        this.Number2 = B
11    }
12    Addition() : number
13    {
14        return this.Number1 + this.Number2
15    }
16
17    Subtraction() : number
18    {
19        return this.Number1 - this.Number2
20    }
21
22    Multiplication() : number
23    {
24        return this.Number1 * this.Number2
25    }
26
27    Division() : number
28    {
29        return this.Number1 / this.Number2
30    }
31 }
32
33 var obj1 = new Arithmetic(4,2)
34 var obj2 = new Arithmetic(6,3)
35 var Ret : number = 0
26
27     Division() : number
28     {
29         return this.Number1 / this.Number2
30     }
31 }
32
33 var obj1 = new Arithmetic(4,2)
34 var obj2 = new Arithmetic(6,3)
35 var Ret : number = 0
36
37 Ret = obj1.Addition()
38 console.log("Addition of obj1 is : "+Ret) //6
39
40 Ret = obj2.Addition()
41 console.log("Addition of obj2 is : "+Ret) //9
42
43 Ret = obj1.Subtraction()
44 console.log("Subtraction of obj1 is : "+Ret) //2
45
46 Ret = obj2.Subtraction()
47 console.log("Subtraction of obj2 is : "+Ret) //3
48
49 Ret = obj1.Multiplication()
50 console.log("Multiplication of obj1 is : "+Ret) //8
51
52 Ret = obj2.Multiplication()
53 console.log("Multiplication of obj2 is : "+Ret) //18
54
55 Ret = obj1.Division()
56 console.log("Division of obj1 is : "+Ret) //2
57
58 Ret = obj2.Division()
59 console.log("Division of obj2 is : "+Ret) //2
```

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19044.2604]
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C:\Users\admin>cd desktop/typescript

C:\Users\admin\Desktop\typescript>tsc assignment3_1.ts

C:\Users\admin\Desktop\typescript>node assignment3_1.js
Addition of obj1 is : 6
Addition of obj2 is : 9
Subtraction of obj1 is : 2
Subtraction of obj2 is : 3
Multiplication of obj1 is : 8
Multiplication of obj2 is : 18
Division of obj1 is : 2
Division of obj2 is : 2

C:\Users\admin\Desktop\typescript>
```

Q.2

C: > Users > admin > Desktop > typescript > TS assignment3\_2.ts > ...

```
1
2 class Circle
3 {
4     Radius : number
5     PI : number
6
7     constructor(R : number)
8     {
9         this.Radius = R
10        this.PI = 3.14
11    }
12    Area()
13    {
14        var Ans : number = 0
15        Ans = this.PI * this.Radius * this.Radius
16        return Ans
17    }
18 }
19
20 var obj1 = new Circle(5)
21 var obj2 = new Circle(4)
22 var Ret : number = 0
23
24 Ret = obj1.Area()
25 console.log("Area of obj1 is : "+Ret)
26
27 Ret = obj2.Area()
28 console.log("Area of obj2 is : "+Ret)
```

C:\WINDOWS\system32\cmd.exe

```
C:\Users\admin\Desktop\typescript>tsc Assignment3_2.ts
C:\Users\admin\Desktop\typescript>node assignment3_2.js
Area of obj1 is : 78.5
Area of obj2 is : 50.24
C:\Users\admin\Desktop\typescript>
```



### Q.3

```
C: > Users > admin > Desktop > typescript > TS assignment3_3.ts > CircleX > Circumference

1  class Circle
2  {
3      Radius : number
4      PI : number
5
6      constructor(R : number)
7      {
8          this.Radius = R
9          this.PI = 3.14
10     }
11     Area() : number
12     {
13         var Ans : number = 0
14         Ans = this.PI * this.Radius * this.Radius
15         return Ans
16     }
17 }
18
19 class CircleX extends Circle
20 {
21
22     constructor(R : number )
23     {
24         super(R)
25     }
26
27     Circumference() : number
28     {
29         var Ans : number
30         Ans = 2 * this.PI * this.Radius
31         return Ans
32     }
33 }
34 var obj1 = new CircleX(5)
35 var obj2 = new CircleX(4)
```

```
C: > Users > admin > Desktop > typescript > TS assignment3_3.ts > CircleX > Circumference

23     {
24         super(R)
25     }
26
27     Circumference() : number
28     {
29         var Ans : number
30         Ans = 2 * this.PI * this.Radius
31         return Ans
32     }
33 }
34 var obj1 = new CircleX(5)
35 var obj2 = new CircleX(4)
36 var Ret : number = 0
37
38 Ret = obj1.Area()
39 console.log("Area of obj1 is : "+Ret)
40
41 Ret = obj1.Circumference()
42 console.log("Circumference of obj1 is : "+Ret)
43
44 Ret = obj2.Area()
45 console.log("Area of obj2 is : "+Ret)
46
47 Ret = obj2.Circumference()
48 console.log("Circumference of obj2 is : "+Ret)
```

```
C:\WINDOWS\system32\cmd.exe

C:\Users\admin\Desktop\typescript>tsc assignment3_3.ts

C:\Users\admin\Desktop\typescript>node assignment3_3.js
Area of obj1 is : 78.5
Circumference of obj1 is : 31.400000000000002
Area of obj2 is : 50.24
Circumference of obj2 is : 25.12

C:\Users\admin\Desktop\typescript>
```