Question 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 parameterised constructor which accept
two values and assign it to Number1 and Number2.
//In arithmetic class we have to write four methods as Addition, Substraction,
Multiplication, Division.
//Adddition will add Number1, Number2 and return result
//Substraction will substract Number1, Number2 and return result
//Multiplication will multiply Number1, Number2 and return result
//Division will divide Number1, Number2 and return result

//after Designing class create two objects of that class by providing some
hardcoded value. Call all the methods by using both the objects.

class Arithmetic {
    public Number1 : number ;
    public Number2 : number ;

    constructor(A : number, B : number)
    {
        this.Number1 = A;
        this.Number2 = B;
    }

    Addition() : number
    {
        var Ans : number = 0;
        Ans = this.Number1 + this.Number2;
        return Ans;
    }

    Substraction() : number
    {
        var Ans : number = 0;
        Ans = this.Number1 + this.Number2;
        return Ans;
    }
    Multiplication() : number
    {
        var Ans : number = 0;
        Ans = this.Number1 * this.Number2;
        return Ans;
    }
    Division() : number
    {
        var Ans : number = 0;
        Ans = this.Number1 / this.Number2;
```

```
        return Ans;
    }

}

var obj1 = new Arithmetic(20,10);
var obj2 = new Arithmetic(40,20);

var Result : number = 0;

Result = obj1.Addition();
console.log("Addition of "+obj1.Number1+" and "+obj1.Number2+" is "+Result);

Result = obj1.Substraction();
console.log("Substraction of "+obj1.Number1+" and "+obj1.Number2+" is
"+Result);

Result = obj1.Multiplication();
console.log("Multiplication of "+obj1.Number1+" and "+obj1.Number2+" is
"+Result);

Result = obj1.Division();
console.log("Division of "+obj1.Number1+" and "+obj1.Number2+" is "+Result);

Result = obj2.Addition();
console.log("Addition of "+obj2.Number1+" and "+obj2.Number2+" is "+Result);

Result = obj2.Substraction();
console.log("Substraction of "+obj2.Number1+" and "+obj2.Number2+" is
"+Result);

Result = obj2.Multiplication();
console.log("Multiplication of "+obj2.Number1+" and "+obj2.Number2+" is
"+Result);

Result = obj2.Division();
console.log("Division of "+obj2.Number1+" and "+obj2.Number2+" is "+Result);
```

Output :

```
D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>tsc Question1.ts

D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>node Question1.js
Addition of 20 and 10 is 30
Substraction of 20 and 10 is 30
Multiplication of 20 and 10 is 200
Division of 20 and 10 is 2
Addition of 40 and 20 is 60
Substraction of 40 and 20 is 60
Multiplication of 40 and 20 is 800
Division of 40 and 20 is 2

D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>
```

Question 2:

```typescript
//Create one typescript application which contains one class named as Circle .
//Circle class contain two charateristics(Class data member) as Radius and PI.
// Create one parameterised  constructor which willl 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 whiich will
return area of circle.
//after Designing class create two objects of that class by providing some
hardcoded value. Call all the methods by using both the objects.

class Circle {

    public Radius : number;
    public PI : number = 3.14;

    constructor (A : number)
    {
        this.Radius = A;
    }

    Area () : number
    {
        var Result : number = 0;
        Result = (this.Radius ** 2) * this.PI;
        return Result;
    }
}


var obj1 = new Circle(15);
```

```
var obj2 = new Circle(19);

var area : number = 0;
area = obj1.Area();
console.log("Area of circle with Radius "+obj1.Radius+" is "+area );

area = obj2.Area();
console.log("Area of circle with Radius "+obj2.Radius+" is "+area );
```

Output :

```
D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>tsc Question2.ts

D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>node Question2.js
Area of circle with Radius 15 is 706.5
Area of circle with Radius 19 is 1133.54

D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>
```

Question 1:

```
//Create one typescript application which contains one class named as CircleX.
Which will iherits above Circle class
//In circleX class we have to one method (Behaviours) as Circumference whiich
will return Circumference of circle.
//after Designing class create two objects of that class by providing some
hardcoded value. Call all the methods by using both the objects.

class Circle {

    public Radius : number;
    public PI : number = 3.14;

    constructor (A : number)
    {
        this.Radius = A;
    }

    Area () : number
    {
        var Result : number = 0;
        Result = (this.Radius ** 2) * this.PI;
        return Result;
    }
}
```

```
class CircleX extends Circle {
    Circumference () : number
    {
        var Result : number = 0;
        Result = 2 * this.PI * this.Radius;
        return Result;
    }
}



var obj1 = new CircleX(15);
var obj2 = new CircleX(19);

var area : number = 0;
var circumference : number = 0;
area = obj1.Area();
circumference = obj1.Circumference();
console.log("Area of circle with Radius "+obj1.Radius+" is "+area );
console.log("Circumference of circle with Radius "+obj1.Radius+" is
"+circumference );

area = obj2.Area();
circumference = obj2.Circumference();
console.log("Area of circle with Radius "+obj2.Radius+" is "+area );
console.log("Circumference of circle with Radius "+obj2.Radius+" is
"+circumference );
```

Output :

```
D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>node Question3.js
Area of circle with Radius 15 is 706.5
Circumference of circle with Radius 15 is 94.2
Area of circle with Radius 19 is 1133.54
Circumference of circle with Radius 19 is 119.32000000000001

D:\Courses\Full Stack Angular Web Development with MEAN Stack\Class Assignme
nts\Assignment3>
```