2.1 Write a program in Java to show the use of super and this keyword with a constructor, methods, variables.

2.2 Code with comments

```java
package assignments;

class telephone
    {
        void telephone() //Method
        {

            int telno= 12345;//Variable declaration
              System.out.println("Telephone number -" +telno);
        }


       telephone(String str) //Constructor
         {
             // invoke or call parent class constructor
            this.telephone(); //using this keyword
              System.out.println("Telephone Constructor");
         }
    }

    class mobphone extends telephone
    {
            mobphone(String str) //parameterized constructor
            {
                    super(str); //Using super keyword to call the parent class
constructor

                    System.out.println("Mobphone Constructor");
            }

    }



    class MobilePhone
    {
        public static void main(String[] args)
        {
            mobphone s = new mobphone(null); //creating object to call all the
methods

        }
    }
```

2.3 Explanation of the code

I have created 3 classes. In the class telephone I have created a method called telephone() and parameterized constructor. I declared a variable and print statement inside the method. I used 'this' keyword inside the constructor to call another overloaded constructor in the same Class.

And created mobphone class and extended telephone class and used to super keyword to call the parent class. Then I have created another class called MobilePhone there I used main function and created an object for the mobphone to call all the methods inside it.

2.4 Output

```
1 package assignments;
2
3 class telephone
4     {
5⊝         void telephone() //Method
6         {
7
8             int telno= 12345;//Variable declaration
9             System.out.println("Telephone number -" +telno);
10         }
11
12
13⊝     telephone(String str) //Constructor
14         { |
15             // invoke or call parent class constructor
16             this.telephone(); //using this keyword
17             System.out.println("Telephone Constructor");
18         }
19     }
20
21     class mobphone extends telephone
22     {
```

Problems @ Javadoc Declaration Console ⊠ Results of running suite Git Staging
<terminated> MobilePhone [Java Application] C:\Program Files\Java\jre-10.0.1\bin\javaw.exe (2
```
Telephone number -12345
Telephone Constructor
Mobphone Constructor
```