Assignment 2_Task1

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> **?** Pseudo code

Task: Format a telephone number

STEP 1: STATE THE PROBLEM

You are given a string containing digits, to represent an American phone number. Produce another string -with parentheses, dashes and spaces- that reads easier as a telephone number.

For example, given the string "7812832456" you want to produce the string "(781) 283 - 2456".

Note: you can assume the given string contains only digits. If it contains more than or less than 10 digits, produce an error message.

- Given an empty string, have to create a phone number out of a 10 digit string of numbers. This has to include two () between the first three characters and - between the 5th and 6th character.

STEP 2: TESTING PLAN

Decide on some well-chosen testing cases to use later in order to verify the correctness of your solution plan (algorithm). Use these to help you think and develop your plan.

- Testing case 1: "2019463719"

- Testing case 2: "3478556328"

- Testing case 3: "2128886578"

STEP 3: WRITE THE PSEUDOCODE

Write some pseudocode to describe the plan you came up with in the previous step.

- Step2: Add the next 3 digits to the string

- add the first three units of the number inside closed parenthesis

  - e.g. (index0 index1 index3)

- Step 1: create a class, public String and public static main

  - for the class: public class Phone

```
public Phone (String number, String first, String second, String Third)
   {
     this.number = number;
     this.first = first;
     this.second = second;
     this.third = third;
   }
```

  - for the string:

```
public String toString(){
     String result = "(" + first+ ")"+ + second + "-" + third;
     return result;
   }
```

  - for the static main:

```
public static void main(String[] args)
   {
     Scanner sc = new Scanner(System.in);
     //ask for phone number
     System.out.print("Insert num");
     String newNum = sc.nextString();
     //set user input to be the new number
     //set number to be the whole number, first to be first 3..etc
     String first = newNum.substring(0,3);
     String second= newNum.substring(3,7);
     String third = newNum.substring(7,10+1);
       Phone person= new Phone(newNum, first, second, third) ;
```

```
        String phoneDescription = person.toString();
        System.out.println(phoneDescription);
    }
```

STEP 4: HAND-EXECUTE THE PSEUDOCODE

Run your pseudocode by hand on your test examples. If you discover errors in the logic, fix them and repeat this step.

- Testing case 1: "2019463719"

    - returns: (201) 946-3719

```
//testing for "2019463719"
public String toString(){
      String result = "(" + first+ ")"+ + second + "-" + third;
      return result; => returns (201)956-3719
   }
public static void main(String[] args)
   {
     Scanner sc = new Scanner(System.in);
     //ask for phone number
     System.out.print("Insert num"); => 2019463719
     String newNum = sc.nextString(); => 2019463719
     //set user input to be the new number
     //set number to be the whole number, first to be first 3..etc
     String first = newNum.substring(0,3); => 201
     String second= newNum.substring(3,7); => 946
     String third = newNum.substring(7,10+1); => 3719
     Phone person= new Phone(newNum, first, second, third) ;



     String phoneDescription = person.toString();
     System.out.println(phoneDescription); => prints (201)956-3719
   }
```

- Testing case 2: "3478556328"

    - returns: (347)855-6328

```
//testing for "3478556328"
public String toString(){
      String result = "(" + first+ ")"+ + second + "-" + third;
```

```
           return result; => returns (347)855-6328
       }
    public static void main(String[] args)
       {
         Scanner sc = new Scanner(System.in);
         //ask for phone number
         System.out.print("Insert num"); => inserts 3478556328
         String newNum = sc.nextString();
         //set user input to be the new number
         //set number to be the whole number, first to be first 3..etc
         String first = newNum.substring(0,3); => 347
         String second= newNum.substring(3,7); => 855
         String third = newNum.substring(7,10+1); =>6328
           Phone person= new Phone(newNum, first, second, third) ;



         String phoneDescription = person.toString();
         System.out.println(phoneDescription); => prints (347)855-6328
       }
```

- Testing case 3: "2128886578"

    - returns: (212)888-6578

```
//testing for "2128886578"
public String toString(){
      String result = "(" + first+ ")"+ + second + "-" + third;
      return result; returns (212)888-6578
    }
public static void main(String[] args)
   {
     Scanner sc = new Scanner(System.in);
     //ask for phone number
     System.out.print("Insert num"); => inserts 2128886578
     String newNum = sc.nextString();
     //set user input to be the new number
     //set number to be the whole number, first to be first 3..etc
     String first = newNum.substring(0,3); => 212
     String second= newNum.substring(3,7); => 888
     String third = newNum.substring(7,10+1); => 6578
       Phone person= new Phone(newNum, first, second, third) ;



     String phoneDescription = person.toString();
     System.out.println(phoneDescription); => prints (212)888-6578
   }
```