Programming I

Assignment 1

1. Write a program that counts the number of digits in an integer entered by the user. The program should repeatedly ask for input and displays the number of digits the input integer has. The program output should loosely resemble the following;

```
This program counts the number of digits
in an integer entered by the user.
Enter -1 to exit

Enter Number: 1234
Number of digits in 1234 is 4

Enter Number: 5432
Number of digits in 5432 is 4

Enter Number: 123
Number of digits in 123 is 3

Enter Number: 12
Number of digits in 12 is 2

Enter Number: 2
Number of digits in 2 is 1

Enter Number: -1
Program Terminated ...
```
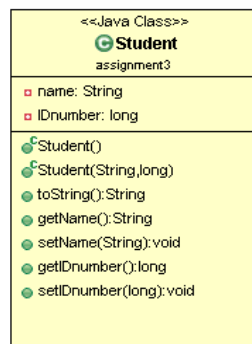
2. Using the following UML diagram you are required to:

```
<<Java Class>>
 G Student
 assignment3

 ¤ name: String
 ¤ IDnumber: long

 Student()
 Student(String,long)
 toString():String
 getName():String
 setName(String):void
 getIDnumber():long
 setIDnumber(long):void
```

    (I)   Implement the Student class.

    (II)   Create a tester class which:

        i) creates an array to hold a collection of Student objects.
        ii) adds a number of instances of Student to the array.
        ii) uses a loop to traverse the array and display the contents.