Q. Write a Java Program to implement simple Quiz.

Program1:

```
import java.util.Scanner;
public class SQuiz {
        public static void main(String[] args) {
                int ans, correct=0,wrong=0;
                Scanner in=new Scanner(System.in);
                System.out.println("Q1.In Java new operator is used to create");
                System.out.print("1.only primitives\n2.only objects\n3.both primitives and
objects\n4.none\n");
                System.out.println("your answer: ");
                ans=in.nextInt();
                if(ans==3) correct++;
                else wrong++;
                System.out.println("Q2.A signature of a method is :");
                System.out.print("1.name of the method\n2.name of the method + parameter
list\n3.name of the method + parameter list+return type\n4.return type of method\n");
                System.out.println("your answer: ");
                ans=in.nextInt();
                if(ans==2) correct++;
                else wrong++;
                System.out.println("Correct="+correct+"\twrong="+wrong);
        }

}
```

OUTPUT:

```
Q1.In Java new operator is used to create
1.only primitives
2.only objects
3.both primitives and objects
4.none
your answer:
3
Q2.A signature of a method is :
1.name of the method
2.name of the method + parameter list
3.name of the method + parameter list+return type
4.return type of method
your answer:
2
Correct=2       wrong=0
```

PROGRAM2:

```
import java.util.Scanner;
class Questions{
        public String[][] qpa;
        public String[][] qca;
        Questions(){
        qpa=new String[10][5];
        /* questions and objectives */
        qpa[0][0]="How to run Java program on the command prompt?";
        qpa[0][1]="1.javac JavaProgram";
        qpa[0][2]="2.java JavaProgram";
        qpa[0][3]="3.javac JavaProgram.java";
        qpa[0][4]="4.No one";

        qpa[1][0]="What is the use of the println method?";
        qpa[1][1]="1.It is used to print text on the screen.";
        qpa[1][2]="2.It is used to print text on the screen with the line break.";
        qpa[1][3]="3.It is used to read text from keyboard.";
        qpa[1][4]="4.It is used to read text from a file.";

        qpa[2][0]="How to read a character from the keyboard?";
        qpa[2][1]="1.char c=System.read()";
        qpa[2][2]="2.char c=System.in.read()";
        qpa[2][3]="3.char c=(char)System.read()";
        qpa[2][4]="4.char c=(char)System.in.read()";

        qpa[3][0]="Which one is a single-line comment?";
        qpa[3][1]="1.//...";
        qpa[3][2]="2.///...";
        qpa[3][3]="3./*...";
        qpa[3][4]="4./*...*/";

        qca=new String[10][2];
        /* questions and correct answers */
        qca[0][0]="How to run Java program on the command prompt?";
        qca[0][1]="2.java JavaProgram";

        qca[1][0]="What is the use of the println method?";
        qca[1][1]="2.It is used to print text on the screen with the line break.";

        qca[2][0]="How to read a character from the keyboard?";
        qca[2][1]="4.char c=(char)System.in.read()";

        qca[3][0]="Which one is a single-line comment?";
        qca[3][1]="2.///...";
        }
}
public class SimpleQuiz {
        public static void main(String[] args) {
                int x,correct=0,wrong=0,i,j;
                String ans[]=new String[10];
                Scanner in=new Scanner(System.in);
                Questions q=new Questions();
                System.out.println("JAVA QUIZ");
                System.out.println("----------");
                /* for loop to display question and read the answer from the user */
                for(i=0;i<4;i++){
                        for(j=0;j<5;j++){
                                System.out.println(q.qpa[i][j]);
                        }
                        System.out.println("your answer: ");
```

```
                    x=in.nextInt();
                    ans[i]=q.qpa[i][x];
                }
                /* calculate correct answers*/
                for(i=0;i<4;i++){
                    if(q.qca[i][1].equals(ans[i]))
                        correct++;
                    else
                        wrong++;
                }
                /* printing the correct answers and user selected answers */
                System.out.println("CORRECT ANSWERS");
                for(i=0;i<4;i++){
                    System.out.println();
                    System.out.println(q.qpa[i][0]);
                    System.out.println("correct answer:"+q.qca[i][1]);
                    System.out.println("your answer:"+ans[i]);
                }
                    System.out.println("Correct="+correct+"\twrong="+wrong);
        }
    }
```

OUTPUT:

```
JAVA QUIZ
---------
How to run Java program on the command prompt?
1.javac JavaProgram
2.java JavaProgram
3.javac JavaProgram.java
4.No one
your answer:
2
What is the use of the println method?
1.It is used to print text on the screen.
2.It is used to print text on the screen with the line break.
3.It is used to read text from keyboard.
4.It is used to read text from a file.
your answer:
2
How to read a character from the keyboard?
1.char c=System.read()
2.char c=System.in.read()
3.char c=(char)System.read()
4.char c=(char)System.in.read()
your answer:
4
Which one is a single-line comment?
1./...
2.//...
3./*...
4./*...*/
your answer:
2
CORRECT ANSWERS

How to run Java program on the command prompt?
correct answer:2.java JavaProgram
your answer:2.java JavaProgram
```

What is the use of the println method?
correct answer:2.It is used to print text on the screen with the line break.
your answer:2.It is used to print text on the screen with the line break.

How to read a character from the keyboard?
correct answer:4.char c=(char)System.in.read()
your answer:4.char c=(char)System.in.read()

Which one is a single-line comment?
correct answer:2.//...
your answer:2.//...
Correct=4 wrong=0

Q. Write Java program to generate HAILSTONE sequence
PROGRAM:

```
import java.util.Scanner;
public class HailstoneSequenceGenerator {
 public static void main(String[] args) {
   Scanner inputScanner = new Scanner(System.in);
   System.out.printf("Enter a Number:  ");
   int number = inputScanner.nextInt();
   int steps = 0;
   while (number != 1) {
          if (number % 2 == 0) {
                 System.out.println(number + " is even, so I take half: " + number / 2);
                 number /= 2;
          }
          else {
                System.out.println(number + " is odd, so I make 3n + 1: " + (number * 3 + 1));
                number = number * 3 + 1;
          }
          steps++;
    }
    System.out.println("The process took "+steps+(steps < 2 ? "step" : "steps") + "to reach 1");
  }
}
```

OUTPUT:

```
Enter a Number:  17
17 is odd, so I make 3n + 1: 52
52 is even, so I take half: 26
26 is even, so I take half: 13
13 is odd, so I make 3n + 1: 40
40 is even, so I take half: 20
20 is even, so I take half: 10
10 is even, so I take half: 5
5 is odd, so I make 3n + 1: 16
16 is even, so I take half: 8
8 is even, so I take half: 4
4 is even, so I take half: 2
2 is even, so I take half: 1
The process took 12 steps to reach 1
```