Assignment 3: Crack the Code!

Instructions

In this assignment, you will be creating a program that requires a secret code to “unlock.” The program should first welcome the user and ask the user to input his/her name. Then, the program will greet the user using the entered name and ask whether they are ready to crack the code. If they type "yes" (using any combination of upper/lower-case letters) then the program should proceed to the next stage. Otherwise, it should finish at that point and produce no more output.

In order to “crack the code,” the user must input three integer numbers which satisfy the following conditions:

- The first number must be the number 3.
- The second number can either be the number 1 or be between 33 and 100, inclusive.
- The third number must be a positive number (remember 0 is not positive) that is either evenly divisible by 3 or evenly divisible by 7

As the user enters each number, the program should immediately check whether or not the number satisfies its respective requirement(s) listed above. If the requirement(s) is satisfied, then a “Correct!” confirmation should be printed out. If the requirement(s) is NOT satisfied, then an error message should be printed out, and the user cannot input any more numbers. (i.e. if the user input 5 as the first number, then the user has failed to crack the code, and cannot guess the second or third number.)

Please refer to the sample outputs below for formatting. (Any output statements from the program must match the sample formatting exactly.)

Sample Run 1:

```
Welcome. What is your name?
Jane Doe
Hello Jane Doe. Are you ready to crack the code?
yes

PHASE 1
Enter a number:
3
Correct!

PHASE 2
Enter a number:
```

```
40
Correct!

PHASE 3
Enter a number:
6
Correct!
You have cracked the code!
```

Sample Run 2:

```
Welcome. What is your name?
Jane Doe
Hello Jane Doe. Are you ready to crack the code?
YES

PHASE 1
Enter a number:
0
Sorry, that was incorrect!
Better luck next time!
```

Sample Run 3:

```
Welcome. What is your name?
John Doe
Hello John Doe. Are you ready to crack the code?
Yes

PHASE 1
Enter a number:
3
Correct!

PHASE 2
Enter a number:
2
Sorry, that was incorrect!
Better luck next time!
```

Milestones

As you work on this assignment, you can use the milestones below to inform your development process:

Milestone 1: Write code that takes the name input and displays it along with the appropriate messages. Take a second String input from the user, process it and write a first if statement to check if the input by the user is equal to "yes" in any case.

Milestone 2: Write a conditional block of code for the program, displaying “Correct!” and continuing only if the number entered is 3, displaying the appropriate messages and ending

otherwise.

Milestone 3: Write the next conditional block of code for the program, displaying correct and continuing only if the number entered is either 1 or between 33 and 100 inclusive, displaying the appropriate messages and ending otherwise.

Milestone 4: Write the final conditional block of code for the program, displaying correct and finishing if the number entered is positive and divisible by 7 or 3, displaying the appropriate messages for an incorrect entry otherwise.

NOTE: You MUST use the class name "Assignment3" for this assignment. REMEMBER: you must SUBMIT your answer. Your assignment doesn't count as complete unless it has been submitted.

Files

Assignment3.java

STATUS SUBMITTED 100% SAVE SUBMIT

INSTRUCTIONS RUN CODE GRADING HISTORY

```
1  import java.util.Scanner;
2
3  public class Assignment3 {
4
5    public static void main (String args[])
6
7      Scanner scan = new Scanner(System.in)
8
9      System.out.println("Welcome. What is
10     String name = scan.nextLine();
11
12     System.out.println("Hello " + name +
           to crack the code?");
13     String answer = scan.nextLine();
14
15     if (!answer.equalsIgnoreCase("yes"))
16       return;
17     }
18
19     System.out.println("\nPHASE 1");
20     System.out.println("Enter a number:")
21     int num1 = scan.nextInt();
22     if (checkPhase1(num1)) {
23       System.out.println("Correct!");
24     } else {
25       System.out.println("Sorry, that was
26       System.out.println("Better luck nex
27       return;
28     }
29
30     System.out.println("\nPHASE 2");
31     System.out.println("Enter a number:")
32     int num2 = scan.nextInt();
33     if (checkPhase2(num2)) {
34       System.out.println("Correct!");
35     } else {
36       System.out.println("Sorry, that was
37       System.out.println("Better luck nex
38       return;
39     }
```

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