**Coin Game**

Write a simple game in Java called "Same or Different".

First, let the user choose either "Same" or "Different". Then, have the computer randomly flip two coins. If the person choose correctly (Same is either both heads or both tails) the user wins; otherwise the user loses.

Enter your choice (Same or Different): same

Computer flipped heads and heads

YOU WIN

Sample Session

import java.util.Scanner;

public class Game

{

public static void main(String args[])

{

// Declare a local variable to hold user input

String userInput;

// Create a Scanner object to read from the keyboard

Scanner keyboard = new Scanner (System.in);

// Declare and instantiate two Coin objects

Coin coin1 = new Coin();

Coin coin2 = new Coin();

// Prompt for and read the user choice: either same or different

// TODO: you write this code using keyboard.next().toLowerCase();

// Flip the two coins

coin1.flip();

coin2.flip();

// Display the results of the coin flip

// Hint: use the Coin class toString() method

// TODO: you write this code

// Display if the user wins or loses

// If the user entered "same" and the coins are equal OR the user entered

// "different" and the coins are not equal, they win; otherwise they lose

// Hint: use Coin class equals() method

// TODO: you write this code

}

import java.util.Random;

public class Coin

{

// Instance variables

private boolean sideShowing; //true -- "heads", false -- "tails"

private Random randomNumberGenerator;

// Constructor method:

// initialize the sideShowing to false

// instantiate the randomNumberGenerator

public Coin()

{

sideShowing = false;

randomNumberGenerator = new Random();

}

// Flip the coin by using the randomNumberGenerator object

public void flip()

{

sideShowing = randomNumberGenerator.nextBoolean();

}

// Returns true if sideShowing is equal to coin2's sideShowing

public boolean equals(Coin coin2)

{

// TODO: you write this code

}

// Returns either "Heads" or "Tails" based on the value of sideShowing

public String toString()

{

if (sideShowing == true)

{

return "heads";

}

else

{

return "tails";

}

}

}

**Optional: Use a loop to allow re-plays. Modify your main method to allow the user to choose whether they want to play another round (yes or no). Hint: use a do while loop. Also, keep track of the number of times won or lost.**

**Enter your choice (Same or Different): same**

**Computer flipped tails and heads**

**YOU LOSE**

**Would you like to try again (yes or no): yes**

**Enter your choice (Same or Different): different**

**Computer flipped tails and heads**

**YOU WIN**

Would you like to try again (yes or no): no

Game over

**You won 1 times**

**You lost 1 times**

**Sample Session**