**Task 1**

import java.util.Random;

import java.util.Scanner;

public class GuessingGame {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

Random random = new Random();

boolean playAgain = true;

int score = 0;

System.out.println("Welcome to the Number Guessing Game!");

while (playAgain) {

int numberToGuess = random.nextInt(100) + 1;

int numberOfAttempts = 0;

int maxAttempts = 10;

boolean hasGuessedCorrectly = false;

System.out.println("I have generated a number between 1 and 100. Can you guess it?");

System.out.println("You have " + maxAttempts + " attempts.");

while (!hasGuessedCorrectly && numberOfAttempts < maxAttempts) {

System.out.print("Enter your guess: ");

int userGuess = sc.nextInt();

numberOfAttempts++;

if (userGuess < numberToGuess) {

System.out.println("Your guess is too low.");

} else if (userGuess > numberToGuess) {

System.out.println("Your guess is too high.");

} else {

System.out.println("Congratulations! You guessed the correct number.");

hasGuessedCorrectly = true;

score++;

}

System.out.println("Attempts left: " + (maxAttempts - numberOfAttempts));

}

if (!hasGuessedCorrectly) {

System.out.println("Sorry, you have used all your attempts. The correct number was " + numberToGuess);

}

System.out.print("Do you want to play again? (yes/no): ");

playAgain = sc.next().equalsIgnoreCase("yes");

}

System.out.println("Game over! Your total score is: " + score);

sc.close();

}

}