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import java.io.*;
import java.util.*;

public class LotteryGameAlex2 {

    static int randomNumber(int a) { // method to generate random numbers
        Random randomNumberGenerator = new Random(); // random numbers generator
        int randomNumber = randomNumberGenerator.nextInt(a) + 1; // generates random number
        return randomNumber; // returns random number
    }

    public static void main(String[] args) throws Exception, IOException {
        // TODO Auto-generated method stub

        Scanner input = new Scanner(System.in); // user input
        BufferedReader input2 = new BufferedReader(new InputStreamReader(System.in));

        ArrayList<Integer> numbersPool = new ArrayList<Integer>(); // generates 100 random numbers

        int tenRandomNumbers[] = new int[10]; // stores 10 unique random numebtrs

        int sum = 0, userGuessedSum = 0; // sum of all the 10 numbers and the users guess

        int bonusGameChance[] = { randomNumber(1000), randomNumber(1000), randomNumber(1000), randomNumber(1000) }; // randomly
                                                                    // generates
                                                                    // chances
                                                                    // for
                                                                    // bonus
                                                                    // game

        int bonusGamePrize[] = new int[5]; // determines which prize will be won if any

        int bonusGameWin = 0; // bonus game win

        int userEnteredNumbers[] = new int[5]; // stores user guesses

        int userWinnings = 0; // prize pool

        int sequence[] = new int[2]; // tracks siquencess for prize

        int sequenceBonus = 0; //

        ArrayList<Integer> stats = new ArrayList <Integer>();

        /*
         * - 0 9- ten wining numebtrs
         * - 10 11 12 - sum / user guessed sum / bonus
         * - 2 4 - prize chances
         * - 3 0 - bonus prize
        */
    }
}

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* - 4 4 - user guessed numbers
* - 5 5 - sequence and prize
* */

for (int i = 0; i < 100; i++) { // fills number pull with 100 random numbers
    numbersPool.add(randomNumber(99));
}

for (int i = 0; i < numbersPool.size(); i++) { // cleans up duplicates
    for (int j = i + 1; j < numbersPool.size(); j++) { // 2 loops check for duplicates
        if (numbersPool.get(i) == numbersPool.get(j)) {
            numbersPool.remove(j);
            if (j > 0) {
                j = j - 1; // resets j to avoid missing dupcates after previous removal
            }
        }
    }
}

System.out.println("----- The Winning Numbers Are-----\n");

for (int i = 0; i < 10; i++) { // prints out the 10 random numbers
    tenRandomNumbers[i] = numbersPool.get(i);
    stats.add(tenRandomNumbers[i]);
    sum += tenRandomNumbers[i];
    if (tenRandomNumbers[i] < 10)
        System.out.print("0" + tenRandomNumbers[i] + " ");
    else
        System.out.print(tenRandomNumbers[i] + " ");
}
stats.add(sum);
System.out.println("\n\nThe sum of wining numbers is " + sum);

for (int i = 0; i < bonusGameChance.length; i++) { //
    if (bonusGameChance[i] > 0 && bonusGameChance[i] <= 600) {
        bonusGamePrize[0] += 1;
        stats.add(10);
    } else if (bonusGameChance[i] > 600 && bonusGameChance[i] <= 800) {
        bonusGamePrize[1] += 1;
        stats.add(20);
    } else if (bonusGameChance[i] > 800 && bonusGameChance[i] <= 900) {
        bonusGamePrize[2] += 1;
        stats.add(50);
    } else if (bonusGameChance[i] > 900 && bonusGameChance[i] <= 975) {
        bonusGamePrize[3] += 1;
        stats.add(200);
    } else if (bonusGameChance[i] > 975 && bonusGameChance[i] <= 1000) {
        bonusGamePrize[4] += 1;
        stats.add(1000);
    }
}

System.out.println("\n----- The Bonus Winings Are -----");

for (int i = bonusGamePrize.length - 1; i >= 0; i--) { // starts looking for matches backwards in order to take

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// in to account higher winings for bonus game

if (bonusGamePrize[i] >= 2) {
    switch (i) {
        case 0:
            System.out.println("\nYou won 10💎");
            bonusGameWin = 10;
            break;
        case 1:
            System.out.println("\nYou won 20💎");
            bonusGameWin = 20;
            break;
        case 2:
            System.out.println("\nYou won 50💎");
            bonusGameWin = 50;
            break;
        case 3:
            System.out.println("\nYou won 200💎");
            bonusGameWin = 200;
            break;
        case 4:
            System.out.println("\nYou won 1000💎");
            bonusGameWin = 1000;
            break;
        default:
            System.out.println("No Bonus");
    }
    break;
}

}
stats.add(bonusGameWin);
userWinnings += bonusGameWin;
System.out.println("\n----- Guess the Five Numbers -----");

for (int i = 0; i < userEnteredNumbers.length; i++) { // user will attempt to guess the five winning numbers
                                                        // which get stored inside an array

    System.out.println("Enter number " + (i + 1));
    int userChoice = input.nextInt();
    for (int k = 0; k < userEnteredNumbers.length; k++) {
        if (userChoice < 1 || userChoice > 99) {
            System.out.println("Please enter number between 1 - 99 !");
            i = i - 1;
            break;
        }
        if (userChoice == userEnteredNumbers[k]) {
            System.out.println("Number already entered");
            i = i - 1;
            break;
        }
        if (k == (userEnteredNumbers.length - 1)) {
            userEnteredNumbers[i] = userChoice;
            stats.add(userEnteredNumbers[i]);
            break;
        }
    }
}

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    }

}

System.out.println("\nWhat is the sum of all wining numbers ?");
userGuessedSum = input.nextInt();
stats.add(userGuessedSum);
if (userGuessedSum == sum) {
    int temp = 300000;
    userWinnings += temp;
    stats.add(temp);
}

System.out.println("\n----- Results -----");
System.out.println("The Winning Numbers Are !!!");
for (int i = 0; i < tenRandomNumbers.length; i++) {
    if (tenRandomNumbers[i] < 10)
        System.out.print("0" + tenRandomNumbers[i] + " ");
    else
        System.out.print(tenRandomNumbers[i] + " ");
}

System.out.println("\nYou chose the numbers !!!");
for (int i = 0; i < userEnteredNumbers.length; i++) {
    if (userEnteredNumbers[i] < 10)
        System.out.print("0" + userEnteredNumbers[i] + " ");
    else
        System.out.print(userEnteredNumbers[i] + " ");
}

int matchingNumber = 0;
int seq = 0;

for (int i = 0; i < userEnteredNumbers.length; i++) {
    for (int j = 0; j < tenRandomNumbers.length; j++) {
        if (userEnteredNumbers[i] == tenRandomNumbers[j]) {
            matchingNumber += 1;
            sequence[seq] += 1;
            break;
        }
        if (j == tenRandomNumbers.length - 1 && sequence[seq] > 0) {
            if (sequence[seq] == 1) {
                sequence[seq] = 0;
            } else if (sequence[seq] > 1) {
                seq += 1;
            }
        }
    }
}

stats.add(matchingNumber);
int hit=0;
if (sequence[0] > sequence[1]) {

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    sequenceBonus = sequence[0];  
} else if (sequence[0] < sequence[1]) {  
    sequenceBonus = sequence[1];  
}
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switch (matchingNumber) {  
case 1:  
    userWinnings += 1000;  
    stats.add(1000);  
    break;  
case 2:  
    userWinnings += 5000;  
    stats.add(5000);  
    break;  
case 3:  
    userWinnings += 20000;  
    stats.add(20000);  
    break;  
case 4:  
    userWinnings += 100000;  
    stats.add(100000);  
    break;  
case 5:  
    userWinnings += 700000;  
    stats.add(700000);  
    break;  
}
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switch (sequenceBonus) {  
case 2:  
    userWinnings += 50000;  
    stats.add(50000);  
    break;  
case 3:  
    userWinnings += 300000;  
    stats.add(300000);  
    break;  
case 4:  
    userWinnings += 800000;  
    stats.add(800000);  
    break;  
case 5:  
    stats.add(3000000);  
    stats.add(3000000);  
    break;  
}
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stats.add(userWinnings);
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System.out.println("\nYour total winnings are " + userWinnings + "💎\n");
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System.out.println("----- Break down -----");
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}
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}
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