import java.util.\*;

public class NumberGuessingGame {

static ArrayList<Integer> scoreBoard = new ArrayList<Integer>();

public static void main(String[] args) {

NumberGuessingGame methodChange = new NumberGuessingGame();

methodChange.menu(scoreBoard);

}

public void menu(ArrayList<Integer> scoreBoard) {

NumberGuessingGame methodChange = new NumberGuessingGame();

Scanner input = new Scanner(System.in);

System.out.println("--------------------");

System.out.println("Welcome to the number game");

System.out.println("1) Play the Game");

System.out.println("2) Score Board");

System.out.println("3) Exit the game");

System.out.println("--------------------");

try {

System.out.print("What action would you like to do from the above actions? ");

int menuOption = input.nextInt();

switch (menuOption) {

case 1:

System.out.print("\n"+"What would you like the range of the numbers to be? ");

int numberRange = input.nextInt();

int randomNumber = methodChange.randomNumber(numberRange);

methodChange.guessNumber(randomNumber);

break;

case 2:

methodChange.displayScoreBoard();

break;

case 3:

System.out.println("\n"+"Thanks for playing the game!");

System.exit(1);

break;

default:

throw new InputMismatchException("Invalid number entry.Could you please Try again later");

}

}catch(InputMismatchException e){

System.err.println("\n"+e.getMessage() +"\n");

menu(scoreBoard);

}

}

public int randomNumber(int numberRange) {

Random random = new Random();

int randomNumber = random.nextInt(numberRange) + 1;

return randomNumber;

}

public void guessNumber(int randomNumber) {

Scanner input = new Scanner(System.in);

int userGuess;

int guess = 0;

do {

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

userGuess = input.nextInt();

guess++;

if (userGuess > randomNumber) {

System.out.println("Lower");

} else if (userGuess < randomNumber) {

System.out.println("Higher");

}

} while (randomNumber != userGuess);

System.out.println(" ");

if (guess == 1) {

System.out.println("You answered number is right in " + guess + " try!");

} else {

System.out.println("You answered number is right in " + guess + " tries!");

}

scoreBoard.add(guess);

System.out.println(" ");

menu(scoreBoard);

}

public void displayScoreBoard() {

System.out.println("--------------------");

System.out.println("Score Board");

System.out.println("--------------------");

System.out.println("Your fastest games today out of all tries is: " +"\n");

Collections.sort(scoreBoard);

for (Integer scores : scoreBoard) {

System.out.println("Finished the number game in " + scores + " tries");

}

System.out.println(" ");

menu(scoreBoard);

}

}