Main.java

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Rohan Parikh  
Coder Tester lab  
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import* java.io.BufferedReader;  
*import* java.io.File;  
*import* java.io.FileReader;  
*import* java.io.IOException;  
*import* java.util.ArrayList;  
*import* java.util.*Comparator*;  
*import* java.util.*List*;  
*import* java.util.Scanner;  
  
*public class* Main {  
  
  
 *// Arrays to see if the randomindex has already been used  
 static boolean*[] *usedCoder* = *new boolean*[33];  
 *static boolean*[] *usedTester* = *new boolean*[33];  
  
 *public static void* main(String[] args) {  
  
  
 *//printing out to make sure the values are starting out as false  
 // initialize variables and creating array list* File file;  
  
 String tempeoryStorage = *null*;  
  
  
 *List*<String> studentPairsCodersFirst = *new* ArrayList<>();  
  
 *// List<String> studentPairsTestersFirst = new ArrayList<>();  
  
 List*<String> testersGroupInCodersFirstRun = *new* ArrayList<>();  
  
 Scanner in = *new* Scanner(System.*in*);  
 *List*<String> allStudents = *new* ArrayList<>();  
  
  
  
  
 BufferedReader br;  
 *int* numOfStudents;  
  
  
 *//Reading file into an array using bufferreader  
  
  
 try* {  
 file = *new* File("C:\\Users\\mpari\\Documents\\coding projects\\Java\\Coder Tester Software Design Program\\src\\SD\_ClassList.txt");  
 br = *new* BufferedReader(*new* FileReader(String.*valueOf*(file)));  
 *while* (br.ready()) {  
 allStudents.add(br.readLine());  
 }  
 } *catch* (IOException e) {  
 System.*out*.println(e.getMessage());  
 }  
  
  
 *//Asking user for how many students do they want* System.*out*.println("How many students should be in pairs?");  
  
  
 numOfStudents = in.nextInt();  
  
  
 *if* (numOfStudents > allStudents.size() || numOfStudents <= 0) {  
 System.*out*.println("Sorry, the amount of students you inputted is larger than the students" +  
 " in the file. Input a different number.");  
 numOfStudents = in.nextInt();  
 }  
  
  
  
  
 *int* i = 0;  
  
 *while* (i != numOfStudents) {  
 i++;  
  
  
 *// method for coders first* tempeoryStorage = ((*studentsAllCoders*(allStudents, numOfStudents)));  
 studentPairsCodersFirst.add(tempeoryStorage);  
 testersGroupInCodersFirstRun.add(tempeoryStorage);  
 }  
  
  
 studentPairsCodersFirst.sort(*Comparator*.*comparing*(String::toString));  
 *//Formatting output* String firstLine = String.*format*("%10S %19S ", " Coders", "Testers");  
 System.*out*.println(firstLine);  
 String secondLine = String.*format*("%10S %19S ", " Last Name", " Last Name");  
 System.*out*.println(secondLine);  
 System.*out*.println("-----------------------------------------------");  
  
  
 *//for loop to run for amount of coders and then also to split the string and output  
 for* (*int* P = 0; P < studentPairsCodersFirst.size(); P++) {  
 String value = studentPairsCodersFirst.get(P);  
 String[] split = value.split(",");  
 String names = String.*format*("%10S %19S ", split[0], split[1]);  
 System.*out*.println(names);  
 }  
  
 System.*out*.println(" ");  
 System.*out*.println(" ");  
 *// oraganizing the array into testers first  
 for* (*int* w = 0; w < testersGroupInCodersFirstRun.size(); w++) {  
 String value = testersGroupInCodersFirstRun.get(w);  
 String [] split = value.split (",");  
 String names = String.*format*("%10S %19S", split[1], split[0]);  
 }  
 *//sorting function* testersGroupInCodersFirstRun.sort(*Comparator*.*comparing*(String::toString));  
  
  
  
 *//final output* firstLine = String.*format*("%10S %19S ", " Testers", "Coders");  
 System.*out*.println(firstLine);  
 secondLine = String.*format*("%10S %19S ", " Last Name", " Last Name");  
 System.*out*.println(secondLine);  
 System.*out*.println("-----------------------------------------------");  
  
  
 *for* (*int* C = 0; C < testersGroupInCodersFirstRun.size(); C++) {  
 String value = testersGroupInCodersFirstRun.get(C);  
 String[] split = value.split(",");  
 String names = String.*format*("%10S %19S ", split[0], split[1]);  
 System.*out*.println(names);  
 }  
 }  
  
 *public static* String studentsAllCoders(*List* < String > allStudents,*int* numOfStudents){  
 *while* (*true*) {  
 *//common variable for randomindex  
 int* studentsAllLength = allStudents.size();  
 *//random index and inputting arraylist value into a string  
 int* randomIndex = (*int*) (Math.*random*() \* studentsAllLength);  
 *int* randomIndex2 = (*int*) (Math.*random*() \* studentsAllLength);  
 *if* ((!*usedTester*[randomIndex] && !*usedCoder*[randomIndex2]) && randomIndex != randomIndex2) {  
 String last = allStudents.get(randomIndex2) + "," + allStudents.get(randomIndex);  
 *usedCoder*[randomIndex2] = *true*;  
 *usedTester*[randomIndex] = *true*;  
 *return* last;  
 }  
 }  
 }  
}  
  
  
  
  
 */\*  
 else {  
 int i = 0;  
 while (i != numOfStudents) {  
 i++;  
  
 // method for testers first  
 testersTempeory = ((studentsAllTesters(allStudents, numOfStudents)));  
 studentPairsTestersFirst.add(testersTempeory);  
 }  
  
  
 studentPairsTestersFirst.sort(Comparator.comparing(String::toString));  
 //Formatting output but this time testers first  
 System.out.println("Printing testers first now. Will let user know about change.");  
 String firstLine = String.format("%10S %19S ", " Testers", "Coders");  
 System.out.println(firstLine);  
 String secondLine = String.format("%10S %19S ", " Last Name", " Last Name");  
 System.out.println(secondLine);  
 System.out.println("-------------------------------");  
 //for loop to run for amount of coders and then also to split the string and output  
 for (int P = 0; P < studentPairsTestersFirst.size(); P++) {  
 String value = studentPairsTestersFirst.get(P);  
 String[] split = value.split(",");  
 String names = String.format("%10S %19S ", split[0], split[1]);  
 System.out.println(names);  
 }  
 System.out.println(" ");  
 System.out.println(" ");  
 firstLine = String.format("%10S %19S ", " Coders", "Testers");  
 System.out.println(firstLine);  
 secondLine = String.format("%10S %19S ", " Last Name", " Last Name");  
 System.out.println(secondLine);  
 System.out.println("-------------------------------");  
 for (int P = 0; P < studentPairsTestersFirst.size(); P++) {  
 String value = studentPairsTestersFirst.get(P);  
 String[] split = value.split(",");  
 String names = String.format("%10S %19S ", split[1], split[0]);  
 System.out.println(names);  
 }  
 }  
 }  
  
  
 private static String studentsAllTesters(List<String> allStudents, int numOfStudents) {  
 while (true) {  
 //common variable for randomindex  
 int studentsAllLength = allStudents.size();  
 //random index and inputting arraylist value into a string  
 int randomIndex = (int) (Math.random() \* studentsAllLength);  
 int randomIndex2 = (int) (Math.random() \* studentsAllLength);  
 if ((!usedTester[randomIndex] && !usedCoder[randomIndex2]) && randomIndex != randomIndex2) {  
  
 String last = allStudents.get(randomIndex) + "," + allStudents.get(randomIndex2);  
 usedCoder[randomIndex2] = true;  
 usedTester[randomIndex] = true;  
 return last;  
 }  
 }  
 }  
  
  
  
 \*/*

Output is attached in separate text file