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Roll no : 51

Batch : b3

1] Write a program to create to stored 1 lakh numbers in txt file i.sequential ii. Random repeated iii. Random unique

The screenshot shows a code editor with a file explorer on the left and a terminal at the bottom. The file explorer shows a project named 'RITU' with a 'src' folder containing several Java files, including 'Sorted.java' which is currently selected. The 'Sorted.java' file contains the following code:

```
1 import java.io.BufferedWriter;
2 import java.io.FileWriter;
3 import java.io.IOException;
4
5
6 public class Sorted {
7     public static void main(String args[]) {
8         String fileName = "file1.txt"; // Output file name
9         int num = 100000; // Total numbers to generate
10
11         try (BufferedWriter writer = new BufferedWriter(new FileWriter(fileName))) {
12             for (int i = 1; i <= num; i++) {
13
14                 writer.write(Integer.toString(i));
15                 writer.newLine(); // Write a newline character after each number
16             }
17             System.out.println("Finished writing random numbers to " + fileName);
18         } catch (IOException e) {
19             System.err.println("An error occurred while writing to the file: " + e.getMessage());
20         }
21     }
22 }
23
24 }
```

The terminal at the bottom shows the command to run the program and its output:

```
rituchoudhary@Ritus-MacBook-Air RITU % /usr/bin/env /Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java --enable-preview -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/rituchoudhary/RITU/bin Sorted
Finished writing random numbers to file1.txt
rituchoudhary@Ritus-MacBook-Air RITU %
```

The status bar at the bottom indicates the current line and column (Ln 5, Col 1), the number of spaces (4), the encoding (UTF-8), the line feed (LF), the language (Java), and the active extensions (Go Live, Quokka, Prettier).

← →

🔍 RITU

🏠 📄 📁 📌

EXPLORER

📁 RITU

📄 .vscode

📄 {} settings.json

📁 > bin

📁 > lib

📁 > src

📄 J App.java

📄 J BinarySearch.java 1

📄 J BubbleSort.java

📄 J Graph.java

📄 J InsertionSort.java

📄 J LinearSearchFromFile.java 1

📄 J MergeSort.java

📄 J Multiplication.java

📄 J Randomnum.java

📄 J Selection.java

📄 J Sorted.java

📄 J UniqueNum.java

📄 file1.txt

📄 file2.txt

📄 file3.txt

📄 InsertionSort.txt

📄 MergeSort.txt

📄 README.md

📄 Selection.txt

J Sorted.java

J Randomnum.java X

src > J Randomnum.java > ...

1 //2] Program to create a single txt file having 1lakh data arranged in random order

2 import java.io.BufferedWriter;

3 import java.io.FileWriter;

4 import java.io.IOException;

5 import java.util.Random;

6

7 public class Randomnum {

8 Run | Debug

9 public static void main(String args[]) {

10 String fileName = "file2.txt"; // Output file name

11 int num = 100000; // Total numbers to generate

12 int upperBound = 1000000; // Upper bound for the random numbers (exclusive)

13

14 Random random = new Random(); //creating random number object

15

16 try (BufferedWriter writer = new BufferedWriter(new FileWriter(fileName))) {

17 for (int i = 1; i <= num; i++) {

18 int randomNumber = random.nextInt(upperBound); // Generate a random number

19 writer.write(Integer.toString(randomNumber));

20 writer.newLine(); // Write a newline character after each number

21 }

22 System.out.println("Finished writing random numbers to " + fileName);

23 } catch (IOException e) {

24 System.err.println("An error occurred while writing to the file: " + e.getMessage());

25 }

26

27 }

28 }

PROBLEMS 2

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

● rituchoudhary@Ritus-MacBook-Air RITU % /usr/bin/env /Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java --enable-preview -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/rituchoudhary/RITU/bin Sorted

Finished writing random numbers to file1.txt

○ rituchoudhary@Ritus-MacBook-Air RITU %

👤

🔧

📄 OUTLINE

📄 TIMELINE

📄 JAVA PROJECTS

🔍 0 2

🔍 0

🔍

🔍 Java: Ready

Ln 1, Col 85

Spaces: 4

UTF-8

LF

() Java

🔍 Go Live

🔍 Quokka

🔍 Prettier

🔍

EXPLORER

RITU

.vscode

settings.json

bin

lib

src

App.java

BinarySearch.java

BubbleSort.java

Graph.java

InsertionSort.java

LinearSearchFromFile.java

MergeSort.java

Multiplication.java

Randomnum.java

Selection.java

Sorted.java

UniqueNum.java

file1.txt

file2.txt

file3.txt

InsertionSort.txt

MergeSort.txt

README.md

Selection.txt

OUTLINE

TIMELINE

JAVA PROJECTS

J Sorted.java

J UniqueNum.java

src > J UniqueNum.java > ...

```
1 //3] write a program to create a single txt file having 1lakh data item arranged in random and unique
2 import java.io.FileWriter;
3 //import java.io.IOException;
4 //import java.io.PrintWriter;
5 import java.util.HashSet;
6 import java.util.Random;
7 import java.util.Set;
8
9 public class UniqueNum {
10     public static void main(String args[]){
11         try{
12             FileWriter f = new FileWriter(fileName:"file3.txt");
13             Random r = new Random();
14             Set<Integer> num = new HashSet<>();
15             while (num.size()<100000) {
16                 num.add(r.nextInt(bound:100000));
17             }
18             for(int i:num) {
19                 f.write(i + "\n");
20             }
21             System.out.println(x:"File created successfully");
22             f.close();
23         } catch (Exception ex) {
24             System.out.println(x:"Error!!!!");
25             ex.printStackTrace();
26         }
27     }
28 }
29
```

PROBLEMS 2

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

rituchoudhary@Ritus-MacBook-Air RITU % /usr/bin/env /Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java --enable-preview -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/rituchoudhary/RITU/bin Sorted

Finished writing random numbers to file1.txt

rituchoudhary@Ritus-MacBook-Air RITU %

Ln 3, Col 3

Spaces: 4

UTF-8

LF

{ } Java

Go Live

Quokka

Prettier