

Server Monitoring System

Languages Used : Java

Version : JDK 11

Design :

The Monitoring system has two main classes LogGenerator and Query Tool

- 1) LogGenerator: The task of LogGenerator is to print logs to 1000 files, one file for each server for a day.**

The logs are printed for every minute from both the CPUs of each server.

Design Analysis: The generator logs a file completely before opening another file of a different server. In this way there will be less number of file open operations.

- 2) Query Tool: The QueryTool is used to query the given command.**

It takes the Directory Path, IP-address, CPU-ID, Start_Date, End Date as the arguments.

Steps for Compilation

- 1) Download the jar file -> go to the specific directory where jar file resides**

- 2) Command to run Generator->**

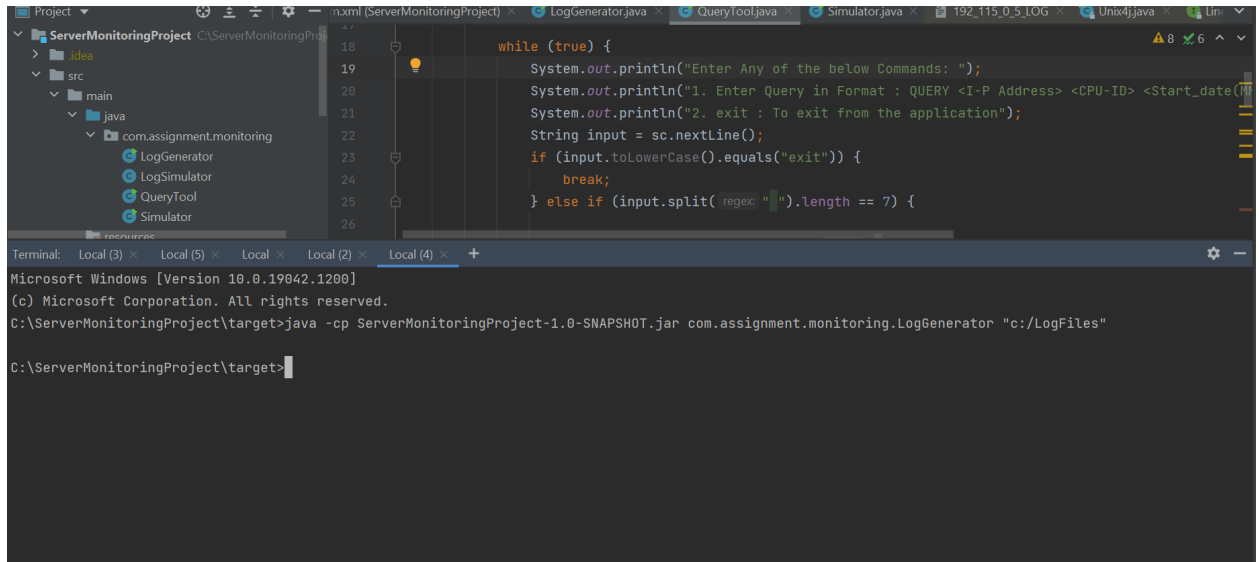
```
java -cp ServerMonitoringProject-1.0-SNAPSHOT.jar  
com.assignment.monitoring.LogGenerator "c:\LogFiles"
```

- 3) Command to run Query Tool ->**

```
java -cp ServerMonitoringProject-1.0-SNAPSHOT.jar  
com.assignment.monitoring.QueryTool "c:\LogFiles"
```

Screen shots

1) Running Log Generator and generating Log Files

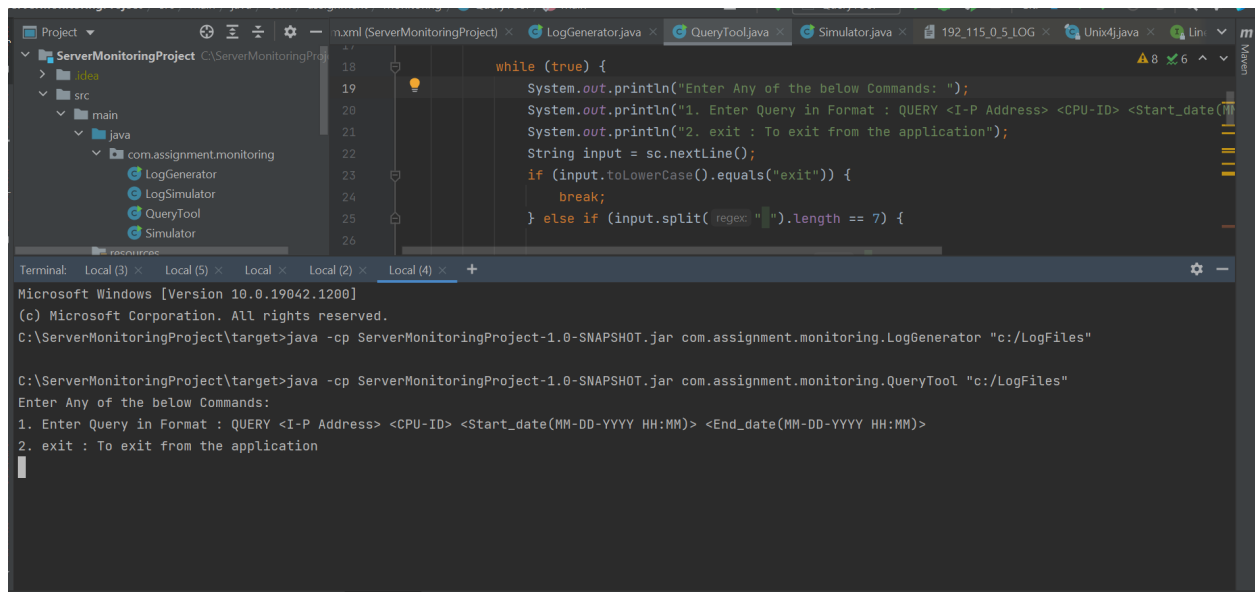


2)The files are created in the specified directory

This PC > OS (C:) > LogFiles

Name	Date modified	Type	Size
192.115.0.1_LOG	8/21/2021 1:14 PM	1_LOG File	1 KB
192_115_0_0_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_1_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_2_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_3_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_4_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_5_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_6_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_7_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_8_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_9_LOG	8/21/2021 7:52 PM	File	87 KB
192_115_0_10_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_11_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_12_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_13_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_14_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_15_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_16_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_17_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_18_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_19_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_20_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_21_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_22_LOG	8/21/2021 7:52 PM	File	90 KB
192_115_0_23_LOG	8/21/2021 7:52 PM	File	90 KB

3) Run the command for the Query tool

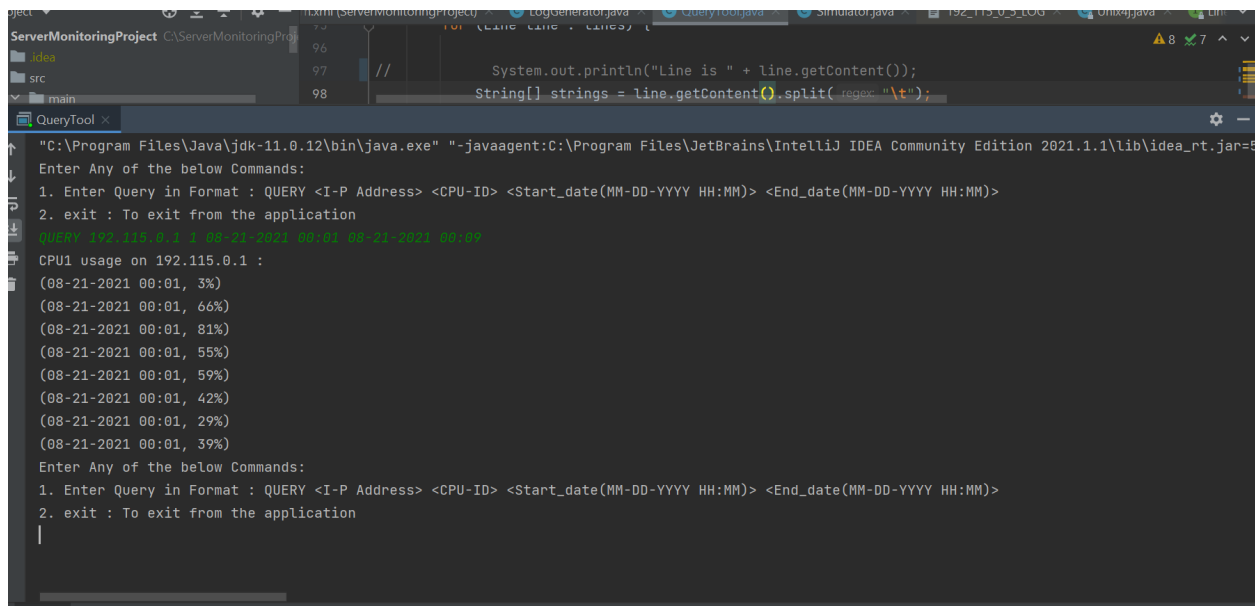


```
Project: ServerMonitoringProject
src/main/java/com/assignment/monitoring/QueryTool.java
while (true) {
    System.out.println("Enter Any of the below Commands: ");
    System.out.println("1. Enter Query in Format : QUERY <I-P Address> <CPU-ID> <Start_date(MM-DD-YYYY HH:MM)> <End_date(MM-DD-YYYY HH:MM)>");
    System.out.println("2. exit : To exit from the application");
    String input = sc.nextLine();
    if (input.toLowerCase().equals("exit")) {
        break;
    } else if (input.split(" ").length == 7) {
        // ...
    }
}
```

```
Terminal: Local (3) x Local (5) x Local x Local (2) x Local (4) x +
Microsoft Windows [Version 10.0.19042.1200]
(c) Microsoft Corporation. All rights reserved.
C:\ServerMonitoringProject\target>java -cp ServerMonitoringProject-1.0-SNAPSHOT.jar com.assignment.monitoring.LogGenerator "c:/LogFiles"

C:\ServerMonitoringProject\target>java -cp ServerMonitoringProject-1.0-SNAPSHOT.jar com.assignment.monitoring.QueryTool "c:/LogFiles"
Enter Any of the below Commands:
1. Enter Query in Format : QUERY <I-P Address> <CPU-ID> <Start_date(MM-DD-YYYY HH:MM)> <End_date(MM-DD-YYYY HH:MM)>
2. exit : To exit from the application
```

4) Execute accordingly with the expected input



```
Project: ServerMonitoringProject
src/main/java/com/assignment/monitoring/QueryTool.java
System.out.println("Line is " + line.getContent());
String[] strings = line.getContent().split(" ");

QueryTool x
"C:\Program Files\Java\jdk-11.0.12\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.1.1\lib\idea_rt.jar=5
Enter Any of the below Commands:
1. Enter Query in Format : QUERY <I-P Address> <CPU-ID> <Start_date(MM-DD-YYYY HH:MM)> <End_date(MM-DD-YYYY HH:MM)>
2. exit : To exit from the application
QUERY 192.115.0.1 1 08-21-2021 00:01 08-21-2021 00:04
CPU1 usage on 192.115.0.1 :
(08-21-2021 00:01, 3%)
(08-21-2021 00:01, 66%)
(08-21-2021 00:01, 81%)
(08-21-2021 00:01, 55%)
(08-21-2021 00:01, 59%)
(08-21-2021 00:01, 42%)
(08-21-2021 00:01, 29%)
(08-21-2021 00:01, 39%)
Enter Any of the below Commands:
1. Enter Query in Format : QUERY <I-P Address> <CPU-ID> <Start_date(MM-DD-YYYY HH:MM)> <End_date(MM-DD-YYYY HH:MM)>
2. exit : To exit from the application
```