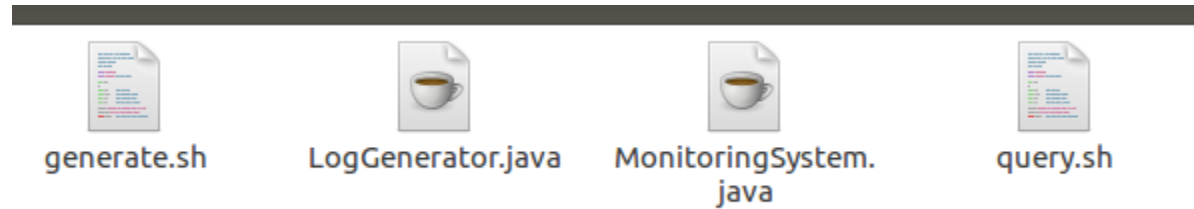


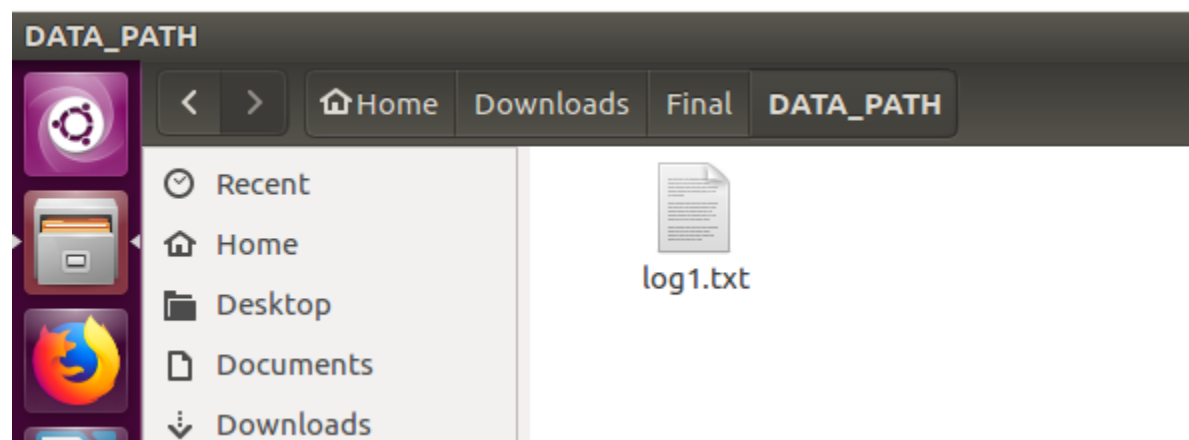
The project contains 4 files: 2 java files which are responsible to create logs and one generator file and query file We will look forward how all files are used. I have used bash in system. **please use bash ahead of command for having no errors**



1)Run bash ./generate.sh Data Path: it will compile java files and then generate log file in given data path

```
jay@jay-VirtualBox: ~/Downloads/Final
jay@jay-VirtualBox:~/Downloads/Final$ bash ./generate.sh DATA_PATH
Compile Successfull
Done
Logs generatad in DATA_PATH directory
jay@jay-VirtualBox:~/Downloads/Final$
```

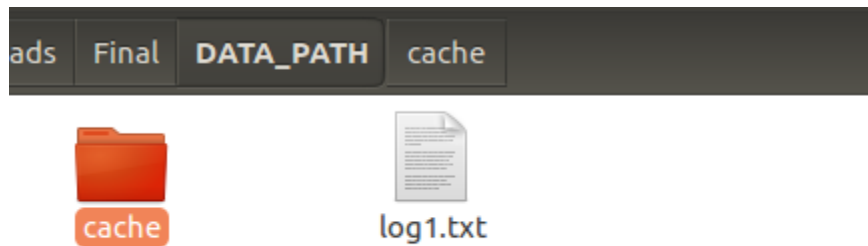
Logs generated in given path



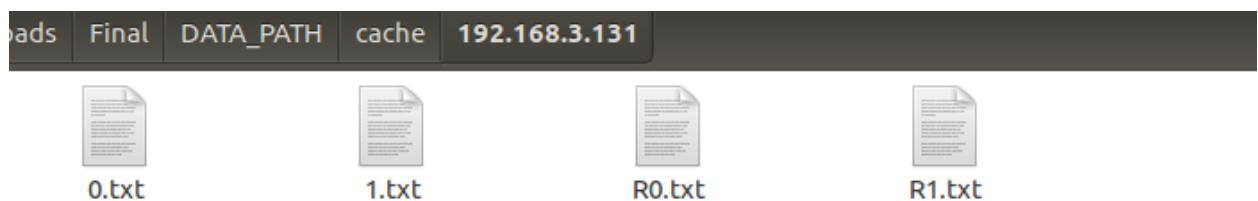
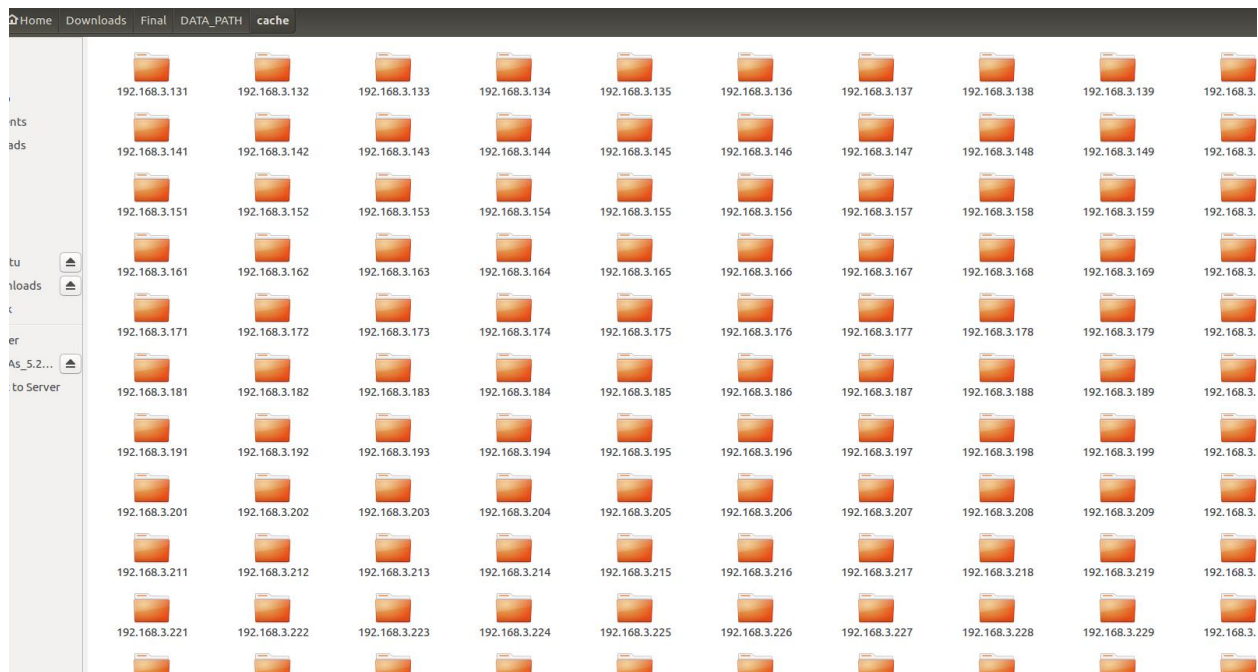
2)Run bash ./Query file with above data path to start query command line tool

```
Logs generatad in DATA_PATH directory
jay@jay-VirtualBox:~/Downloads/Final$ bash ./query.sh DATA_PATH
Initialization will take around 25 minutes. It will be creating cache folder containing result for each ipaddress and each cpuid
```

Wait for several minutes as it will be create cache for faster querying of logs.It may took longer time first time. It may take more than 25 minutes



Creates cahce folder inside it each has ip address folder and ip contains 4 files where R0 and R1 are final result files from which we will fetch data.



0 and 1 txt file has unixtime data and R0 and R1 has results of ipaddress with respective cupid as per given output requirements.

3) Query input in format: QUERY IP CPU\_ID start\_time end\_time and get results within one second.

Time\_start and time\_end should be specified in the format YYYY-MM-DD HH:MM where YYYY is a four digit year, MM is a two digit month (i.e., 01 to 12), DD is the day of the month (i.e., 01 to 31), HH is the hour of the day, and MM is the minute of an hour

```
jay@jay-VirtualBox:~/Downloads/Final$ bash ./query.sh DATA_PATH
Initialization will take around 25 minutes. It will be creating cache folder containing result for each ipaddress and each cpuid
>QUERY 192.168.1.12 0 2014-10-31 00:00 2014-10-31 00:05
CPU0 usage on 192.168.1.12:
(2014-10-31 00:00, 26%),(2014-10-31 00:01, 9%),(2014-10-31 00:02, 70%),(2014-10-31 00:03, 72%),(2014-10-31 00:04, 9%),(2014-10-31 00:05, 41%)
>QUERY 192.168.1.10 1 2014-10-31 00:00 2014-10-31 00:05
CPU1 usage on 192.168.1.10:
(2014-10-31 00:00, 45%),(2014-10-31 00:01, 28%),(2014-10-31 00:02, 68%),(2014-10-31 00:03, 26%),(2014-10-31 00:04, 41%),(2014-10-31 00:05, 68%)
>QUERY 192.168.1.10 1 2014-10-31 00:00 2014-10-31 02:00
CPU1 usage on 192.168.1.10:
(2014-10-31 00:00, 45%),(2014-10-31 00:01, 28%),(2014-10-31 00:02, 68%),(2014-10-31 00:03, 26%),(2014-10-31 00:04, 41%),(2014-10-31 00:05, 68%),(2014-10-31 00:06, 26%),(2014-10-31 00:07, 23%),(2014-10-31 00:08, 78%),(2014-10-31 00:09, 40%),(2014-10-31 00:10, 32%),(2014-10-31 00:11, 87%),(2014-10-31 00:12, 17%),(2014-10-31 00:13, 64%),(2014-10-31 00:14, 92%),(2014-10-31 00:15, 56%),(2014-10-31 00:16, 11%),(2014-10-31 00:17, 8%),(2014-10-31 00:18, 13%),(2014-10-31 00:19, 27%),(2014-10-31 00:20, 29%),(2014-10-31 00:21, 7%),(2014-10-31 00:22, 26%),(2014-10-31 00:23, 76%),(2014-10-31 00:24, 64%),(2014-10-31 00:25, 77%),(2014-10-31 00:26, 92%),(2014-10-31 00:27, 64%),(2014-10-31 00:28, 52%),(2014-10-31 00:29, 29%),(2014-10-31 00:30, 25%),(2014-10-31 00:31, 56%),(2014-10-31 00:32, 88%),(2014-10-31 00:33, 88%),(2014-10-31 00:34, 5%),(2014-10-31 00:35, 38%),(2014-10-31 00:36, 40%),(2014-10-31 00:37, 5%),(2014-10-31 00:38, 93%),(2014-10-31 00:39, 32%),(2014-10-31 00:40, 66%),(2014-10-31 00:41, 76%),(2014-10-31 00:42, 47%),(2014-10-31 00:43, 11%),(2014-10-31 00:44, 29%),(2014-10-31 00:45, 54%),(2014-10-31 00:46, 39%),(2014-10-31 00:47, 15%),(2014-10-31 00:48, 12%),(2014-10-31 00:49, 69%),(2014-10-31 00:50, 69%),(2014-10-31 00:51, 64%),(2014-10-31 00:52, 36%),(2014-10-31 00:53, 39%),(2014-10-31 00:54, 88%),(2014-10-31 00:55, 79%),(2014-10-31 00:56, 72%),(2014-10-31 00:57, 89%),(2014-10-31 00:58, 76%),(2014-10-31 00:59, 94%),(2014-10-31 01:00, 68%),(2014-10-31 01:01, 66%),(2014-10-31 01:02, 36%),(2014-10-31 01:03, 72%),(2014-10-31 01:04, 23%),(2014-10-31 01:05, 52%),(2014-10-31 01:06, 31%),(2014-10-31 01:07, 20%),(2014-10-31 01:08, 82%),(2014-10-31 01:09, 85%),(2014-10-31 01:10, 38%),(2014-10-31 01:11, 7%),(2014-10-31 01:12, 72%),(2014-10-31 01:13, 68%),(2014-10-31 01:14, 54%),(2014-10-31 01:15, 77%),(2014-10-31 01:16, 62%),(2014-10-31 01:17, 91%),(2014-10-31 01:18, 19%),(2014-10-31 01:19, 67%),(2014-10-31 01:20, 61%),(2014-10-31 01:21, 41%),(2014-10-31 01:22, 21%),(2014-10-31 01:23, 22%),(2014-10-31 01:24, 43%),(2014-10-31 01:25, 22%),(2014-10-31 01:26, 21%),(2014-10-31 01:27, 6%),(2014-10-31 01:28, 59%),(2014-10-31 01:29, 68%),(2014-10-31 01:30, 62%),(2014-10-31 01:31, 27%),(2014-10-31 01:32, 50%),(2014-10-31 01:33, 59%),(2014-10-31 01:34, 91%),(2014-10-31 01:35, 44%),(2014-10-31 01:36, 68%),(2014-10-31 01:37, 40%),(2014-10-31 01:38, 67%),(2014-10-31 01:39, 87%),(2014-10-31 01:40, 88%),(2014-10-31 01:41, 30%),(2014-10-31 01:42, 84%),(2014-10-31 01:43, 71%),(2014-10-31 01:44, 24%),(2014-10-31 01:45, 43%),(2014-10-31 01:46, 81%),(2014-10-31 01:47, 12%),(2014-10-31 01:48, 44%),(2014-10-31 01:49, 2%),(2014-10-31 01:50, 60%),(2014-10-31 01:51, 45%),(2014-10-31 01:52, 90%),(2014-10-31 01:53, 56%),(2014-10-31 01:54, 3%),(2014-10-31 01:55, 35%),(2014-10-31 01:56, 86%),(2014-10-31 01:57, 91%),(2014-10-31 01:58, 85%),(2014-10-31 01:59, 95%),(2014-10-31 02:00, 62%)
```

If start time is greater then end time it gives error in console to enter correct time

```
>QUERY 192.168.1.1 1 2014-10-31 00:10 2014-10-31 00:00
Please enter correct time. Type help to see command usage !
>
```

4) You can type **help** to know how to use tool

```
>help
COMMANDS are QUERY or EXIT only!!Please try again
Example- QUERY IP CPU_ID start_time end_time
IP in the ranges 192.168.1.1 to 1.255, 192.168.2.1 to 2.255, 192.168.3.1 to 3.255, 192.168.4.1 to 4.235
CPU_ID is 0 or 1
start_time and end_time are in YYYY-MM-DD HH:MM and start_time < end_time
DATA available only for 24 hrs of CPU USAGE for the day 2014-10-31
>
```

5) Finally **Exit** command to exit tool.

```
>exit

jay@jay-VirtualBox:~/Downloads/Final$
```

If you are again running the tool again in same path you need to delete cache folder or can comment caching code first 40 lines