USER MANUAL with Example Screenshots

Keep all the source files and scripts in a directory. Provide Execute permission to both the shell scripts Snapshot attached

```
[sxs2262@omega Quantil]$ ls -ltr
total 16
-rw-r--r-- 1 sxs2262 students  569 Jul 14 19:23 generate.sh
-rw-r--r-- 1 sxs2262 students 3184 Jul 14 19:41 query.sh
-rw-r--r-- 1 sxs2262 students 3409 Jul 14 21:49 monitoring_system.cpp
-rw-r--r-- 1 sxs2262 students  644 Jul 14 21:56 monitoring_system.h
[sxs2262@omega Quantil]$ chmod 777 generate.sh
[sxs2262@omega Quantil]$ chmod 777 query.sh
[sxs2262@omega Quantil]$
```

Execute the generate.sh script with output directory path.

Snapshot example with directory name DATA_PATH.
Code gets compiled, Executed and output directory and logs are generated

```
[sxs2262@omega Quantil]$ ./generate.sh DATA_PATH
Compiling source code
Compilation successful
Generating Logs!!Please wait
DONE
Logs generated in DATA_PATH directory
[sxs2262@omega Quantil]$ ls -ltr
total 36
-rwxrwxrwx 1 sxs2262 students  3184 Jul 14 19:41 query.sh
-rw-r--r-- 1 sxs2262 students   644 Jul 14 21:56 monitoring_system.h
-rwxrwxrwx 1 sxs2262 students   569 Jul 14 22:29 generate.sh
-rw-r--r-- 1 sxs2262 students  3410 Jul 14 22:30 monitoring_system.cpp
drwxr-xr-x 2 sxs2262 students  4096 Jul 14 22:30 DATA_PATH
-rwxr-xr-x 1 sxs2262 students 13163 Jul 14 22:30 a.out
[sxs2262@omega Quantil]$
```

LOG is generate inside newly created directory as shown below

```
[sxs2262@omega DATA_PATH]$ ls
log1.txt
[sxs2262@omega DATA_PATH]$
```

Now execute query.sh script as shown below

Query the CPU usage for a particular CPU with range of time of stamps.

Snapshot for Positive Case:

```
[sxs2262@omega DATA_PATH]$ cd ..
[sxs2262@omega Quantil]$ ./query.sh DATA_PATH
>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 00:00,85%),(2014-10-31 00:01,86%),(2014-10-31 00:02,99%),(2014-10-31 00:03,21%),(2014-10-31 00:04,100%),
>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 00:00,86%),(2014-10-31 00:01,59%),(2014-10-31 00:02,17%),(2014-10-31 00:03,34%),(2014-10-31 00:04,75%),
>EXIT

[sxs2262@omega Quantil]$
```

Snapshot for improper cases

1) **If executed without giving directory name**

```
[sxs2262@omega Quantil]$ ./query.sh
Please provide proper command.Example-  ./query.sh DATA_PATH
[sxs2262@omega Quantil]$
```

2) **If executed without proper parameters. Below snap shot shows no destination timestamp**

```
[sxs2262@omega Quantil]$ ./query.sh DATA_PATH/
>QUERY 192.168.1.10 1 2014-10-31 00:00
Please enter valid command.Type help to see command usage !
>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
>
```

3) If all the query fields are provided and invalid ip address is given

```
[sxs2262@omega Quantil]$ ./query.sh DATA_PATH
>QUERY 193.168.1.1 1 2014-10-31 00:00 2014-10-31 00:05
No data found. Possible reasons could be either data not found for the given input or Invalid command.
Type Help to see the commands and format of query
No data found. Possible reasons could be either data not found for the given input or Invalid input or Invalid Command.
Type Help to see the commands and format of query

>
```