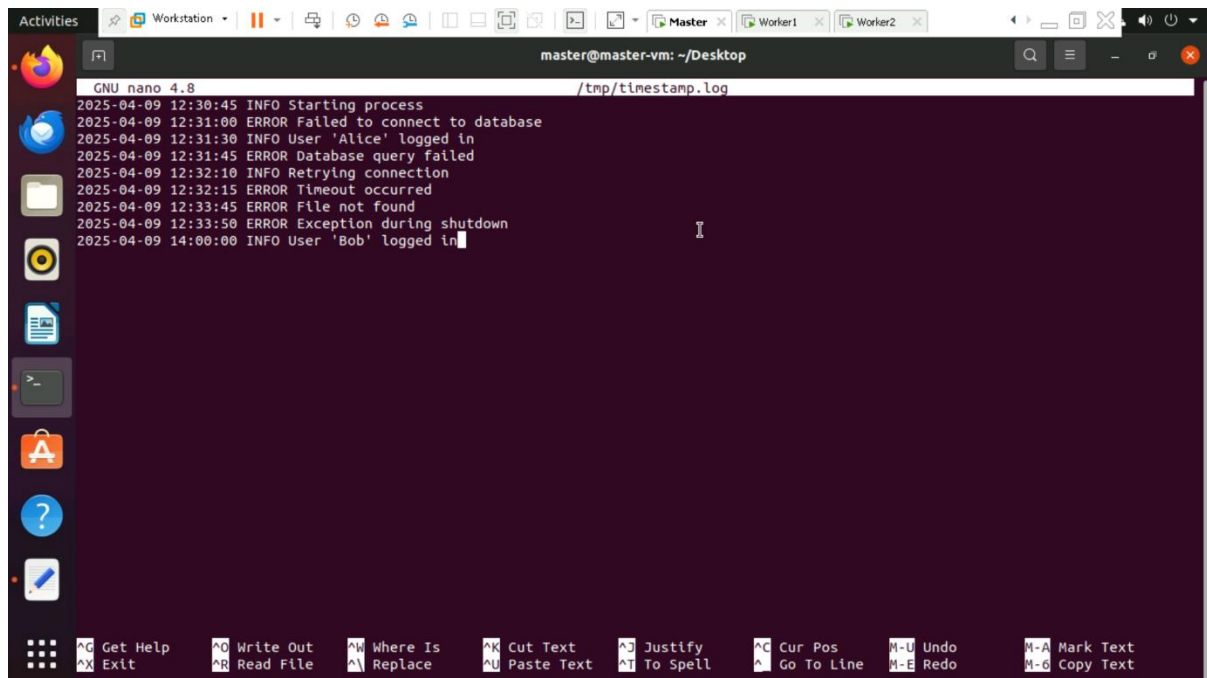


Q. Python scripting to parse log files and extract the errors

[devops-commontrack-mocktest/question3 at main · KPkm25/devops-commontrack-mocktest](#)

1. Create a sample error file using the following command

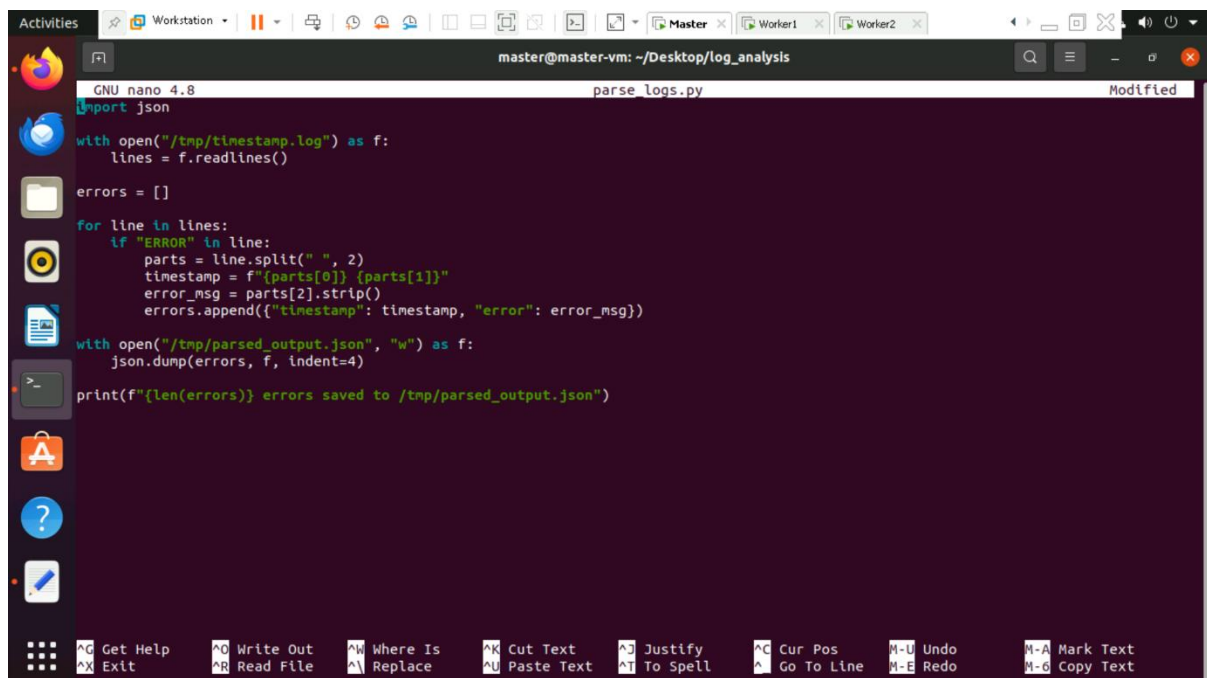
Nano tmp/timestamp.log



```
GNU nano 4.8 /tmp/timestamp.log
2025-04-09 12:30:45 INFO Starting process
2025-04-09 12:31:00 ERROR Failed to connect to database
2025-04-09 12:31:30 INFO User 'Alice' logged in
2025-04-09 12:31:45 ERROR Database query failed
2025-04-09 12:32:10 INFO Retrying connection
2025-04-09 12:32:15 ERROR Timeout occurred
2025-04-09 12:33:45 ERROR File not found
2025-04-09 12:33:50 ERROR Exception during shutdown
2025-04-09 14:00:00 INFO User 'Bob' logged in
```

2. Create a python script to parse through the log files and check for errors

Nano parse_logs.py



```
GNU nano 4.8 parse_logs.py
import json

with open("/tmp/timestamp.log") as f:
    lines = f.readlines()

errors = []

for line in lines:
    if "ERROR" in line:
        parts = line.split(" ", 2)
        timestamp = f"{parts[0]} {parts[1]}"
        error_msg = parts[2].strip()
        errors.append({"timestamp": timestamp, "error": error_msg})

with open("/tmp/parsed_output.json", "w") as f:
    json.dump(errors, f, indent=4)

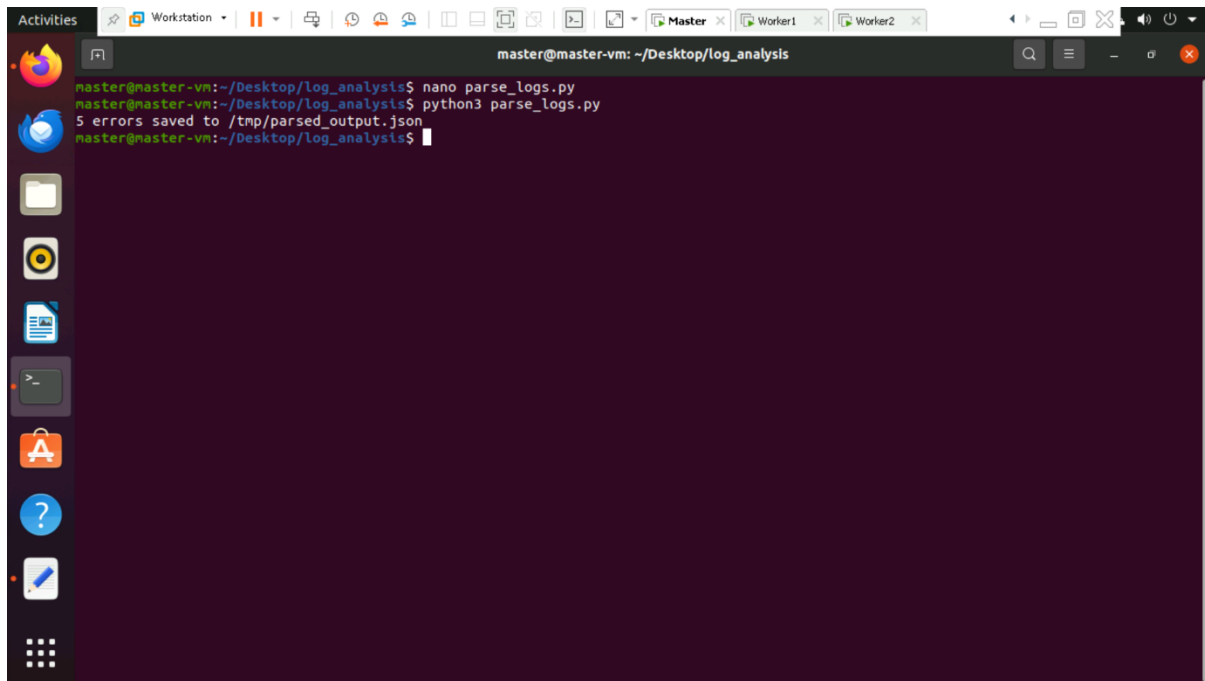
print(f"{len(errors)} errors saved to /tmp/parsed_output.json")
```

This script parses the timestamp.log file and looks for “ERROR”. Once found, the line containing “ERROR” is split into three parts according to whitespaces. The date and time part are

appended to create the timestamp while the 3rd part is used as the error message. The timestamp and the error message are appended to an empty array 'errors[]' which is then written into the output file /tmp/parsed_output.json

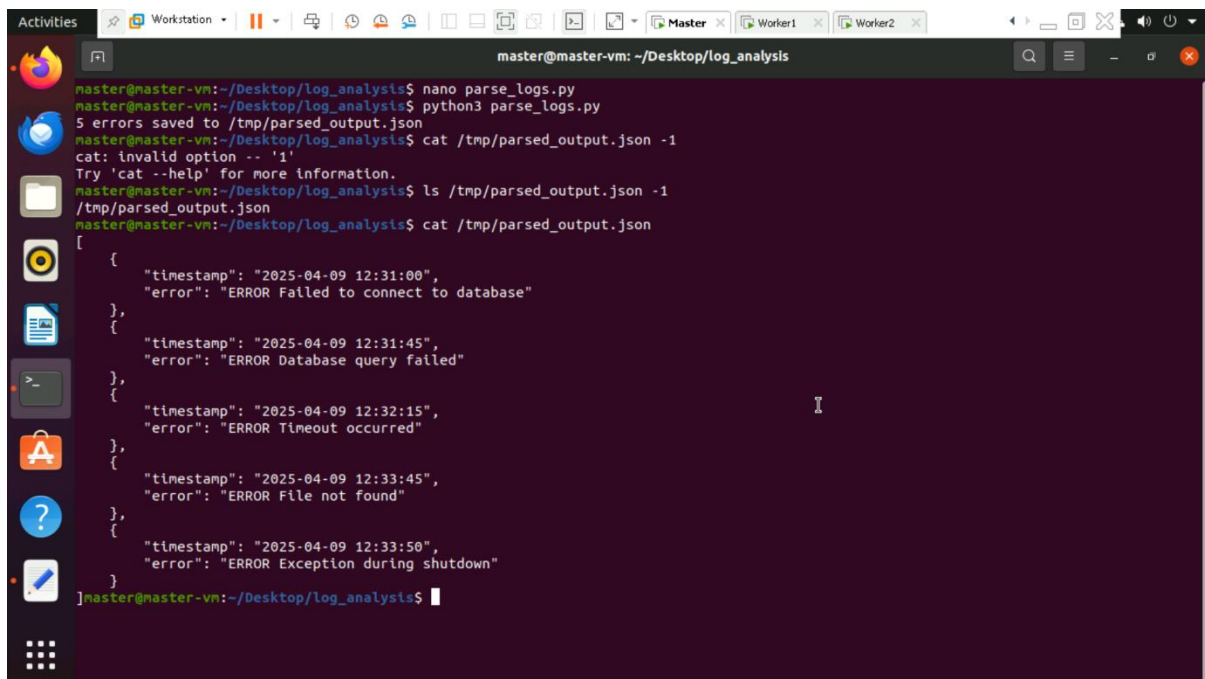
3. Execute the python script using the following command

Python3 parse_logs.py



```
master@master-vm: ~/Desktop/log_analysis
master@master-vm:~/Desktop/log_analysis$ nano parse_logs.py
master@master-vm:~/Desktop/log_analysis$ python3 parse_logs.py
5 errors saved to /tmp/parsed_output.json
master@master-vm:~/Desktop/log_analysis$
```

4. /tmp/parsed_output.json file is created with all the errors



```
master@master-vm:~/Desktop/log_analysis$ nano parse_logs.py
master@master-vm:~/Desktop/log_analysis$ python3 parse_logs.py
5 errors saved to /tmp/parsed_output.json
master@master-vm:~/Desktop/log_analysis$ cat /tmp/parsed_output.json -1
cat: invalid option -- '1'
Try 'cat --help' for more information.
master@master-vm:~/Desktop/log_analysis$ ls /tmp/parsed_output.json -1
/tmp/parsed_output.json
master@master-vm:~/Desktop/log_analysis$ cat /tmp/parsed_output.json
[
  {
    "timestamp": "2025-04-09 12:31:00",
    "error": "ERROR Failed to connect to database"
  },
  {
    "timestamp": "2025-04-09 12:31:45",
    "error": "ERROR Database query failed"
  },
  {
    "timestamp": "2025-04-09 12:32:15",
    "error": "ERROR Timeout occurred"
  },
  {
    "timestamp": "2025-04-09 12:33:45",
    "error": "ERROR File not found"
  },
  {
    "timestamp": "2025-04-09 12:33:50",
    "error": "ERROR Exception during shutdown"
  }
]
master@master-vm:~/Desktop/log_analysis$
```

Activities Workstation Master Worker1 Worker2

master@master-vm: ~/Desktop/log_analysis

GNU nano 4.8 /tmp/parsed_output.json

```
{
  "timestamp": "2025-04-09 12:31:00",
  "error": "ERROR Failed to connect to database"
},
{
  "timestamp": "2025-04-09 12:31:45",
  "error": "ERROR Database query failed"
},
{
  "timestamp": "2025-04-09 12:32:15",
  "error": "ERROR Timeout occurred"
},
{
  "timestamp": "2025-04-09 12:33:45",
  "error": "ERROR File not found"
},
{
  "timestamp": "2025-04-09 12:33:50",
  "error": "ERROR Exception during shutdown"
}
```

Read 22 lines

Get Help	Write Out	Where Is	Cut Text	Justify	Cur Pos	Undo	Mark Text
Exit	Read File	Replace	Paste Text	To Spell	Go To Line	Redo	Copy Text