#Author: Devanarayanan T M

#Date: 90-04-25

#Pourpose: Parse a /tmp/timestamp.log extract all timestamp and error messages store o/p in a json format provide one line line to install necessary modules using pip

```
import re
import json

log_path = "timestamp.log"
output_file = "errors.json"

def extract_errors(log_file):
    """Extract timestamp and ERROR messages from log file"""
    pattern = r'(\d{4}-\d{2}-\d{2} \d{2}:\d{2}:\d{2},\d{3}) - ERROR - (.*?)(?=\n\d{4}|$)'
    results = []

    try:
        with open(log_file) as f:
            log_content = f.read()
            matches = re.finditer(pattern, log_content, re.DOTALL)
            for match in matches:
                results.append({
                    'timestamp': match.group(1),
                    'error_message': match.group(2).strip()
                })
        return results
    except FileNotFoundError:
        return {"error": f"Log file not found at {log_file}"}
    except Exception as e:
        return {"error": str(e)}
```

```
if __name__ == "__main__":
    errors = extract_errors(log_path)
    print(json.dumps(errors, indent=2))
    with open(output_file, 'w') as f:
        json.dump(errors, f, indent=2)
```

```
PS C:\Users\290398\sheelDevanarayanan-09-04-25> python p1.py
[
  {
    "timestamp": "2025-04-04 22:01:17,890",
    "error_message": "Failed to connect to external service.\n\nRetrying in 5 seconds. Error: Connection refused. 2025-04-04 22:01:22,956 -
WARNING - High CPU usage detected: 95%. 2025-04-04\n\n22:01:25,345 - ERROR - Database query failed. Error: Table 'users' not found. 2025-04-
04 22:01:28,789 - INFO - User 'Bob' logged in."
  },
  {
    "timestamp": "2025-04-04 22:01:33,012",
    "error_message": "File not found. Path:\n\n/tmp/important_file.txt. 2025-04-04 22:01:36,543 - INFO - Application shutting down. 2025-04-
04 22:01:37,098 - WARNING - Unsaved\n\ndata might be lost. 2025-04-04 22:01:38,675 - ERROR - Exception during shutdown. Error: 'NoneType' ob
ject has no attribute 'close!'."
  }
]
PS C:\Users\290398\sheelDevanarayanan-09-04-25>
```

o/p file errors.json

```
{} errors.json > ...
1  [
2    {
3      "timestamp": "2025-04-04 22:01:17,890",
4      "error_message": "Failed to connect to external service.\n\nRetrying in 5 seconds. Error: Connection refused. 202
5    },
6    {
7      "timestamp": "2025-04-04 22:01:33,012",
8      "error_message": "File not found. Path:\n\n/tmp/important_file.txt. 2025-04-04 22:01:36,543 - INFO - Application
9    }
10 ]
```