OWAIS DHUKKA - 13

```python
import re

def extract_critical_errors(log_data: str) -> list[tuple]:

    pattern = r'\[(\d{4}-\d{2}-\d{2} \d{2}:\d{2}:\d{2})\] \[ERROR\] \
[([\w_]+)\] (.*?(?:\d{1,3}\.){3}\d{1,3}.*?0x[0-9A-Fa-f]{8}.*)'

    matches = re.findall(pattern, log_data)

    return matches
def get_user_input():
    print("Enter log entries line by line (type 'END' to stop):")

    logs = []
    while True:
        log_entry = input()
        if log_entry.strip().upper() == "END":
            break
        logs.append(log_entry)

    log_data = "\n".join(logs)

    print("\nInputs:")
    for log in logs:
        print(log)

    result = extract_critical_errors(log_data)

    print("\nOutput:")
    if result:
        for item in result:
            print(item)
    else:
        print("No critical errors found.")

get_user_input()
```

```
Enter log entries line by line (type 'END' to stop):
[2025-02-10 14:23:01] [INFO] [Auth_Module] User login successful.
[2025-02-10 15:45:32] [ERROR] [Net_Module] Connection timeout from
192.168.1.10. Error Code: 0xAB12CD34
[2025-02-10 16:01:10] [WARN] [Disk_Module] Low disk space warning.
[2025-02-10 17:12:05] [ERROR] [Security_Module] Unauthorized access
detected from 10.0.0.5. Error Code: 0xDEADBEEF
END

Inputs:
```

```
[2025-02-10 14:23:01] [INFO] [Auth_Module] User login successful.
[2025-02-10 15:45:32] [ERROR] [Net_Module] Connection timeout from
192.168.1.10. Error Code: 0xAB12CD34
[2025-02-10 16:01:10] [WARN] [Disk_Module] Low disk space warning.
[2025-02-10 17:12:05] [ERROR] [Security_Module] Unauthorized access
detected from 10.0.0.5. Error Code: 0xDEADBEEF

Output:
('2025-02-10 15:45:32', 'Net_Module', 'Connection timeout from
192.168.1.10. Error Code: 0xAB12CD34')
('2025-02-10 17:12:05', 'Security_Module', 'Unauthorized access
detected from 10.0.0.5. Error Code: 0xDEADBEEF')
```