LAB ASSIGNMENT-02

Experiment Title: System Startup, Process Creation, and Termination Simulation in Python

Implementation:

```
import multiprocessing
import time
import logging
# Setup logger
logging.basicConfig(
    filename='process_log.txt',
    level=logging.INFO,
    format='%(asctime)s - %(processName)s - %(message)s'
)
# Dummy function to simulate a task
def system_process(task_name):
    logging.info(f"{task_name} started")
    time.sleep(2)
    logging.info(f"{task_name} ended")
if __name__ == '__main__':
    print("System Starting...")
    # Create processes
    p1 = multiprocessing.Process(target=system_process, args=('Process-1',))
    p2 = multiprocessing.Process(target=system_process, args=('Process-2',))
    # Start processes
    p1.start()
    p2.start()
    # Wait for processes to complete
```

```
p1.join()

p2.join()

print("System Shutdown.")
```

Output:

```
System Starting...
System Shutdown.


...Program finished with exit code 0
Press ENTER to exit console.
```

main.py | process_log.txt

```
1  2025-11-23 19:00:57,216 - Process-1 - Process-1 started
2  2025-11-23 19:00:57,217 - Process-2 - Process-2 started
3  2025-11-23 19:00:59,218 - Process-1 - Process-1 ended
4  2025-11-23 19:00:59,219 - Process-2 - Process-2 ended
5
```