# KR MANGALAM UNIVERSITY

## SOHNA ROAD, GURUGRAM


## OPERATING SYSTEM LAB FILE

## COURSE CODE-ENCS351

**Submitted by**

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**Section: 6/F**

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**Submitted To**

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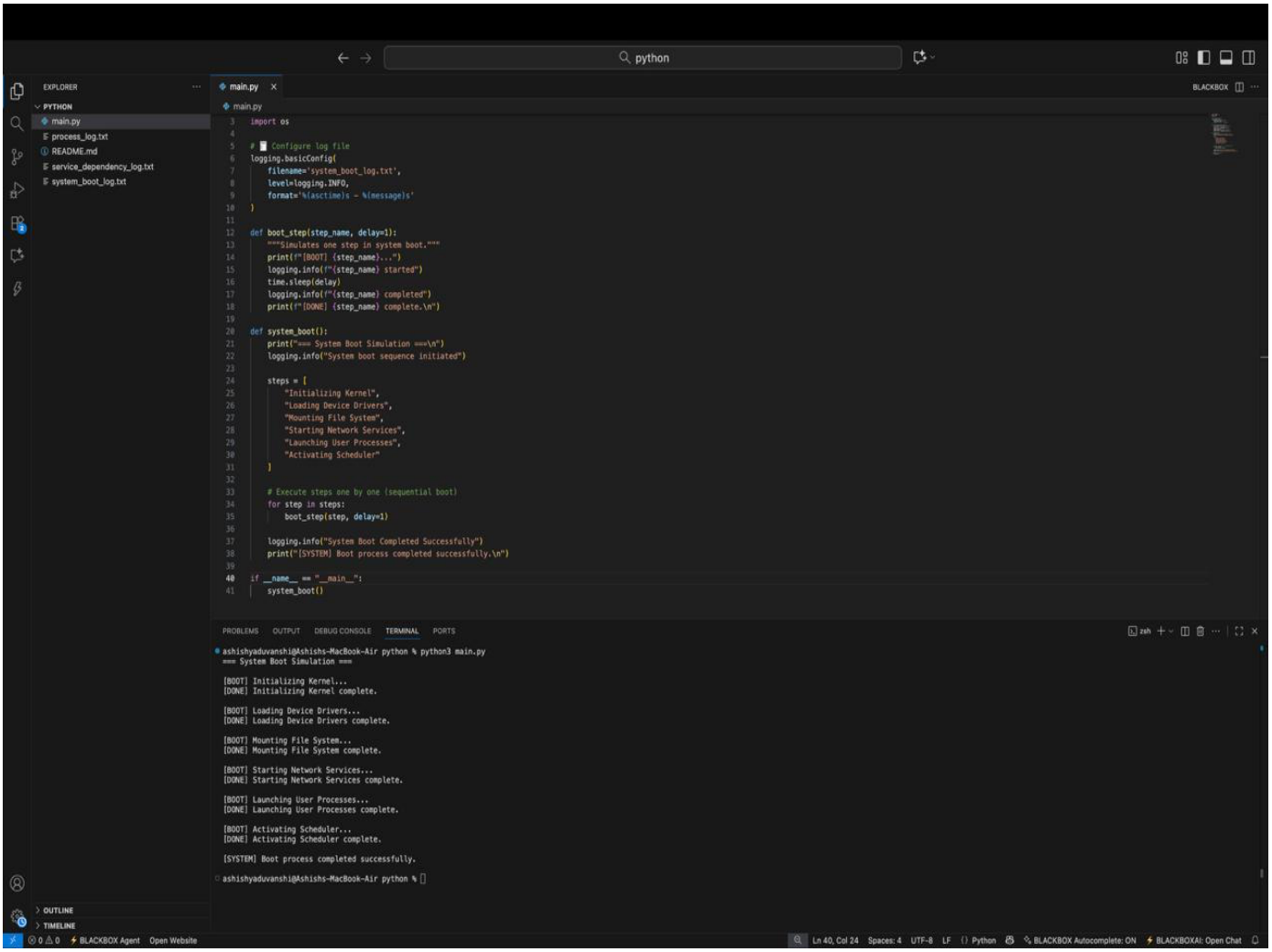
Sub-Task 1: Initialize the logging configuration

**Objective:** Set up the logging system to log messages with timestamps and process names.

```
import logging

# Setup logger

logging.basicConfig(

    filename='process_log.txt',

    level=logging.INFO,

    format='%(asctime)s - %(processName)s - %(message)s'

)
```



Sub-Task 2: Define a function that simulates a process task

**Objective:** Write a function that mimics the work of a system process.

import time

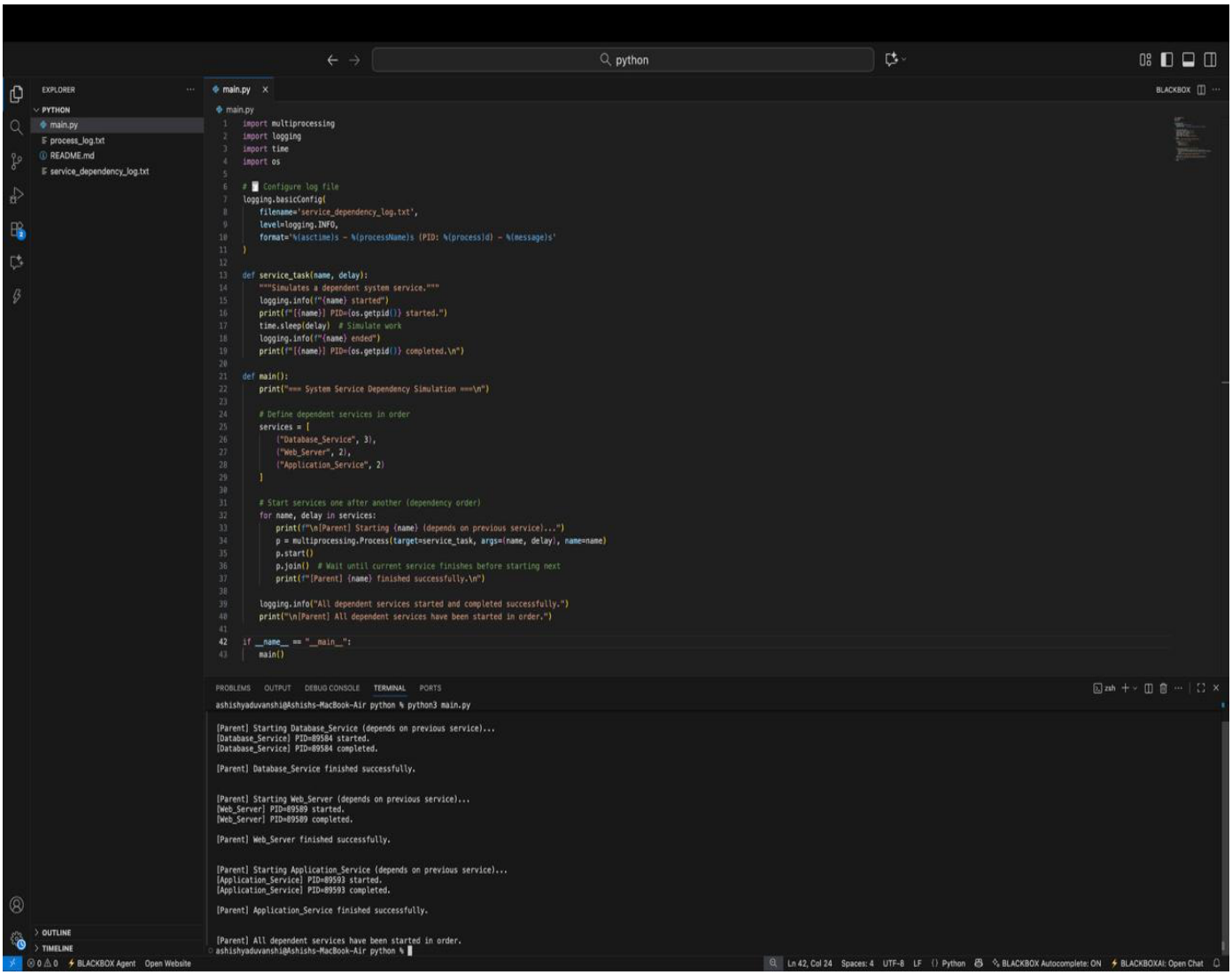
# Dummy function to simulate a task

def system_process(task_name):

    logging.info(f"{task_name} started")

    time.sleep(2)  # Simulate task delay

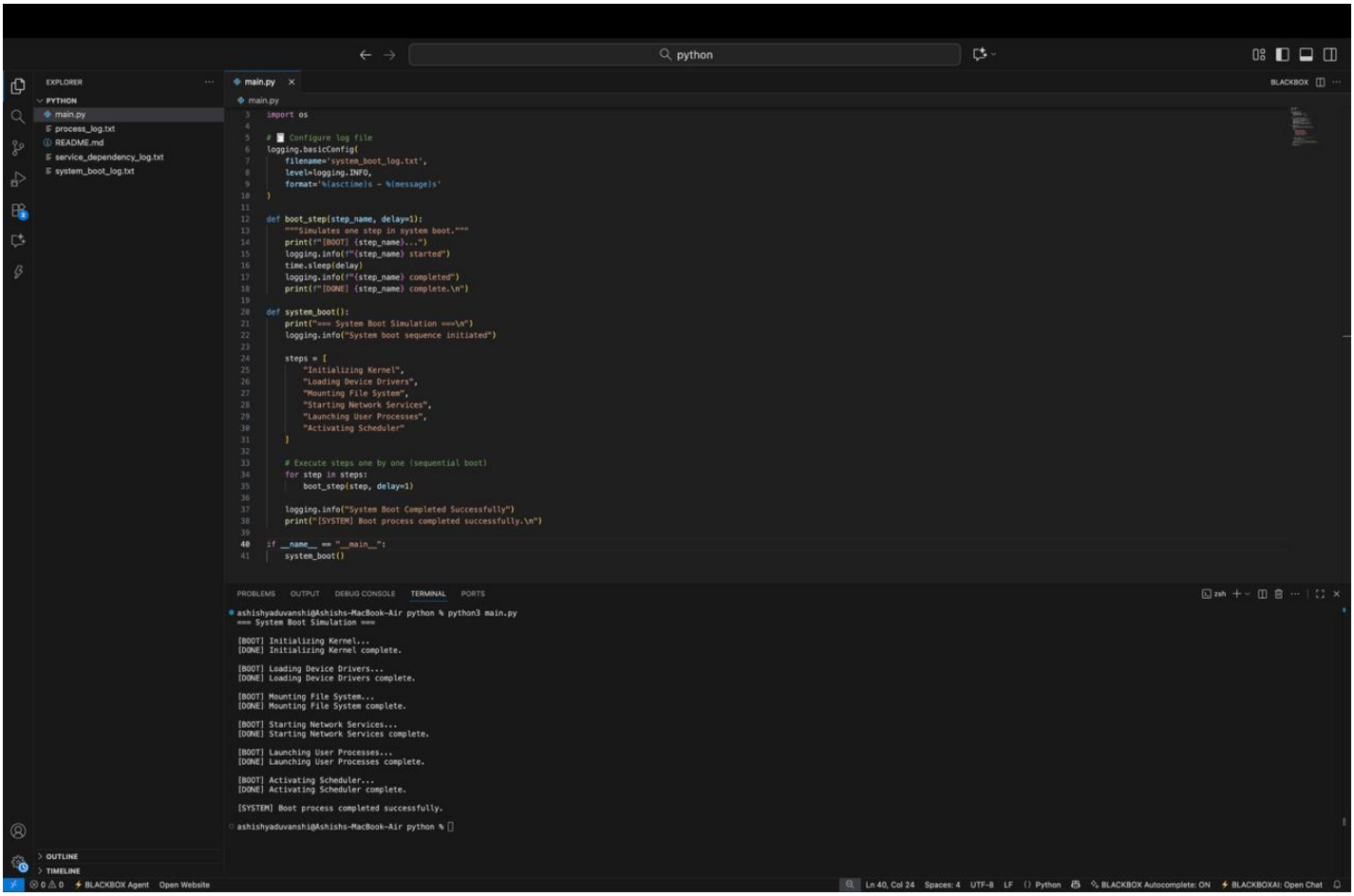
    logging.info(f"{task_name} ended")



Sub-Task 3: Create at least two processes and start them concurrently

**Objective:** Use the multiprocessing module to initiate parallel tasks.

```
import multiprocessing

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()
```



Sub-Task 4: Ensure proper termination and verify logs

**Objective:** Wait for processes to complete and confirm the shutdown.

```
# Wait for processes to complete

p1.join()

p2.join()

print("System Shutdown.")
```