11.

```
"""
Write a program on threading using python.
QAYAM 231P038/ 02
"""
print("****")
print("Threading using Python")
print("Mohd Qayam")
print("****")
# Importing required modules
from threading import Thread
from time import sleep
class Theatre:
    # Constructor
    def __init__(self, message):
        self.message = message
    # Method to simulate movie ticket and seat allocation
    def movieshow(self):
        for i in range(1, 6):
            print(self.message, ":", i)
            sleep(0.5)  # Simulating delay
# Creating two instances of Theatre class
obj1 = Theatre("Cut Ticket")
obj2 = Theatre("Show Chair")
# Creating two threads to run movieshow()
t1 = Thread(target=obj1.movieshow)
t2 = Thread(target=obj2.movieshow)
# Starting the threads
t1.start()
t2.start()
# Ensuring both threads finish before the program exits
t1.join()
```

```
t2.join()
print("Both threads have finished execution!")
```

Output:

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

****
Threading using Python
Mohd Qayam
****
Cut Ticket Show Chair : 1
: 1
Cut Ticket : 2
Show Chair : 2
Cut Ticket : 3
Show Chair : 3
Cut Ticket : 4
Show Chair : 4
Cut Ticket : 5
Show Chair : 5
Both threads have finished execution!
```

11a.

```
"""
Write a program for single thread.
QAYAM 231P038/ 02
"""
import threading
import time
# Function to print numbers with a delay
def print_numbers():
    for i in range(1, 6):
        print(f"Number: {i}")
        time.sleep(1)  # Delay of 1 second
# Creating a single thread
```

```
t1 = threading.Thread(target=print_numbers)


print("Starting Single Thread Execution...")
t1.start()
t1.join()
print("Single Thread Execution Completed!")
```

OUTPUT:

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

Starting Single Thread Execution...
Number: 1
Number: 2
Number: 3
Number: 4
Number: 5
Single Thread Execution Completed!
```

11b.

```
"""
Write a program for multiple thread.
QAYAM 231P038/ 02
"""
import threading
import time
# Function to print numbers
def print_numbers():
    for i in range(1, 6):
        print(f"Thread 1 - Number: {i}")
        time.sleep(1)  # Delay of 1 second
# Function to print alphabets
def print_alphabets():
    for ch in 'ABCDE':
        print(f"Thread 2 - Alphabet: {ch}")
        time.sleep(1)  # Delay of 1 second
# Creating multiple threads
t1 = threading.Thread(target=print_numbers)
```

```
t2 = threading.Thread(target=print_alphabets)
print("Starting Multiple Threads Execution...")
# Starting the threads
t1.start()
t2.start()
# Ensuring both threads complete execution before program exits
t1.join()
t2.join()
print("Multiple Threads Execution Completed!")
```

Output:

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

Starting Multiple Threads Execution...
Thread 1 - Number: 1
Thread 2 - Alphabet: A
Thread 1 - Number: 2
Thread 2 - Alphabet: B
Thread 2 - Alphabet: CThread 1 - Number: 3

Thread 2 - Alphabet: D
Thread 1 - Number: 4
Thread 2 - Alphabet: EThread 1 - Number: 5

Multiple Threads Execution Completed!
```