MULTITHREADING AND SYNCHRONIZATION

1. Write a Java program to simulate downloading three files using three separate threads. Each thread should display the download progress from 0% to 100% and pause for a short period between each progress update.

2. Write a Java program to search for a given number in an array using multiple threads. Divide the array into equal portions and assign each portion to a separate thread. Each thread should search its portion and report whether the number is found.

3. Write a Java program for the following scenario.

   A railway reservation system maintains a limited number of seats for a train. Multiple customers may try to book seats simultaneously. If two or more customers attempt to book the same available seat at the same time, only one customer should be allowed to book it. Use multithreading and synchronization to ensure that the same seat is not booked by multiple customers.