# LAB 6 (EXAMPLES):

## CODE # 01:

```
package Lab6;
public class MovieBookAppp {
    public static void main(String[] args) {
        TotalEarnings te = new TotalEarnings();
        te.start();
        System.out.println("Total earnings: " + te.total + " Rs");
    }
}
```

```
package Lab6;
class TotalEarnings extends Thread {
    int total = 0;

    public void run() {
        for (int i = 1; i <= 10; i++) {
            total += 100;
        }
    }
}
```

## OUTPUT:

```
Total earnings: 0 Rs
```

## CODE # 02:

```
package Lab6Task2;

class TotalEarnings extends Thread {
    int total = 0;

    public void run() {
        synchronized (this) {
        // Simulate earnings calculation
        for (int i = 1; i <= 10; i++) {
            total= total + 100;
        }

            notify(); // Notify the waiting thread (main thread)
        }
    }
}
```

```
package Lab6Task2;
public class movie {
    public static void main(String[] args) {
        TotalEarnings te = new TotalEarnings();
        te.start();

        synchronized(te)
        {
            try {
                te.wait();
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
            System.out.println("Total earnings: " + te.total + " Rs");
        }
    }
}
```

**OUTPUT:**

```
Total earnings: 1000 Rs
```

**CODE # 03:**

```
package synchronization;
class synch {
      int total_seats=10;

      void  busTicket(int seats) {
          if(total_seats>=seats)
          {
             System.out.println(seats+ "  Seats booked successfully");
             total_seats=total_seats-seats;
             System.out.println("seats left    " +total_seats);

          }
          else {
              System.out.println("Sorry Seats cannot be booked....!!");
              System.out.println("seats left "+total_seats);
          }

      }

    }
```

```
package synchronization;
    class BusTicketApp extends Thread
    {
    static  synch  b;
    int seats;
    public void run()

    {

    b. busTicket(seats);

    }

    public static void main(String args[])
      {
        b =new synch();

         BusTicketApp t1 =new  BusTicketApp();
        t1.seats=7;
        t1.start();


         BusTicketApp t2 =new  BusTicketApp();
        t2.seats=7;
        t2.start();
       }
    }
```

## OUTPUT:

```
7  Seats booked successfully
seats left   3
7  Seats booked successfully
seats left   -4
```

## CODE # 04:

```
package synchronization;
class synch {
    int total_seats = 10;

    synchronized void busTicket(int seats) {
        if (total_seats >= seats) {
            System.out.println(seats + "  Seats booked successfully");
            total_seats = total_seats - seats;
            System.out.println("Seats left   " + total_seats);
        } else {
            System.out.println("Sorry, seats cannot be booked....!!");
            System.out.println("Seats left " + total_seats);
        }
    }
}
```

```
package synchronization;
class BusTicketApp extends Thread {
    static synch b;
    int seats;

    public void run() {
        b.busTicket(seats);
    }

    public static void main(String args[]) {
        b = new synch();

        BusTicketApp t1 = new BusTicketApp();
        t1.seats = 7;
        t1.start();

        BusTicketApp t2 = new BusTicketApp();
        t2.seats = 7;
        t2.start();
    }
}
```

**OUTPUT:**

```
7  Seats booked successfully
Seats left   3
Sorry, seats cannot be booked....!!
Seats left 3
```

**CODE # 05:**

```
package synchronization;
class synch {
    int total_seats = 10;

    void busTicket(int seats) {
        synchronized (this) {
            if (total_seats >= seats) {
                System.out.println(seats + "  Seats booked successfully");
                total_seats = total_seats - seats;
                System.out.println("Seats left   " + total_seats);
            } else {
                System.out.println("Sorry, seats cannot be booked....!!");
                System.out.println("Seats left " + total_seats);
            }
        }
    }
}
```

```java
package synchronization;
class BusTicketApp extends Thread {
    static synch b;
    int seats;

    public void run() {
        b.busTicket(seats);
    }

    public static void main(String args[]) {
        b = new synch();

        BusTicketApp t1 = new BusTicketApp();
        t1.seats = 7;
        t1.start();

        BusTicketApp t2 = new BusTicketApp();
        t2.seats = 7;
        t2.start();
    }
}
```

**OUTPUT:**

```
7  Seats booked successfully
Seats left   3
Sorry, seats cannot be booked....!!
Seats left 3
```