



Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

AY: 2024-25

Class:	SE	Semester:	III
Course Code:		Course Name:	OOPJ

Name of Student:	Aman Mehtar
Roll No. :	32
Assignment No.:	05
Title of Assignment:	
Date of Submission:	
Date of Correction:	

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Completeness	5	5
Demonstrated Knowledge	3	3
Legibility	2	2
Total	10	16

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Completeness	5	3-4	1-2
Demonstrated Knowledge	3	2	1
Legibility	2	1	0

Checked by

Name of Faculty : Ms. Neha Raut
Signature :
Date :

(Q1) A user wanted to book the last available ticket of class Movie. Create two threads of the object of this class, created at two counters and book the ticket for one of the customers and book the ticket for one of the customer while displaying "House full" for the other customer.

Ans:- Program :-

```
import java.io.*;
import java.util.*;

class Movie {
    private boolean availableTicket = true;

    public synchronized void bookTicket (String customerName) {
        if (availableTicket) {
            System.out.println (customerName + " Successfully
            booked the last ticket ");
            availableTicket = false;
        }
        else {
            System.out.println (" Housefull for " + customerName);
        }
    }
}

class TicketCounter extends Thread
{
    private Movie movie;
```



```
private String customerName;
```

```
public TicketCounter (Movie movie, String customerName) {  
    this.movie = movie;  
    this.customerName = customerName;  
}
```

```
@Override
```

```
public void run () {  
    movie.bookTicket (customerName);  
}
```

```
}
```

```
public class MovieBookingApp {  
    public static void main (String [] args) {  
        Movie movie = new Movie();  
        TicketCounter counter1 = new TicketCounter (movie,  
            "Customer1");  
        TicketCounter counter2 = new TicketCounter (movie, ("  
            "Customer2");
```

```
        counter1.start();  
        counter2.start();
```

```
    }
```

```
}
```

Output :- Customer 1 successfully booked the last ticket
Housefull for Customer2

Q2) Implement a program to perform division of two nos accepted from user. Handle the ID Exception, Number format exception and also handle the divide by zero exception using try-catch block.

Ans:- Program :-

```
import java.io.*;
```

```
public class DivisionProgram {
```

```
    public static void main(String[] args) {
```

```
        BufferedReader reader = new BufferedReader(  
            new InputStreamReader(System.in));
```

```
        int num1 = 0, num2 = 0;
```

```
        try {
```

```
            System.out.print("Enter the first number : ");
```

```
            try {
```

```
                num1 = Integer.parseInt(reader.readLine());
```

```
                // May throw Number format exception
```

```
            } catch (NumberFormatException e) {
```

```
                System.out.println("Invalid input for the first  
                number. Please enter a valid Number");
```

```
                return;
```

```
            }
```

```
            System.out.print("Enter the second number : ");
```

```
            try {
```

```
                num2 = Integer.parseInt(reader.readLine());
```

```
            }
```

```
        } catch (NumberFormatException e) {
```

```
            System.out.println("Invalid input for the second  
            number. Please enter a valid Number");
```



```

        return;
    }
    try {
        int result = num1/num2;
        // May throw Arithmetic Exception (division by 0)
        System.out.println("Result : " + result);
    }
    catch (ArithmeticException e) {
        System.out.println("Error!! Division by zero is  
not allowed");
    }
    catch (IOException e) {
        System.out.println("An input/output error occurred"  
+ e.getMessage());
    }
}
}
}

```

Output :-

Enter the first number: 10

Enter the second number: 0

Error!! Division by zero is not allowed.