DON BOSCO INSTITUTE OF TECHNOLOGY

OBJECT ORIENTED PROGRAMMING METHODOLOGY

MINI PROJECT REPORT

On

"BookYourShow"

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Mini Project Name: BookYourShow

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SUBJECT: OBJECT ORIENTED PROGRAMMING

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MINI-PROJECT (BookYourShow)

INTRODUCTION

The program BookYourShow is a Graphical User Interface based program that stimulates a real-time movie booking System interface to the end User.

WHY THIS PROJECT

This project provided us an opportunity to implement various Object Oriented Concepts learned throughout the course of Introduction to Object Oriented Programming Methodology.

Also, a graphical based interface is how an end user would like to interact with a program.

This project allowed us to demonstrate how a real-world application on Booking System would work.

ADT SPECIFICATIONS

This GUI Based Project helps an end user to book Movie tickets.

The user selects options like language, movie, show time, date, Theater and the seats.

Finally, there is a backend calculation happening on the basis of the above factors selected by the user, which finally helps in displaying the details and the final amount.

PROGRAM SOURCE CODE:

(Note that this project is made using netbeans and hence the source code is as follows)

Default package:

Bahubali.java

```
import variables.*;
public class Bahubali extends javax.swing.JFrame
{
   public Bahubali()
   {
      initComponents();
   }

   @SuppressWarnings("unchecked")
//generated code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
      MovieName mn=new MovieName("BAHUBALI : THE CONCLUSION");
      this.dispose();
      new DateTime().setVisible(true);
```

```
    }

    public static void main(String args[]) {
//look and feel
java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new FarFromHome().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

BookMovieMain.java

```
public class BookMovieMain extends javax.swing.JFrame {
    public BookMovieMain() {
        initComponents();
    }

    @SuppressWarnings("unchecked")
//Generated code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        new LanguageSelection().setVisible(true);
        this.dispose();// TODO add your handling code here:
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        this.dispose();        // TODO add your handling code here:
    }
    public static void main(String args[]) {
//look and feel
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new BookMovieMain().setVisible(true);
            }});
```

```
    }


    // Variables declaration
}
```

Dangal.java

```
import variables.*;
public class Dangal extends javax.swing.JFrame {
    public Dangal() {
        initComponents();
    }    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
MovieName mn=new MovieName("DANGAL");
        this.dispose();
        new DateTime().setVisible(true);
    }
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
//Look And Feel
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new FarFromHome().setVisible(true);
            }
        });
    }


    // Variables declaration
}
```

DateTime.java

```
import java.text.SimpleDateFormat;
import java.util.Locale;
import variables.*;
public class DateTime extends javax.swing.JFrame {
    public DateTime() {
        initComponents();
```

```
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        SimpleDateFormat sdf=new SimpleDateFormat("dd-MM-yyyy",Locale.getDefault());
        String d=sdf.format(jDateChooser1.getDate());
        DateT dt=new DateT(d+" "+jComboBox2.getSelectedItem().toString());
            this.dispose();
            new TheaterSelection().setVisible(true);
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {

//Look And Feel
//</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new LanguageSelection().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

Dil.java

```
import variables.*;
public class Dil extends javax.swing.JFrame {
    public Dil() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
```

```
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        MovieName mn=new MovieName("DIL CHAHTA HAI");
        this.dispose();
        new DateTime().setVisible(true);        // TODO add your handling code here:
    }
    public static void main(String args[]) {
//Look And Feel
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new FarFromHome().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

EnglishMovieSelection.java

```
public class EnglishMovieSelection extends javax.swing.JFrame {
    public EnglishMovieSelection() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        this.dispose();
        new LanguageSelection().setVisible(true);
        // TODO add your handling code here:
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        if(jRadioButton1.isSelected())
            new FarFromHome().setVisible(true);
        else if(jRadioButton2.isSelected())
            new TheLionKing().setVisible(true);
        this.dispose();
```

```
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new LanguageSelection().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

FarFromHome.java

```
import variables.*;
public class FarFromHome extends javax.swing.JFrame {
    public FarFromHome() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        MovieName mn=new MovieName("SPIDERMAN : FAR FROM HOME");
                this.dispose();
        new DateTime().setVisible(true);
    }
    public static void main(String args[]) {
//Look And Feel
java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new FarFromHome().setVisible(true);
            }
        });
```

```
    }

    // Variables declaration
}
```

HindiMovieSelection.java

```
public class HindiMovieSelection extends javax.swing.JFrame {
    public HindiMovieSelection() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        this.dispose();
        new LanguageSelection().setVisible(true);

        // TODO add your handling code here:
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
            if(jRadioButton1.isSelected())
                new Dangal().setVisible(true);
            else if(jRadioButton2.isSelected())
                new Zindagi().setVisible(true);
            else if(jRadioButton3.isSelected())
                new Dil().setVisible(true);
            this.dispose();
    }

    public static void main(String args[]) {
//Look And Feel
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new LanguageSelection().setVisible(true);
            }
        });
    }
```

```
    // Variables declaration
}
```

LanguageSelection.java

```
public class LanguageSelection extends javax.swing.JFrame {
    public LanguageSelection() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        new BookMovieMain().setVisible(true);
        this.dispose();
        // TODO add your handling code here:
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        this.dispose();
        if(jRadioButton1.isSelected())
            new EnglishMovieSelection().setVisible(true);
        else if(jRadioButton2.isSelected())
            new HindiMovieSelection().setVisible(true);
        else if(jRadioButton3.isSelected())
            new TeluguMovieSelection().setVisible(true);
    }
    public static void main(String args[]) {
//Look and Feel
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new LanguageSelection().setVisible(true);
            }
        });
    }

    // Variables declaration
```

```
}
```

NenuLocal.java

```
public class NenuLocal extends javax.swing.JFrame {


    /**
     * Creates new form FarFromHome
     */
    public NenuLocal() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
MovieName mn=new MovieName("NENU LOCAL");
        this.dispose();
        new DateTime().setVisible(true);// TODO add your handling code here:
    }


    public static void main(String args[]) {
//Look And Feel
  java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new FarFromHome().setVisible(true);
            }
        });
    }


    // Variables declaration
}
```

SeatSelection.java

```
import variables.*;
public class SeatSelection extends javax.swing.JFrame {
    int r=0;
    @SuppressWarnings("unchecked")
//Generated Code
private void jToggleButton1ActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    if(jToggleButton1.isSelected())
    {
    jLabel6.setText(jLabel6.getText()+"C3 ");
    }
    else if(!(jToggleButton1.isSelected()))
    {
    jLabel6.setText(jLabel6.getText().replace("C3 ",""));
    }
}

private void jToggleButton10ActionPerformed(java.awt.event.ActionEvent evt) {
    if(jToggleButton10.isSelected())
    {
    jLabel6.setText(jLabel6.getText()+"C4 ");
    }
    else if(!(jToggleButton10.isSelected()))
    {
    jLabel6.setText(jLabel6.getText().replace("C4 ",""));
    }
}

private void jToggleButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    if(jToggleButton3.isSelected())
    {
    jLabel6.setText(jLabel6.getText()+"C2 ");
    }
    else if(!(jToggleButton3.isSelected()))
    {
    jLabel6.setText(jLabel6.getText().replace("C2 ",""));
    }
}

private void jToggleButton5ActionPerformed(java.awt.event.ActionEvent evt) {
    if(jToggleButton5.isSelected())
    {
    jLabel6.setText(jLabel6.getText()+"B2 ");
```

```
    }
    else if(!(jToggleButton5.isSelected()))
    {
    jLabel6.setText(jLabel6.getText().replace("B2 ",""));
    }
}

private void jToggleButton11ActionPerformed(java.awt.event.ActionEvent evt) {
    if(jToggleButton11.isSelected())
    {
    jLabel6.setText(jLabel6.getText()+"B4 ");
    }
    else if(!(jToggleButton11.isSelected()))
    {
    jLabel6.setText(jLabel6.getText().replace("B4 ",""));
    }
}

private void jToggleButton9ActionPerformed(java.awt.event.ActionEvent evt) {
    if(jToggleButton9.isSelected())
    {
    jLabel6.setText(jLabel6.getText()+"A3 ");
    }
    else if(!(jToggleButton9.isSelected()))
    {
    jLabel6.setText(jLabel6.getText().replace("A3 ",""));
    }

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

        if(jToggleButton3.isSelected())
            r=r+150;
        if(jToggleButton1.isSelected())
            r=r+150;
```

```
            if(jToggleButton10.isSelected())
                r=r+150;
            if(jToggleButton5.isSelected())
                r=r+200;
            if(jToggleButton11.isSelected())
                r=r+200;
            if(jToggleButton9.isSelected())
                r=r+250;
            Amount a=new Amount(r);
            SeatDetail s=new SeatDetail(jLabel6.getText());
            this.dispose();
            new Ticket().setVisible(true);
    }
    public static void main(String args[]) {
//Look And Feel
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new SeatSelection().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

TeleguMovieSelection.java

```
public class TeluguMovieSelection extends javax.swing.JFrame {
    public TeluguMovieSelection() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        this.dispose();
        new LanguageSelection().setVisible(true);
        // TODO add your handling code here:
```

```
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        if(jRadioButton1.isSelected())
            new Bahubali().setVisible(true);
        else if(jRadioButton2.isSelected())
            new NenuLocal().setVisible(true);
        this.dispose();        // TODO add your handling code here:
    }

    public static void main(String args[]) {
//Look And Feel
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new LanguageSelection().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

TheLionKing.java

```
import variables.*;
public class TheLionKing extends javax.swing.JFrame {
    public TheLionKing() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
MovieName mn=new MovieName("THE LION KING");
        this.dispose();
        new DateTime().setVisible(true);// TODO add your handling code here:
    }
```

```
    public static void main(String args[]) {
//Look And Feel


 try {
          for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
             if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
             }
          }
       } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(FarFromHome.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
       } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(FarFromHome.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
       } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(FarFromHome.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
       } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(FarFromHome.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
       }
       //</editor-fold>


       /* Create and display the form */
       java.awt.EventQueue.invokeLater(new Runnable() {
          public void run() {
             new FarFromHome().setVisible(true);
          }
       });
    }


    // Variables declaration
```

```
}
```

TheaterSelection.java

```
import variables.*;
public class NenuLocal extends javax.swing.JFrame {
    public NenuLocal() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
MovieName mn=new MovieName("NENU LOCAL");
        this.dispose();
        new DateTime().setVisible(true);// TODO add your handling code here:
    }
    public static void main(String args[]) {
//Look And Feel

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new FarFromHome().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

Ticket.java

```
import variables.*;
import javax.swing.*;
public class Ticket extends javax.swing.JFrame {

    MovieName mn=new MovieName();
    Amount a=new Amount();
    DateT dt=new DateT();
    SeatDetail sd=new SeatDetail();
```

```
    Theater t=new Theater();

    public Ticket() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        this.dispose();
        new BookMovieMain().setVisible(true);
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
this.dispose();
JOptionPane.showMessageDialog(null,"Thanks for Booking through BookYourShow");

// TODO add your handling code here:
    }
    public static void main(String args[]) {
//Look And Feel
/* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new Ticket().setVisible(true);
            }
        });
    }

    // Variables declaration
}
```

Zindagi.java

```
import variables.*;
public class Zindagi extends javax.swing.JFrame {
    public Zindagi() {
        initComponents();
    }
```

```
    @SuppressWarnings("unchecked")
//Generated Code
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        MovieName mn=new MovieName("ZINDAGI NA MILEGI DOBARA");
        this.dispose();
        new DateTime().setVisible(true);        // TODO add your handling code here:
    }
    public static void main(String args[]) {
//Look And Feel
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new FarFromHome().setVisible(true);
            }
        });
    }
    // Variables declaration
}
```

Variables package

Amount.java

```
package variables;
public class Amount
{
    static int r;
    public Amount()
    {}
    public Amount(int s)
    {
        r=s;
        System.out.println(r);
    }
    public String getAmount()
    {
    return (""+r);
    }
}
```

DateT.java

```
package variables;
public class DateT
{
   static String datetime;
   public DateT()
   {}
   public DateT(String s)
   {
     datetime=s;
     System.out.println(datetime);
   }
   public String getDateT()
   {
   return datetime;
   }
}
```

MovieName.java

```
package variables;
public class MovieName
{
   static String movie;
   public MovieName()
   {
   }
   public MovieName(String s)
   {
      movie=s;
      System.out.println(movie);
   }
   public String getMovieName()
   {
   return movie;
   }
}
```

SeatDetail.java

```
package variables;
public class SeatDetail
{
   static String seat;
   public SeatDetail()
   {}
   public SeatDetail(String s)
   {
      seat=s;
      System.out.println(seat);
   }
   public String getSeatDetail()
   {
   return seat;
   }
}
```

Theater.java

```
package variables;
public class SeatDetail
{
   static String seat;
   public SeatDetail()
   {}
   public SeatDetail(String s)
   {
      seat=s;
      System.out.println(seat);
   }
   public String getSeatDetail()
   {
   return seat;
   }
}
```

OBJECT ORIENTED CONCEPTS USED

1. Classes and Objects

Classes and Objects are basic concepts of Object Oriented Programming which revolve around the real life entities.

Class

A class is a user defined blueprint or prototype from which objects are created. It represents the set of properties or methods that are common to all objects of one type.

Object

It is a basic unit of Object Oriented Programming and represents the real life entities. A typical Java program creates many objects, which as you know, interact by invoking methods.

2. Static members and methods

When a variable is declared as static, then a single copy of variable is created and shared among all objects at class level. Static variables are, essentially, global variables. All instances of the class share the same static variable.

When a method is declared with *static* keyword, it is known as static method. The most common example of a static method is *main( )* method.As discussed above, Any static member can be accessed before any objects of its class are created, and without reference to any object.Methods declared as static have several restrictions:

A. They can only directly call other static methods.
B. They can only directly access static data.
C. They cannot refer to this or super in any way.

3. PACKAGES

Package in Java is a mechanism to encapsulate a group of classes, sub packages and interfaces. Packages are used for:

I. Preventing naming conflicts. For example there can be two classes with name Employee in two packages, college.staff.cse.Employee and college.staff.ee.Employee
II. Making searching/locating and usage of classes, interfaces, enumerations and annotations easier
III. Providing controlled access: protected and default have package level access control. A protected member is accessible by classes in the same package and its subclasses. A default member (without any access specifier) is accessible by classes in the same package only.
IV. Packages can be considered as data encapsulation (or data-hiding).

4. Inheritance

Inheritance is an important pillar of OOP(Object Oriented Programming). It is the mechanism in java by which one class is allow to inherit the features(fields and methods) of another class.

5. Event Driven Programming

Graphical events

• event: An object that represents a user's interaction with a GUI

component; can be "handled" to create interactive components.

• listener: An object that waits for events and responds to them.

– To handle an event, attach a listener to a component.

– The listener will be notified when the event occurs (e.g. button

click).

6. Constructor

Constructors are used to initialize the object's state. Like methods, a constructor also contains collection of statements(i.e. instructions) that are executed at time of Object creation.

Each time an object is created using new() keyword at least one constructor (it could be default constructor) is invoked to assign initial values to the data members of the same class.

PROBLEMS FACED

There were many problems related to the concept of JFrames because no one of the team members knew it. But we solved it using different references.

We also had to learn a lot about netbeans.

REFERENCES

1. **www.stackoverflow.com**
2. **www.javatpoint.com**
3. **www.geeksforgeeks.com**