Visual Programming – Tutorial Week 6 – Source Code

Please Note: This document can be printed but not copied to Windows' Clipboard. The reason for this is that CQU wants students who need the solutions to type in the code – rather than copy and paste it – to aid in your understanding of the material covered.

Please Note: Only look at the solutions when you have made good attempts at the questions - otherwise you will NOT learn!

/*
   Name: Allocate an Aircraft seat
   Programmer: Tony Dobele
   Filename: Allocations.java
   Purpose: This program creates a windowed application to handle aircraft seat allocation. It calls an external class named AircraftSeats.
*/
import javax.swing.JOptionPane;
import java.awt.*;
import java.awt.event.*;
public class Allocations extends Frame implements ActionListener
{
    Color lightRed = new Color(255, 90, 90);
    Color lightGreen = new Color(140, 215, 40);

    int numRows = 10;
    int numSeats = 3;
    int totalSeats = numRows * numSeats;
    AircraftSeats seat = new AircraftSeats(totalSeats);
    int row = 1;
    char seatPos = 'A';

    Panel seatPanel = new Panel();
    TextField seatDisplay[] = new TextField[totalSeats];

    Panel buttonPanel = new Panel();
    Button allocateButton = new Button("Allocate Seat");

    Panel inputPanel = new Panel();
    Label custNameLabel = new Label("Name:");
    TextField nameField = new TextField(30);
    CheckboxGroup options = new CheckboxGroup();
    Checkbox window = new Checkbox("Window Seat",false,options);
    Checkbox aisle = new Checkbox("Aisle Seat",false,options);
    Checkbox hidden = new Checkbox("",true,options);

...
public Allocations() // constructor
{
    // set Layouts for frame and three panels
    this.setLayout(new BorderLayout());
    seatPanel.setLayout(new GridLayout(numRows, numSeats, 20, 5));
    buttonPanel.setLayout(new FlowLayout());
    inputPanel.setLayout(new FlowLayout());

    // add components to seat panel
    for (int i = 0; i < totalSeats; i++)
    {
        seatDisplay[i] = new TextField();
        seatDisplay[i].setText(row + "" + seatPos);
        seatDisplay[i].setEditable(false);
        seatDisplay[i].setBackground(lightGreen);
        seatPanel.add(seatDisplay[i]);
        seatPos++;
        if (seatPos == 'D')
        {
            seatPos = 'A';
            row++;
        } // end if
    } // end for

    // add components to button panel
    buttonPanel.add(allocateButton);

    // add components to input panel
    inputPanel.add(custNameLabel);
    inputPanel.add(nameField);
    inputPanel.add(window);
    inputPanel.add(aisle);

    // add panels to frame
    add(seatPanel, BorderLayout.NORTH);
    add(inputPanel, BorderLayout.CENTER);
    add(buttonPanel, BorderLayout.SOUTH);

    allocateButton.addActionListener(this);

    // The windowClosing() method allows the user to click the Close button
    // to end the program
    addWindowListener(new WindowAdapter())

{
    public void windowClosing(WindowEvent e)
    {
        System.exit(0);
    }
}
} //end of constructor method

public static void main(String[] args)
{
    Allocations a = new Allocations();
    a.setBounds(180,180,600,370);
    a.setTitle("Aircraft Seat Allocations");
    a.setResizable(false);
    a.setVisible(true);
} //end of main

public void actionPerformed(ActionEvent e)
{

} //end of actionPerformed() method

} //end of Allocations class