

CORE JAVA ASSIGNMENT 2

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BATCH 2

Café Application

[files](#)

Source Code:

```
import javax.swing.*;
import java.awt.*;
import java.io.FileWriter;
import java.io.IOException;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;

public class CafeApp {
    private final String[] items = {"Pizza", "Burger", "Fries", "Coffee", "Iced Tea"};
    private final int[] prices = {300, 150, 100, 80, 50};

    private JFrame frame;
    private JSpinner[] qtySpinners;
    private JTextArea billArea;
    private JTextField discountField;
    private JComboBox<String> paymentBox;
    private int billNo = 1000;

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

```

        SwingUtilities.invokeLater(CafeApp::new);
    }

    public CafeApp() {
        showLogin();
    }

    // ----- LOGIN -----
    private void showLogin() {
        JFrame login = new JFrame("Login - Czyprotex Café");
        login.setSize(280, 140);
        login.setLayout(new GridLayout(3, 2, 5, 5));
        login.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        login.setLocationRelativeTo(null);

        JTextField user = new JTextField();
        JPasswordField pass = new JPasswordField();
        JButton loginBtn = new JButton("Login");

        login.add(new JLabel("Username:")); login.add(user);
        login.add(new JLabel("Password:")); login.add(pass);
        login.add(new JLabel("")); login.add(loginBtn);

        loginBtn.addActionListener(e -> {
            if (user.getText().equals("admin") && new
String(pass.getPassword()).equals("1234")) {
                login.dispose();
                buildMainUI();
            } else JOptionPane.showMessageDialog(login, "Invalid! Try admin /
1234");
        });

        login.setVisible(true);
    }

```

```

// ----- MAIN -----
private void buildMainUI() {
    frame = new JFrame("Czyprotex Café — Billing");
    frame.setSize(700, 500);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    frame.setLayout(new BorderLayout());

    // LEFT: Menu + Discount + Payment
    JPanel left = new JPanel(new GridLayout(items.length + 2, 2, 5, 5));
    qtySpinners = new JSpinner[items.length];

    for (int i = 0; i < items.length; i++) {
        left.add(new JLabel(items[i] + " (₹" + prices[i] + "):"));
        qtySpinners[i] = new JSpinner(new SpinnerNumberModel(0, 0, 20,
1));
        left.add(qtySpinners[i]);
    }

    discountField = new JTextField("0");
    paymentBox = new JComboBox<>(new String[]{"Select", "Cash",
"UPI"});
    left.add(new JLabel("Discount %:")); left.add(discountField);
    left.add(new JLabel("Payment:")); left.add(paymentBox);

    // CENTER: Bill
    billArea = new JTextArea();
    billArea.setEditable(false);
    JScrollPane scroll = new JScrollPane(billArea);

    // BOTTOM: Buttons
    JPanel bottom = new JPanel();
    JButton btnGenerate = new JButton("Generate Bill");
    JButton btnSave = new JButton("Save Bill");
    JButton btnClear = new JButton("Clear");

```

```
        bottom.add(btnGenerate); bottom.add(btnSave);
bottom.add(btnClear);
```

```
// Actions
```

```
btnGenerate.addActionListener(e -> generateBill());
btnSave.addActionListener(e -> saveBill());
btnClear.addActionListener(e -> clearForm());
```

```
frame.add(left, BorderLayout.WEST);
frame.add(scroll, BorderLayout.CENTER);
frame.add(bottom, BorderLayout.SOUTH);
frame.setVisible(true);
```

```
}
```

```
// ----- FUNCTIONS -----
```

```
private void generateBill() {
    if (paymentBox.getSelectedIndex() == 0) {
        JOptionPane.showMessageDialog(frame, "Choose payment
method!");
        return;
    }
    double subtotal = 0;
    StringBuilder sb = new StringBuilder("=== Czynotex Café ===\n");
    sb.append("Bill No: ").append(++billNo).append("\n");
    sb.append("Date: ").append(LocalDate.now()
        .format(DateTimeFormatter.ofPattern("dd/MM/yyyy
HH:mm"))).append("\n");
    sb.append("Payment:
").append(paymentBox.getSelectedItem()).append("\n");
    sb.append("-----\n");
```

```
    for (int i = 0; i < items.length; i++) {
        int qty = (Integer) qtySpinners[i].getValue();
        if (qty > 0) {
            double cost = qty * prices[i];
```

```

        subtotal += cost;
        sb.append(items[i]).append(" x ").append(qty)
          .append(" = ₹").append(cost).append("\n");
    }
}

double discount = parseDouble(discountField.getText());
double discountAmt = subtotal * discount / 100;
double afterDiscount = subtotal - discountAmt;
double gst = afterDiscount * 0.05;
double total = afterDiscount + gst;

sb.append("-----\n");
if (discountAmt > 0) sb.append("Discount:
-₹").append(discountAmt).append("\n");
sb.append("Subtotal: ₹").append(subtotal).append("\n");
sb.append("GST (5%): ₹").append(gst).append("\n");
sb.append("Grand Total: ₹").append(total).append("\n");
sb.append("-----\n");
sb.append("✅ PAID\nThank you! Visit Again\n");

billArea.setText(sb.toString());
}

private void saveBill() {
    try (FileWriter fw = new FileWriter("Bill_" + billNo + ".txt")) {
        fw.write(billArea.getText());
        JOptionPane.showMessageDialog(frame, "Saved as Bill_" + billNo
+ ".txt");
    } catch (IOException ex) {
        JOptionPane.showMessageDialog(frame, "Error: " +
ex.getMessage());
    }
}
}

```

```
private void clearForm() {  
    for (JSpinner s : qtySpinners) s.setValue(0);  
    discountField.setText("0");  
    paymentBox.setSelectedIndex(0);  
    billArea.setText("");  
}  
  
private double parseDouble(String s) {  
    try { return Double.parseDouble(s); } catch (Exception e) { return 0; }  
}  
}
```

Output:



