

Slip No. 27 (Total Marks: 30)

1. Write a program to accept array elements and display them in reverse order – 10 Marks

```
java
Copy code
import java.util.Scanner;

public class ReverseArray {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the number of elements: ");
        int n = sc.nextInt();
        int[] array = new int[n];

        System.out.println("Enter the elements:");
        for (int i = 0; i < n; i++) {
            array[i] = sc.nextInt();
        }

        System.out.println("Elements in reverse order:");
        for (int i = n - 1; i >= 0; i--) {
            System.out.print(array[i] + " ");
        }
    }
}
```

2. Write a Java program using AWT to take a username and password, and validate them – 20 Marks

```
java
Copy code
import java.awt.*;
import java.awt.event.*;

class InvalidLoginException extends Exception {
    public InvalidLoginException(String message) {
        super(message);
    }
}

public class LoginScreen extends Frame implements ActionListener {
    TextField usernameField, passwordField, messageField;
    Button loginButton, clearButton;
    int attempts = 0;

    public LoginScreen() {
        setLayout(new FlowLayout());
        setTitle("Login Screen");

        add(new Label("Username:"));
        usernameField = new TextField(20);
        add(usernameField);

        add(new Label("Password:"));
```

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passwordField = new TextField(20);
passwordField.setEchoChar('*');
add(passwordField);

loginButton = new Button("Login");
clearButton = new Button("Clear");
add(loginButton);
add(clearButton);

messageField = new TextField(30);
messageField.setEditable(false);
add(messageField);

loginButton.addActionListener(this);
clearButton.addActionListener(this);

setSize(300, 200);
setVisible(true);
setResizable(false);
addWindowListener(new WindowAdapter() {
    public void windowClosing(WindowEvent we) {
        System.exit(0);
    }
});
}

public void actionPerformed(ActionEvent e) {
    if (e.getSource() == clearButton) {
        usernameField.setText("");
        passwordField.setText("");
        messageField.setText("");
    } else if (e.getSource() == loginButton) {
        String username = usernameField.getText();
        String password = passwordField.getText();

        try {
            if (username.isEmpty() || password.isEmpty()) {
                throw new InvalidLoginException("Username and Password
cannot be empty.");
            }

            if (!username.equals(password)) {
                attempts++;
                if (attempts >= 3) {
                    messageField.setText("Maximum attempts reached.
Exiting.");
                    System.exit(0);
                } else {
                    throw new InvalidLoginException("Invalid Username or
Password. Attempt " + attempts + " of 3.");
                }
            } else {
                messageField.setText("Login successful!");
            }
        } catch (InvalidLoginException ex) {
            messageField.setText(ex.getMessage());
        }
    }
}

```

```
        }  
    }  
  
    public static void main(String[] args) {  
        new LoginScreen();  
    }  
}
```