

OBJECT-ORIENTED PROGRAMMING PROJECT

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ROLL NUMBER: 22BSCYS035

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import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class MultipleChoiceQuiz extends JFrame implements ActionListener {
    private final String[] questions = {
        "What is the capital of France?",
        "Which planet is known as the Red Planet?",
        "What is 2 + 2?",
        "Who wrote the play 'Romeo and Juliet'?"
    };

    private final String[][] options = {
        {"Paris", "London", "Berlin", "Madrid"},
        {"Venus", "Mars", "Jupiter", "Saturn"},
        {"3", "4", "5", "6"},
        {"William Shakespeare", "Charles Dickens", "Jane Austen", "Leo Tolstoy"}
    };

    private final char[] answers = {'A', 'B', 'B', 'A'};

    private int currentQuestion = 0;
    private char userAnswer;
    private JLabel questionLabel;
    private JRadioButton[] optionButtons;
    private ButtonGroup optionGroup;
    private JButton nextButton;

    public MultipleChoiceQuiz() {
        setTitle("Multiple Choice Quiz");
        setSize(400, 300);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLocationRelativeTo(null);

        questionLabel = new JLabel(questions[currentQuestion]);
        questionLabel.setBounds(20, 20, 360, 30);
        questionLabel.setFont(new Font("Arial", Font.PLAIN, 16));
```

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optionButtons = new JRadioButton[4];
optionGroup = new ButtonGroup();
for (int i = 0; i < 4; i++) {
    optionButtons[i] = new JRadioButton(options[currentQuestion][i]);
    optionButtons[i].setBounds(50, 70 + i * 30, 200, 20);
    optionButtons[i].setFont(new Font("Arial", Font.PLAIN, 14));
    optionGroup.add(optionButtons[i]);
}

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nextButton = new JButton("Next");
nextButton.setBounds(150, 200, 100, 30);
nextButton.addActionListener(this);

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add(questionLabel);
for (int i = 0; i < 4; i++) {
    add(optionButtons[i]);
}
add(nextButton);

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setLayout(null);
setVisible(true);
}

```

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@Override
public void actionPerformed(ActionEvent e) {
    if (currentQuestion < questions.length - 1) {
        for (int i = 0; i < 4; i++) {
            if (optionButtons[i].isSelected()) {
                userAnswer = (char) ('A' + i);
                break;
            }
        }
        if (userAnswer == answers[currentQuestion]) {
            // Handle correct answer (e.g., increase score)
        } else {
            // Handle incorrect answer (e.g., display correct answer)
        }
        currentQuestion++;
        questionLabel.setText(questions[currentQuestion]);
        for (JRadioButton optionButton : optionButtons) {
            optionButton.setSelected(false);
        }
        // End of quiz (e.g., display score)
        JOptionPane.showMessageDialog(this, "Quiz completed!");
        System.exit(0);
    }
}

```

```

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

```

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}  
}
```

