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import java.awt.*;
import java.awt.event.*;
import java.io.*;
import java.util.Scanner;

public class NewsPortalWithCategories extends Frame implements ActionListener {
    private TextField titleField, usernameField, passwordField;
    private TextArea contentArea, displayArea;
    private Choice categoryChoice, filterChoice;
    private Button saveButton, viewButton, filterButton, clearButton, loginButton;
    private Label statusLabel;
    private Panel loginPanel, portalPanel;

    private static final String USERNAME = "admin";
    private static final String PASSWORD = "admin123";
    private static final String FILE_NAME = "articles_with_categories.txt";

    public NewsPortalWithCategories() {
        // Set up the frame
        setTitle("News Portal System with Categories");
        setSize(600, 700);
        setLayout(new CardLayout());
        setResizable(false);

        // Login Panel
        loginPanel = new Panel(new GridLayout(4, 2));
        loginPanel.add(new Label("Username:"));
        usernameField = new TextField();
        loginPanel.add(usernameField);

        loginPanel.add(new Label("Password:"));
        passwordField = new TextField();
        passwordField.setEchoChar('*');
        loginPanel.add(passwordField);

        loginButton = new Button("Login");
        loginButton.addActionListener(this);
        loginPanel.add(loginButton);

        statusLabel = new Label("");
        statusLabel.setForeground(Color.RED);
        loginPanel.add(statusLabel);

        add(loginPanel, "Login");
    }

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// Portal Panel
portalPanel = new Panel(new FlowLayout());

portalPanel.add(new Label("Article Title:"));
titleField = new TextField(40);
portalPanel.add(titleField);

portalPanel.add(new Label("Category:"));
categoryChoice = new Choice();
categoryChoice.add("Sports");
categoryChoice.add("Technology");
categoryChoice.add("Normal News");
portalPanel.add(categoryChoice);

portalPanel.add(new Label("Article Content:"));
contentArea = new TextArea(10, 50);
portalPanel.add(contentArea);

saveButton = new Button("Save Article");
saveButton.addActionListener(this);
portalPanel.add(saveButton);

viewButton = new Button("View All Articles");
viewButton.addActionListener(this);
portalPanel.add(viewButton);

portalPanel.add(new Label("Filter by Category:"));
filterChoice = new Choice();
filterChoice.add("All");
filterChoice.add("Sports");
filterChoice.add("Technology");
filterChoice.add("Normal News");
portalPanel.add(filterChoice);

filterButton = new Button("Filter Articles");
filterButton.addActionListener(this);
portalPanel.add(filterButton);

clearButton = new Button("Clear");
clearButton.addActionListener(this);
portalPanel.add(clearButton);

displayArea = new TextArea(20, 50);
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displayArea.setEditable(false);
portalPanel.add(displayArea);

// Add the portal panel but hide it initially
portalPanel.setVisible(false);
add(portalPanel, "Portal");

// Window close handler
addWindowListener(new WindowAdapter() {
    public void windowClosing(WindowEvent e) {
        dispose();
    }
});
}

@Override
public void actionPerformed(ActionEvent e) {
    if (e.getSource() == loginButton) {
        authenticateUser();
    } else if (e.getSource() == saveButton) {
        saveArticle();
    } else if (e.getSource() == viewButton) {
        viewAllArticles();
    } else if (e.getSource() == filterButton) {
        filterArticles();
    } else if (e.getSource() == clearButton) {
        clearInputs();
    }
}

private void authenticateUser() {
    String username = usernameField.getText().trim();
    String password = passwordField.getText().trim();

    if (USERNAME.equals(username) && PASSWORD.equals(password)) {
        statusLabel.setText("Login successful!");
        loginPanel.setVisible(false);
        portalPanel.setVisible(true);
    } else {
        statusLabel.setText("Invalid username or password.");
    }
}

private void saveArticle() {

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String title = titleField.getText().trim();
String category = categoryChoice.getSelectedItem();
String content = contentArea.getText().trim();

if (title.isEmpty() || content.isEmpty()) {
    displayArea.setText("Title and content cannot be empty!");
    return;
}

try (FileWriter writer = new FileWriter(FILE_NAME, true)) {
    writer.write("Category: " + category + "\n");
    writer.write("Title: " + title + "\n");
    writer.write("Content: " + content + "\n");
    writer.write("=".repeat(50) + "\n");
    displayArea.setText("Article saved successfully!");
} catch (IOException ex) {
    displayArea.setText("Error saving the article: " + ex.getMessage());
}

}

private void viewAllArticles() {
    File file = new File(FILE_NAME);

    if (!file.exists()) {
        displayArea.setText("No articles have been saved yet.");
        return;
    }

    try (Scanner scanner = new Scanner(file)) {
        StringBuilder content = new StringBuilder();
        while (scanner.hasNextLine()) {
            content.append(scanner.nextLine()).append("\n");
        }
        displayArea.setText(content.toString());
    } catch (IOException ex) {
        displayArea.setText("Error reading articles: " + ex.getMessage());
    }

}

private void filterArticles() {
    String selectedCategory = filterChoice.getSelectedItem();
    File file = new File(FILE_NAME);

    if (!file.exists()) {

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        displayArea.setText("No articles have been saved yet.");
        return;
    }

    try (Scanner scanner = new Scanner(file)) {
        StringBuilder content = new StringBuilder();
        while (scanner.hasNextLine()) {
            String line = scanner.nextLine();
            if (line.startsWith("Category: ")) {
                String category = line.substring(10).trim();
                if (selectedCategory.equals("All") || category.equals(selectedCategory)) {
                    content.append(line).append("\n");
                    while (scanner.hasNextLine()) {
                        String articleLine = scanner.nextLine();
                        content.append(articleLine).append("\n");
                        if (articleLine.equals("=".repeat(50))) {
                            break;
                        }
                    }
                }
            }
        }
        displayArea.setText(content.toString());
    } catch (IOException ex) {
        displayArea.setText("Error filtering articles: " + ex.getMessage());
    }
}

private void clearInputs() {
    titleField.setText("");
    contentArea.setText("");
    displayArea.setText("");
}

public static void main(String[] args) {
    NewsPortalWithCategories portal = new NewsPortalWithCategories();
    portal.setVisible(true);
}
}

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