# Array Practice:

```
import java.util.Scanner;

public class ArraySorting {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Step 1: Input the size of the array
        System.out.print("Enter the size of the array: ");
        int size = scanner.nextInt();

        // Step 2: Declare the array
        int[] array = new int[size];

        // Step 3: Input the elements of the array
        System.out.println("Enter " + size + " elements:");
        for (int i = 0; i < size; i++) {
            System.out.print("Element " + (i + 1) + ": ");
            array[i] = scanner.nextInt();
        }

        // Step 4: Sort the array
        for (int i = 0; i < size - 1; i++) {
            for (int j = 0; j < size - i - 1; j++) {
                if (array[j] > array[j + 1]) {
                    // Swap elements
                    int temp = array[j];
                    array[j] = array[j + 1];
                    array[j + 1] = temp;
                }
            }
        }

        // Step 5: Display the sorted array
        System.out.println("\nSorted Array in Ascending Order:");
        for (int num : array) {
            System.out.print(num + " ");
        }
        System.out.println();
    }
}
```

```
import java.util.Scanner;

public class ArraySearchSimple {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Input the size of the array
        System.out.print("Enter the size of the array: ");
        int size = scanner.nextInt();

        // Declare and input the array elements
        int[] array = new int[size];
        System.out.println("Enter " + size + " elements:");
        for (int i = 0; i < size; i++) {
            System.out.print("Element " + (i + 1) + ": ");
            array[i] = scanner.nextInt();
        }

        // Input the element to search
        System.out.print("\nEnter the element to search: ");
        int searchElement = scanner.nextInt();

        // Perform the search
        for (int i = 0; i < size; i++) {
            if (array[i] == searchElement) {
                System.out.println("Element " + searchElement + " is present at index " + i + ".");
                scanner.close();
                return; // Exit the program once the element is found
            }
        }

        // If element is not found
        System.out.println("Element " + searchElement + " is not present in the array.");
    }
}
```

# Button click:

```
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class ButtonClickExampleAWT {
    public static void main(String[] args) {
        // Create a Frame (window)
        Frame frame = new Frame("Button Click Example");
        frame.setSize(300, 200);
        frame.setLayout(null);

        // Create a button
        Button button = new Button("Click Me");
        button.setBounds(100, 70, 100, 30); // Position the button

        // Add an action listener to the button
        button.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                // Show a dialog box when the button is clicked
                Dialog dialog = new Dialog(frame, "Message", true);
                dialog.setSize(200, 100);
                dialog.setLayout(new FlowLayout());

                Label message = new Label("Button clicked!");
                Button okButton = new Button("OK");

                okButton.addActionListener(event -> dialog.dispose());

                dialog.add(message);
                dialog.add(okButton);

                dialog.setVisible(true);
            }
        });

        // Add the button to the frame
        frame.add(button);

        // Add a window listener to close the application
        frame.addWindowListener(new java.awt.event.WindowAdapter() {
            public void windowClosing(java.awt.event.WindowEvent e) {
                frame.dispose();
            }
        });

        // Make the frame visible
        frame.setVisible(true);
    }
}
```

# Simple login form

```
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class LoginFormAWT {
    public static void main(String[] args) {
        // Create a Frame (window)
        Frame frame = new Frame("Login Form");
        frame.setSize(350, 200);
        frame.setLayout(null); // Use absolute layout

        // Create labels for Username and Password
        Label usernameLabel = new Label("Username:");
        usernameLabel.setBounds(30, 30, 80, 25);
        frame.add(usernameLabel);

        Label passwordLabel = new Label("Password:");
        passwordLabel.setBounds(30, 70, 80, 25);
        frame.add(passwordLabel);

        // Create text fields for Username and Password
        TextField usernameField = new TextField();
        usernameField.setBounds(120, 30, 150, 25);
        frame.add(usernameField);

        TextField passwordField = new TextField();
        passwordField.setEchoChar('*'); // Set echo character for password
        passwordField.setBounds(120, 70, 150, 25);
        frame.add(passwordField);

        // Create a Submit button
        Button submitButton = new Button("Submit");
        submitButton.setBounds(120, 110, 100, 30);
        frame.add(submitButton);

        // Add an action listener to the button
        submitButton.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                // Get the entered data
                String username = usernameField.getText();
                String password = passwordField.getText();

                // Display the data in a dialog box
                Dialog dialog = new Dialog(frame, "Submitted Data", true);
                dialog.setSize(300, 150);
                dialog.setLayout(new FlowLayout());
```

```
            Label message = new Label("Username: " + username + "\nPassword: " + password);
            Button okButton = new Button("OK");

            // Add an action listener to close the dialog
            okButton.addActionListener(event -> dialog.dispose());

            dialog.add(message);
            dialog.add(okButton);
            dialog.setVisible(true);
        }
    });

    // Add a window listener to handle closing the application
    frame.addWindowListener(new java.awt.event.WindowAdapter() {
        public void windowClosing(java.awt.event.WindowEvent e) {
            frame.dispose();
        }
    });

    // Make the frame visible
    frame.setVisible(true);
  }
}
```