**Unit Converter**

For Java week 1 & 2 unit converter application using Swing, a GUI toolkit for Java. The application allows users to convert quantities between different units, such as feet to meters, pounds to kilograms, and Fahrenheit to Celsius. Here's an explanation of how the code works:

**Class Structure:**

1. **Main Class (UnitsConverter):**
   * The main class initializes and sets up the GUI components for the unit converter application.
   * It contains a **JFrame** (the main window), **JPanel** (a container for GUI components), and various Swing components such as labels, text fields, combo boxes, buttons, and a result label.
2. **GUI Components:**
   * **quantityTextField:** Allows the user to input the quantity to be converted.
   * **conversionOptions:** A combo box providing different unit conversion options.
   * **resultLabel:** Displays the result of the conversion.
   * **convertButton:** Triggers the conversion process when clicked.

**Methods:**

1. **placeComponents(JPanel panel):**
   * Sets up the layout of GUI components within the given panel.
   * Initializes and configures labels, text fields, combo boxes, buttons, and the result label.
2. **convertButtonClicked():**
   * Handles the logic when the "Convert" button is clicked.
   * Parses the quantity entered by the user and validates it.
   * Determines the selected conversion option from the combo box.
   * Calls the **performConversion()** method to calculate the result.
   * Updates the result label with the conversion details.
3. **performConversion(double quantity, int conversionOption):**
   * Performs the actual conversion based on the selected conversion option.
   * Three conversion options are implemented: feet to meters, pounds to kilograms, and Fahrenheit to Celsius.
4. **getUnitFrom(int conversionOption) and getUnitTo(int conversionOption):**
   * Returns the unit labels for the selected conversion option.
5. **Unit Conversion Methods:**
   * **feetToMeters(double feet)**
   * **poundsToKgs(double pounds)**
   * **fahrenheitToCelsius(double fahrenheit)**
   * These methods perform the specific unit conversions using predefined conversion factors.
6. **main(String[] args):**
   * The entry point of the application.
   * Invokes the Swing GUI creation on the Event Dispatch Thread using **SwingUtilities.invokeLater()**.

**GUI Initialization:**

* The constructor (**UnitsConverter()**) initializes the main frame, sets its size and default close operation.
* The **placeComponents()** method configures the layout and appearance of GUI components.

**Event Handling:**

* The "Convert" button has an action listener that calls the **convertButtonClicked()** method when clicked.
* The **convertButtonClicked()** method processes the user input, performs the conversion, and updates the result label.

**Running the Application:**

* The **main()** method launches the application on the Event Dispatch Thread, ensuring proper handling of Swing components.