```
import java.awt.*;

public class TemperatureConverter extends GBFrame
{
    //The labels: these display the text strings that guide the user.

    private Label tempLabel;
    private Label fahrenheitLabel;
    private Label celsiusLabel;
    private Label kelvinLabel;
    private Label gramsLabel;
    private Label kilogramsLabel;
    private Label weightLabel;

    //The integer fields: these are used for the input and output of
    //integer values.
    private DoubleField fahrenheitField;
    private DoubleField celsiusField;
    private DoubleField kelvinField;
    private DoubleField gramsField;
    private DoubleField kilogramsField;

    //The command buttons: these trigger the buttonClicked method when
    //clicked.

    private Button convertButton;

    private Choice choices;


    // A text area to output the answers.  You can put text into a
TextArea
    // either by using area.setText(somestring) which replaces all of
the text
    // with the new text, or area.append(somestring) which adds the new
string
    // to the text already present in the text area
```

```
public TemperatureConverter( )
{
    tempLabel = addLabel("Temperature Conversion",1,2,2,1 );
    fahrenheitLabel = addLabel("Fahrenheit",2,1,1,1);
    celsiusLabel = addLabel("Celsius",3,1,1,1);
    kelvinLabel = addLabel("Kelvin",4,1,1,1);
    weightLabel = addLabel("Weight Conversion",5,2,2,1);
    gramsLabel = addLabel("Grams",6,1,1,1);
    kilogramsLabel = addLabel("Kilograms",7,1,1,1);


    fahrenheitField = addDoubleField(0,2,2,2,1);
    celsiusField = addDoubleField(0,3,2,2,1);
    kelvinField = addDoubleField(0,4,2,2,1);
    gramsField = addDoubleField(0,6,2,2,1);
    kilogramsField = addDoubleField(0,7,2,2,1);

    convertButton = addButton("Convert",9,1,2,1);

    choices = addChoice(8,2,1,1);
    choices.add("Fahrenheit to Celsius & Kelvin");      // index 0
    choices.add("Celsius to Fahrenheit & Kelvin");     // index 1
    choices.add("Kelvin to Fahrenheit & Celsius");    // index 2
    choices.add("Grams to Kilograms");               // index 3
    choices.add("Kilogram to Grams");               // index 4

}



public void buttonClicked (Button buttonObj)
{
        int ch = choices.getSelectedIndex();

        if(buttonObj == convertButton)
        {

            //Far to Cel & Kelvin

            if(ch == 0)
```

```
        {
            double f = fahrenheitField.getNumber();
            double c = (f - 32)* 5/9;
            celsiusField.setNumber(c);
        }


        if(ch == 0)
        {
            double f = fahrenheitField.getNumber();
            double k = (f + 459.67) * 5/9;
            kelvinField.setNumber(k);
        }

    //Cel to Far & Kelvin

        if(ch == 1)
        {
            double c = celsiusField.getNumber();
            double f = ( c * 9/5 ) + 32;
            fahrenheitField.setNumber(f);
        }


        if(ch == 1)
        {
            double c = celsiusField.getNumber();
            double k = (c + 273);
            kelvinField.setNumber(k);
        }

        //Kelvin to Far & Cel

        if(ch == 2)
        {
            double k = kelvinField.getNumber();
            double c = (k - 273);
            celsiusField.setNumber(c);
        }

        if(ch == 2)
```

```
                {
                    double k = kelvinField.getNumber();
                    double f = (k * 9/5 ) - 459.67;
                    fahrenheitField.setNumber(f);
                }

                //Grams to Kg

                if(ch == 3)
                {

                    double g = gramsField.getNumber();
                    double KG = (g/1000);
                    kilogramsField.setNumber(KG);

                }

                // Kg to Grams

                if(ch == 4)
                {

                    double KG = kilogramsField.getNumber();
                    double g = (KG * 1000);
                    gramsField.setNumber(g);

                }
            }
    }

    public static void main (String[] args)
    {
        //Instantiate the GUI part
        Frame frm = new TemperatureConverter();
        //Set the application's window width and height in pixels
        frm.setSize (1000, 1000);
        //Make the window visible to the user
        frm.setVisible (true);
    }

}
```

TemperatureConverter.java