

```
import java.util.ArrayList;
public class Frequencies
{
    private int min;
    private int max;

    private ArrayList<Integer> alValues = new ArrayList<>();
    private ArrayList<Integer> alFrequencies = new ArrayList<>();

    public Frequencies(int min, int max)
    {
        this.min = min;
        this.max = max;
    }

    public int generateNumber(int min, int max)
    {
        return (int) (Math.random() * (max - min + 1)) + min;
    }

    public void fillValuesList(int nbr)
    {
        for (int i = 0; i < nbr; i++)
            alValues.add(generateNumber(min, max));
    }

    public void sortValues()
    {
        for (int i = 0; i < alValues.size() - 1; i++)
        {
            int min = alValues.get(i);
            int posMin = i;
            for (int j = i + 1; j < alValues.size(); j++)
            {
                if (alValues.get(j) < min)
                {
                    min = alValues.get(j);
                    posMin = j;
                }
            }

            if (i != posMin)
            {
                int temp = alValues.get(i);
                alValues.set(i, alValues.get(posMin));
                alValues.set(posMin, temp);
            }
        }
    }

    public void computeFrequencies()
    {
        for (int i = min; i <= max; i++)
            alFrequencies.add(0);

        int p, f;
        for (int i = 0; i < alValues.size(); i++)
        {
            p = alValues.get(i) - min;
            f = alFrequencies.get(p) + 1;
            alFrequencies.set(p, f);
        }
    }

    public Object[] toArrayValues()
    {
        return alValues.toArray();
    }

    public Object[] toArrayFrequencies()
    {
        return alFrequencies.toArray();
    }
}
```

```
public class MainFrame extends javax.swing.JFrame
{
    private Frequencies freq = null;

    public MainFrame()
    {
        initComponents();
    }

    public void updateView()
    {
        if (freq != null)
        {
            valuesList.setListData(freq.toArrayValues());
            freqList.setListData(freq.toArrayFrequencies());
        }
    }
// Skipped: ... initComponents { ... }
    private void generateButtonActionPerformed(java.awt.event.ActionEvent evt)//GEN-FIRST:event_generateButtonActionPerformed
    {//GEN-HEADEREND:event_generateButtonActionPerformed
        int min = Integer.valueOf(minTextField.getText());
        int max = Integer.valueOf(maxTextField.getText());
        int nbr = Integer.valueOf(nbrTextField.getText());
        freq = new Frequencies(min, max);
        freq.fillValuesList(nbr);
        freq.computeFrequencies();
        updateView();
    }//GEN-LAST:event_generateButtonActionPerformed

    private void sortButtonActionPerformed(java.awt.event.ActionEvent evt)//GEN-FIRST:event_sortButtonActionPerformed
    {//GEN-HEADEREND:event_sortButtonActionPerformed
        freq.sortValues();
        updateView();
    }//GEN-LAST:event_sortButtonActionPerformed
// Skipped: ... Look & Feel
    // Variables declaration - do not modify//GEN-BEGIN:variables
    private javax.swing.JList freqList;
    private javax.swing.JButton generateButton;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JScrollPane jScrollPane1;
    private javax.swing.JScrollPane jScrollPane2;
    private javax.swing.JTextField maxTextField;
    private javax.swing.JTextField minTextField;
    private javax.swing.JTextField nbrTextField;
    private javax.swing.JButton sortButton;
    private javax.swing.JList valuesList;
    // End of variables declaration//GEN-END:variables
}
```