

```
public class SchoolSubject
{
    // PARTIE 1: algorithmes retournent toujours la valeur -1
    // Ver 2: avec quelques améliorations du GUI (gestion matière vide)

    private String name;
    private ArrayList<Integer> alMarks = new ArrayList<Integer>();

    public SchoolSubject(String pName)
    {
        name = pName;
    }

    public String getName()
    {
        return name;
    }

    public void addMark(int score)
    {
        alMarks.add(score);
    }

    public int getBestMark()
    {
        return -1;
    }

    public int getWorstMark()
    {
        return -1;
    }

    public double calculateAverage()
    {
        return -1;
    }

    public int calculateRoundedAverage()
    {
        return -1;
    }

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

    public void clear()
    {
        alMarks.clear();
    }
}
```

```

public class MainFrame extends javax.swing.JFrame
{
    // PARTIE 1: algorithmes retournent toujours la valeur -1
    // Ver 2: avec quelques améliorations du GUI (matière vide enlève le panel)

    private SchoolSubject subject = null;

    public MainFrame()
    {
        initComponents();
        subjectPanel.setVisible(false);
    }

    public void updateView()
    {
        nameLabel.setText(subject.getName());
        marksList.setListData(subject.toArray());

        // Amélioration: ne pas afficher -1 (qui indique une liste vide...)
        int val;

        val = subject.calculateRoundedAverage();
        if (val == -1)
            averageLabel.setText("-");
        else
            averageLabel.setText(String.valueOf(val));

        val = subject.getWorstMark();
        if (val == -1)
            minLabel.setText("-");
        else
            minLabel.setText(String.valueOf(val));

        val = subject.getBestMark();
        if (val == -1)
            maxLabel.setText("-");
        else
            maxLabel.setText(String.valueOf(val));
    }
}
// Skipped: ... initComponents { ... }
private void createActionPerformed(java.awt.event.ActionEvent evt) {GEN-FIRST:event_createButtonActionPerformed

    String name = subjectTextField.getText();
    if (name.equals(""))
    {
        // pas de matière!
        subject = null;
        subjectPanel.setVisible(false);
    }
    else
    {
        subject = new SchoolSubject(name);
        subjectPanel.setVisible(true);
        updateView();
    }
} //GEN-LAST:event_createButtonActionPerformed

private void addButtonActionPerformed(java.awt.event.ActionEvent evt) {GEN-FIRST:event_addButtonActionPerformed
    subject.addMark(Integer.valueOf(markTextField.getText()));
    updateView();

    markTextField.requestFocus();
} //GEN-LAST:event_addButtonActionPerformed

private void clearButtonActionPerformed(java.awt.event.ActionEvent evt) {GEN-FIRST:event_clearButtonActionPerformed
    subject.clear();
    updateView();

    markTextField.requestFocus();
} //GEN-LAST:event_clearButtonActionPerformed
// Skipped: ... Look & Feel
// Variables declaration - do not modify//GEN-BEGIN:variables
private javax.swing.JButton addButton;
private javax.swing.JLabel averageLabel;
private javax.swing.JButton clearButton;
private javax.swing.JButton createButton;
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.JLabel jLabel6;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JTextField markTextField;
private javax.swing.JList marksList;
private javax.swing.JLabel maxLabel;
private javax.swing.JLabel minLabel;
private javax.swing.JLabel nameLabel;
private javax.swing.JPanel subjectPanel;
private javax.swing.JTextField subjectTextField;
// End of variables declaration//GEN-END:variables
}

```