

```
public class RunningTrack
{
    private int minStep = 1;
    private int maxStep = 5;

    private int fieldSize;

    private int wolfPosition = 0;
    private int playerPosition = 0;

    // Etat du jeu:
    // 0 -> en cours
    // -1 -> loup a gagné
    // +1 -> joueur a gagné
    private int gameState = 0;

    public RunningTrack(int fieldSize, int wolfHeadStart)
    {
        this.fieldSize = fieldSize;
        this.wolfPosition = wolfHeadStart;
    }

    public int getWolfPosition()
    {
        return wolfPosition;
    }

    public int getPlayerPosition()
    {
        return playerPosition;
    }

    public int getGameState()
    {
        return gameState;
    }

    public void run(int playerStep)
    {
        if ((playerStep >= minStep) && (playerStep <= maxStep))
        {
            playerPosition = playerPosition + playerStep;
            wolfPosition = wolfPosition + (int) (Math.random() * 5) + 1;
        }

        if (playerPosition == wolfPosition)
        {
            gameState = 1;          // joueur gagne
        }
        else if ((wolfPosition > fieldSize) || (playerPosition > fieldSize))
        {
            gameState = -1;        // loup gagne
        }
        else
        {
            gameState = 0;          // jeu pas encore terminé
        }
    }
}
```

```

public class MainFrame extends javax.swing.JFrame
{
    private RunningTrack runningTrack = null;

    public MainFrame()
    {
        initComponents();
        updateView();
    }

    public void updateView()
    {
        if (runningTrack != null)
        {
            playerProgressBar.setValue(runningTrack.getPlayerPosition());
            wolfProgressBar.setValue(runningTrack.getWolfPosition());

            int state = runningTrack.getGameState();
            if (state != 0)
            {
                // Jeu est terminé !
                runningTrack = null;;
                if (state == 1)
                    titleLabel.setText("You did catch the wolf... YOU WON!!");
                else
                    titleLabel.setText("The wolf escaped... YOU LOST!");
            }
        }

        // Retester car le jeu est peut-être terminé maintenant...
        if (runningTrack == null)
        {
            msgLabel.setText("Please enter the wolf's headstart and start the game!");
            runButton.setEnabled(false);
            playerStepTextField.setEditable(false);
        }
        else
        {
            msgLabel.setText("Game is ongoing... Please enter your step and run!");
            runButton.setEnabled(true);
            playerStepTextField.setEditable(true);
        }
    }
}

// Skipped: ... initComponents { ... }
private void startButtonActionPerformed(java.awt.event.ActionEvent evt) {GEN-FIRST:event_startButtonActionPerformed
    String headStartValue = headStartTextField.getText();
    if (!headStartValue.equals(""))
    {
        // La course a lieu dans un jeu de taille 20
        runningTrack = new RunningTrack(20, Integer.valueOf(headStartValue));
        playerProgressBar.setMaximum(20);
        wolfProgressBar.setMaximum(20);
        titleLabel.setText("Catch the Wolf!");
    }

    updateView();
} //GEN-LAST:event_startButtonActionPerformed

private void runButtonActionPerformed(java.awt.event.ActionEvent evt) {GEN-FIRST:event_runButtonActionPerformed

    String playerStepValue = playerStepTextField.getText();
    if (!playerStepValue.equals(""))
    {
        runningTrack.run(Integer.valueOf(playerStepValue));
    }
    updateView();
} //GEN-LAST:event_runButtonActionPerformed

// Skipped: ... Look & Feel
// Variables declaration - do not modify//GEN-BEGIN:variables
private javax.swing.JTextField headStartTextField;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel msgLabel;
private javax.swing.JProgressBar playerProgressBar;
private javax.swing.JTextField playerStepTextField;
private javax.swing.JButton runButton;
private javax.swing.JButton startButton;
private javax.swing.JLabel titleLabel;
private javax.swing.JProgressBar wolfProgressBar;
// End of variables declaration//GEN-END:variables
}

```

## GUI - Design View

