第三章 德塔ETL.

第一节 研发说明

德塔 ETL 可视化数据分析引擎系统说明书说明书

V_1_0_2

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浏阳德塔软件开发有限公司
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1. 起源动机

作者2009 年首次接触Knime 的SDK 进行插件节点编程。感觉很不错。

作者2011 年在美国加里福尼亚路德大学就读全日制计算机科学硕士研究生时
, 在Dr. Renhart 教授的计算机视觉课程上进行图片工作流作业设计, 发现当时Knime 不支持OBJECT 对象传输,
也不能在网页上用, 仅仅支持矩阵数据表传输, 而Knime 底层是闭源于是作者开始设计可以传输图片的数据流软件。
定义为Applet UNICORN AI

作者在2012-2013 家庭和个人发生了一些变故, 停止了系统设计。在2014 年开始重启。

作者2014年在Rosemead 家设计出Unicorn 的节点画布界面实现视觉分析后突发持续
1个月的肋感神经剧烈疼痛, 于是第二次停止该项目研发。作者2015 年在中国浏阳将Unicorn 引擎实现包括声音流,
电影流的各种对象的节点操作, 之后因为家庭生计一直在上班, 第三次停止了该项目研发。并打包成Unicorn AI在
谷歌邮件博客上发布了第一版开源版。

作者2018 年在中国注册了德塔软件开发有限公司, 于是继续开启该项目研发一直到现在。。

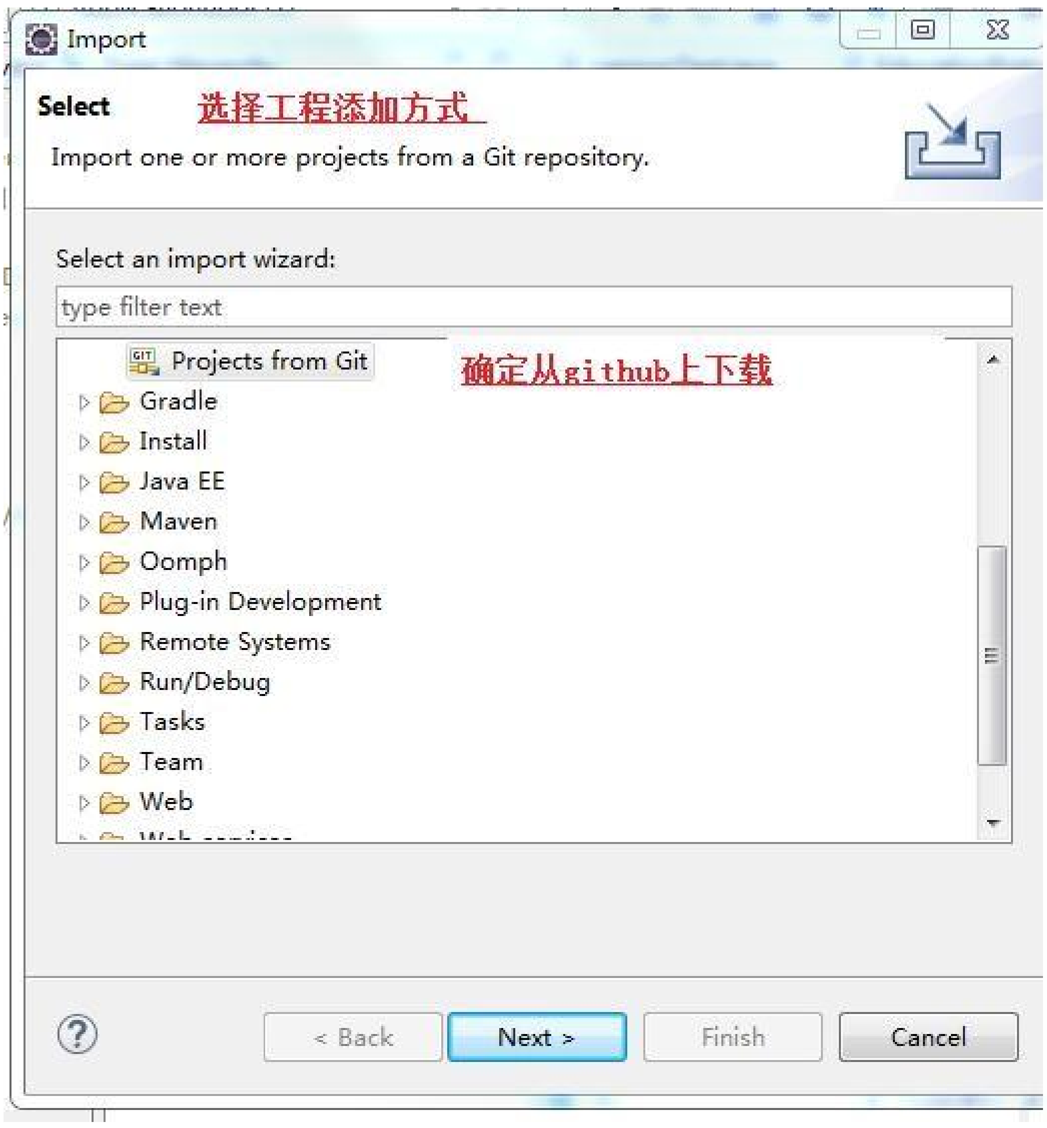
2. 简介

德塔ETL 可视化数据分析引擎系统作为 Deta 人工智能的核心组成部份主要任务就是极为快速和便携的节点数据流处理.
主要用在各种未知的对象数据进行清洗，拆分，计算和功能重用上。.

3 使用方法

3.1 下载 java 开发软件:
Eclipse: https://www.eclipse.org/
Intellij: https://www.jetbrains.com/idea/

3.2 导入 deta 图灵 api (API 是类库,接口 的意思, select 是选择 的意思)


Import

Select 选择工程添加方式

Import one or more projects from a Git repository.

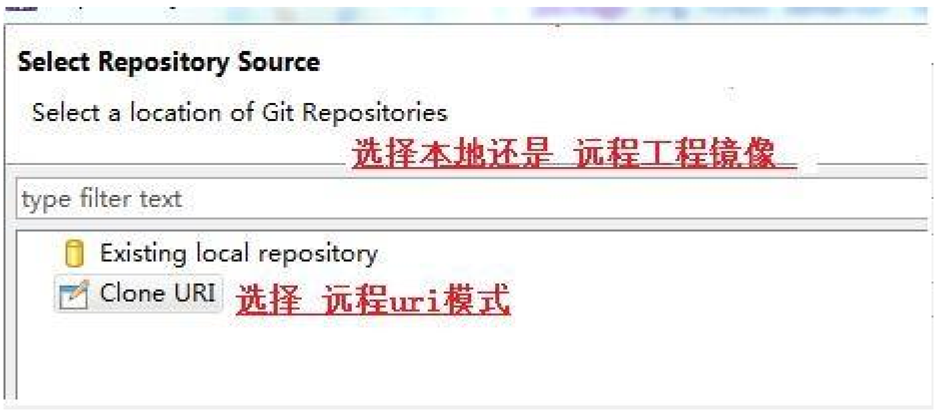
Select an import wizard:

type filter text

Projects from Git 确定从github上下载

- Gradle
- Install
- Java EE
- Maven
- Oomph
- Plug-in Development
- Remote Systems
- Run/Debug
- Tasks
- Team
- Web

3.3 点 URI (uri 是互联网传输的一种协议规范关键字)


Select Repository Source

Select a location of Git Repositories

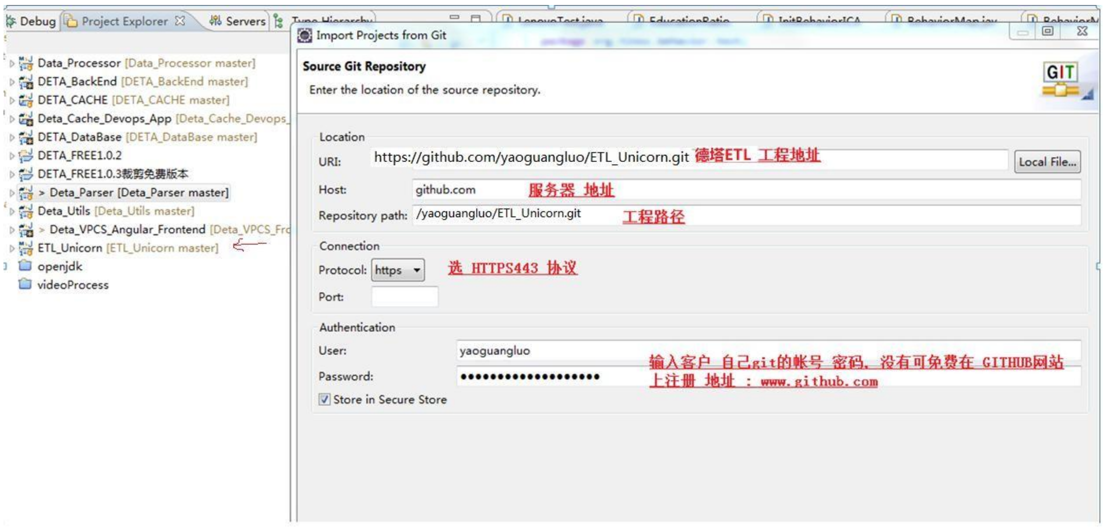
选择本地还是 远程工程镜像

type filter text

Existing local repository

Clone URI 选择 远程uri模式

3.4 输入 Git 导入目标地址 (git 是版本持续化控制软件, repository 是 git 工程的下载标识, host 是远程 主机, repository path 是 git 工程 在主机上下载链接, protocol 是是通信协议, port 是端口, authentication 是密钥, user 是帐户名, password 是密码, store in secure store 是记录保存)



Data_Processor [Data_Processor master]
DETA_BackEnd [DETA_BackEnd master]
DETA_CACHE [DETA_CACHE master]
Deta_Cache_Devops_App [Deta_Cache_Devops_
DETA_DataBase [DETA_DataBase master]
DETA_FREE1.0.2
DETA_FREE1.0.3裁剪免费版本
> Deta_Parser [Deta_Parser master]
Deta_Utils [Deta_Utils master]
> Deta_VPCS_Angular_Frontend [Deta_VPCS_Fr
ETL_Unicorn [ETL_Unicorn master]
openjdk
videoProcess

Import Projects from Git

Source Git Repository

Enter the location of the source repository.

Location

URI: https://github.com/yaoguangluo/ETL_Unicorn.git 德塔ETL 工程地址

Host: github.com 服务器 地址

Repository path: /yaoguangluo/ETL_Unicorn.git 工程路径

Connection

Protocol: https 选 HTTPS443 协议

Port:

Authentication

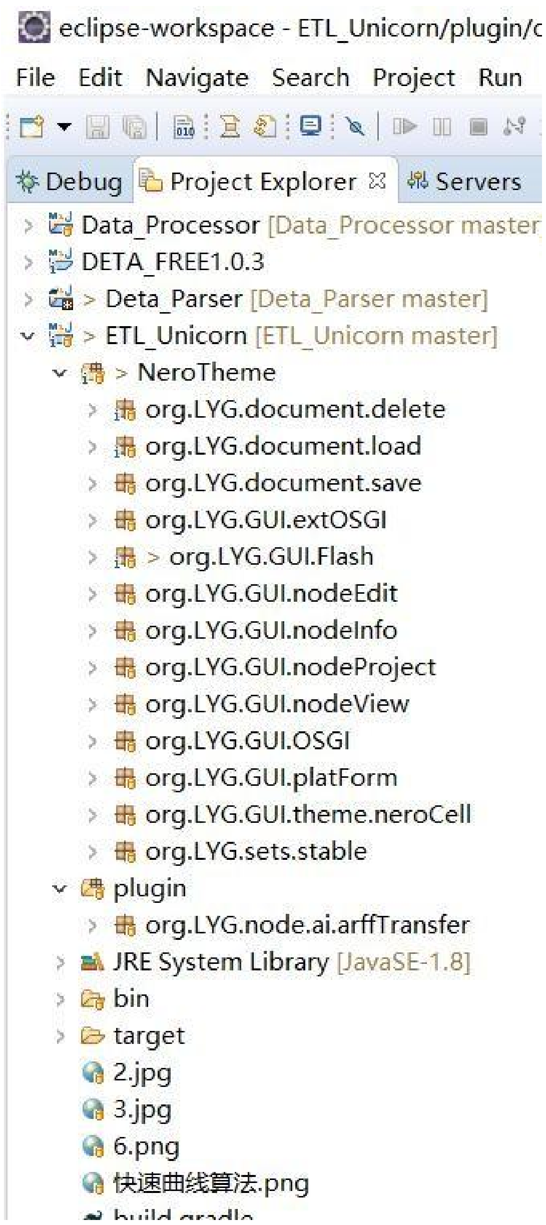
User: yaoguangluo

Password: ••••••••••••••••••••

输入客户 自己git的帐号 密码。没有可免费在 GITHUB网站上注册 地址 : www.github.com

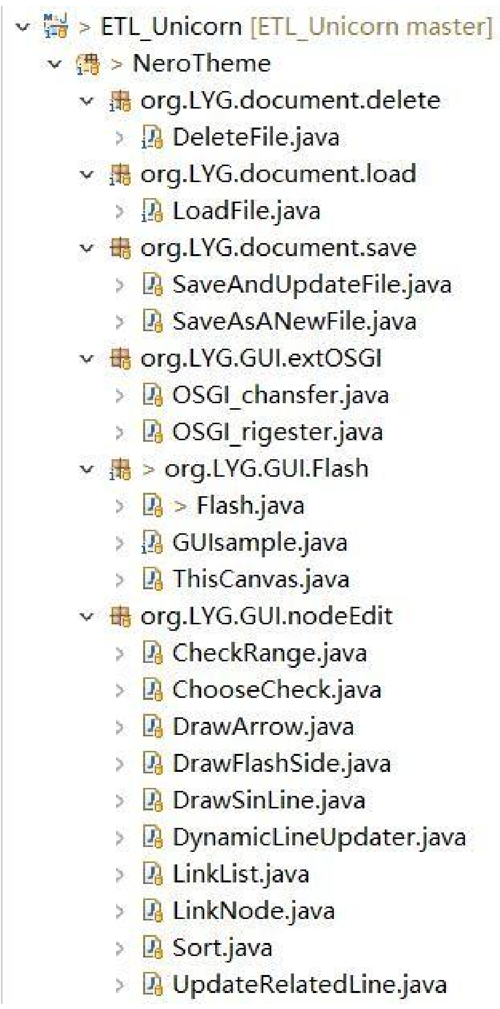
[✓] Store in Secure Store

3.5 生成 eclipse 工程 因为是无插件底层源码, 所以可以自由集成为pom, gradle, web,或者general 工程模式. (POM 是xml形式的库标识 标识, gradle 是 模板形式, web 是 web 2.0 动态java工程, general 是普通java 工程)

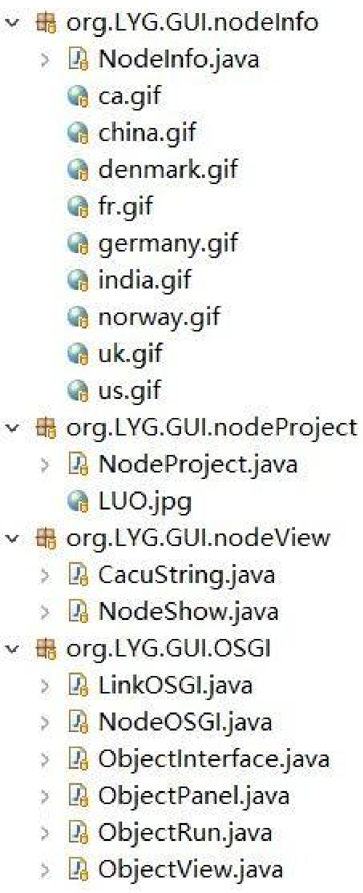

eclipse-workspace - ETL_Unicorn/plugin/c
File Edit Navigate Search Project Run
Debug
Project Explorer
Servers

```
> Data_Processor [Data_Processor master
> DETA_FREE1.0.3
> > Deta_Parser [Deta_Parser master]
v > ETL_Unicorn [ETL_Unicorn master]
    v > NeroTheme
        > org.LYG.document.delete
        > org.LYG.document.load
        > org.LYG.document.save
        > org.LYG.GUI.extOSGI
        > > org.LYG.GUI.Flash
        > org.LYG.GUI.nodeEdit
        > org.LYG.GUI.nodeInfo
        > org.LYG.GUI.nodeProject
        > org.LYG.GUI.nodeView
        > org.LYG.GUI.OSGI
        > org.LYG.GUI.platForm
        > org.LYG.GUI.theme.neroCell
        > org.LYG.sets.stable
    v plugin
        > org.LYG.node.ai.arffTransfer
    > JRE System Library [JavaSE-1.8]
    > bin
    > target
      2.jpg
      3.jpg
      6.png
      快速曲线算法.png
```

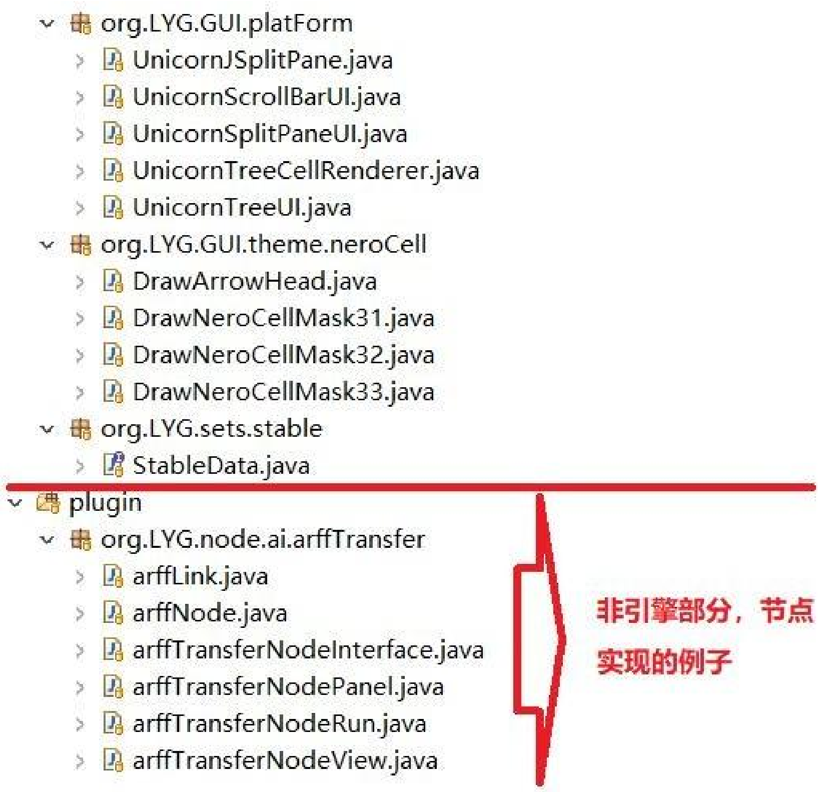
3.6 运行例子就可以了 所有 demo 和 test 都是 可运行实例 (demo 是例子的意思, test 是测试的意思 鼠标右键, 点运行就可以了.)



```
> ETL_Unicorn [ETL_Unicorn master]
  > NeroTheme
    org.LYG.document.delete
      DeleteFile.java
    org.LYG.document.load
      LoadFile.java
    org.LYG.document.save
      SaveAndUpdateFile.java
      SaveAsANewFile.java
    org.LYG.GUI.extOSGI
      OSGI_chansfer.java
      OSGI_rigester.java
    > org.LYG.GUI.Flash
      > Flash.java
      GUIsample.java
      ThisCanvas.java
    org.LYG.GUI.nodeEdit
      CheckRange.java
      ChooseCheck.java
      DrawArrow.java
      DrawFlashSide.java
      DrawSinLine.java
      DynamicLineUpdater.java
      LinkList.java
      LinkNode.java
      Sort.java
      UpdateRelatedLine.java
```



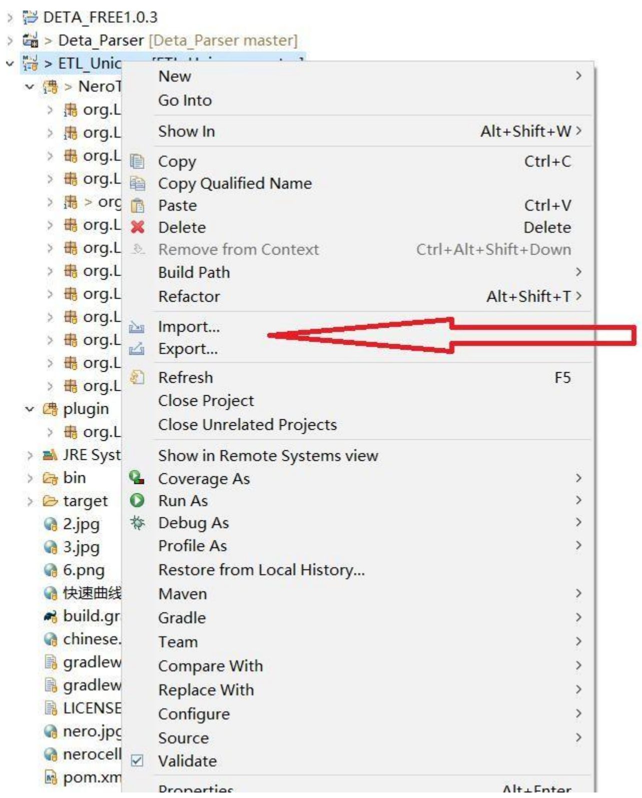
```
org.LYG.GUI.nodeInfo
  NodeInfo.java
  ca.gif
  china.gif
  denmark.gif
  fr.gif
  germany.gif
  india.gif
  norway.gif
  uk.gif
  us.gif
org.LYG.GUI.nodeProject
  NodeProject.java
  LUO.jpg
org.LYG.GUI.nodeView
  CacuString.java
  NodeShow.java
org.LYG.GUI.OSGI
  LinkOSGI.java
  NodeOSGI.java
  ObjectInterface.java
  ObjectPanel.java
  ObjectRun.java
  ObjectView.java
```



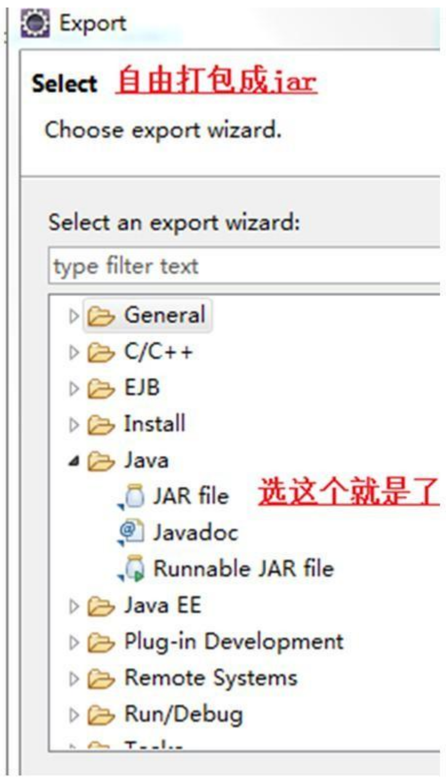
org.LYG.GUI.platForm
UnicornJSplitPane.java
UnicornScrollBarUI.java
UnicornSplitPaneUI.java
UnicornTreeCellRenderer.java
UnicornTreeUI.java
org.LYG.GUI.theme.neroCell
DrawArrowHead.java
DrawNeroCellMask31.java
DrawNeroCellMask32.java
DrawNeroCellMask33.java
org.LYG.sets.stable
StableData.java
plugin
org.LYG.node.ai.arffTransfer
arffLink.java
arffNode.java
arffTransferNodeInterface.java
arffTransferNodePanel.java
arffTransferNodeRun.java
arffTransferNodeView.java

3.7 可下载的免费软件 例子:
https://github.com/yaoguangluo/Deta_Medicine

3.8 可以任意 打包 jar 作为商业 库销售和集成.(jar 是 java 的库的意思, 可运行,可扩展, 可集成, export 是打包输出的意思)

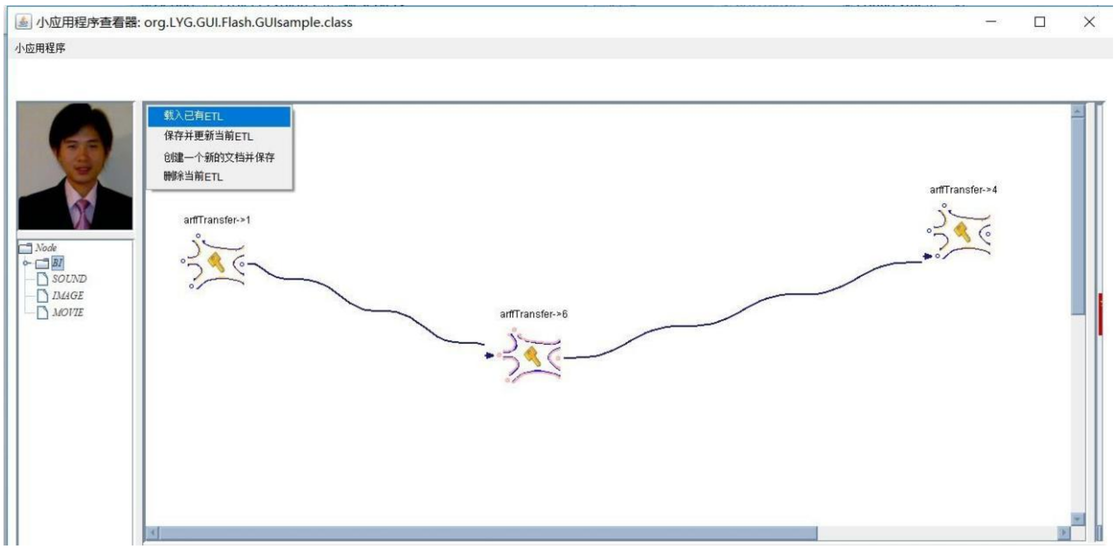


DETA_FREE1.0.3
> Deta_Parser [Deta_Parser master]
> ETL_Unic
> NeroT
org.L
plugin
JRE Syst
bin
target
2.jpg
3.jpg
6.png
快速曲线
build.gr
chinese.
gradlew
gradlew
LICENSE
nero.jpg
nerocell
pom.xm

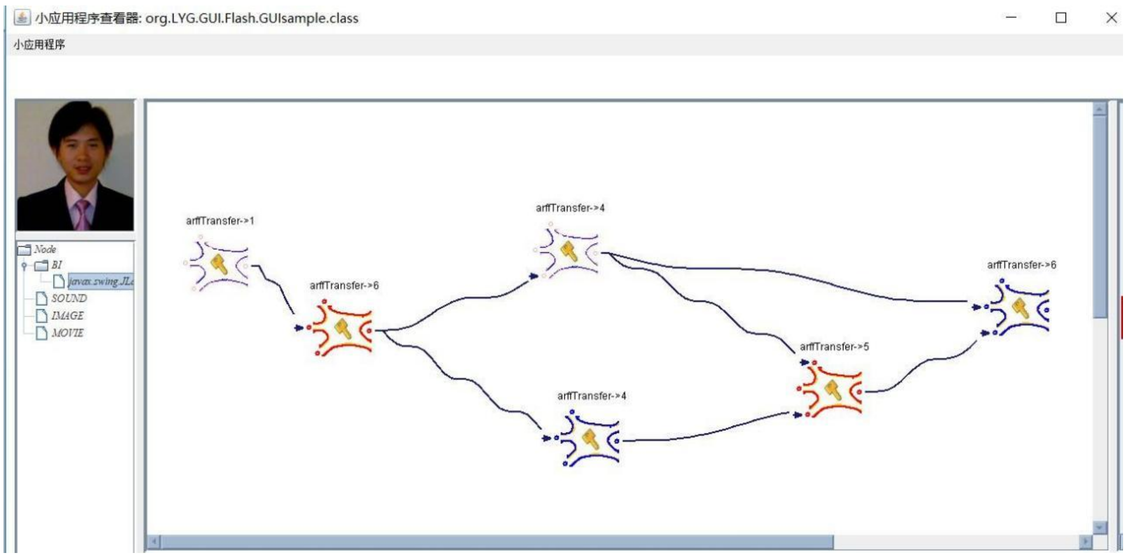


4 具体重要功能展示

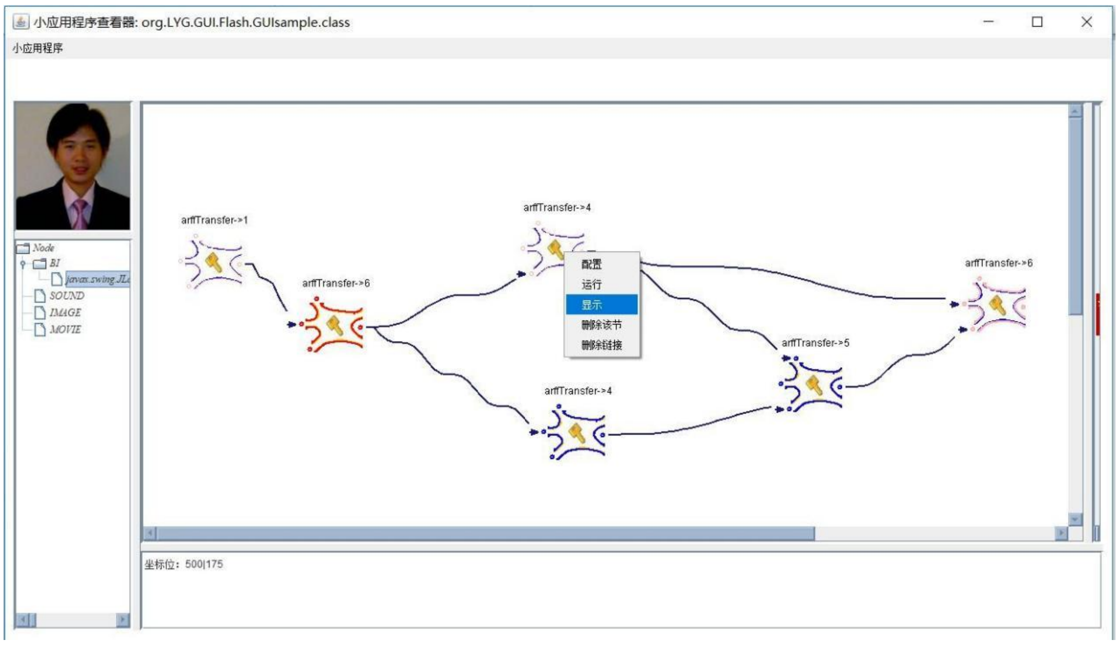
4.1 档案管理功能



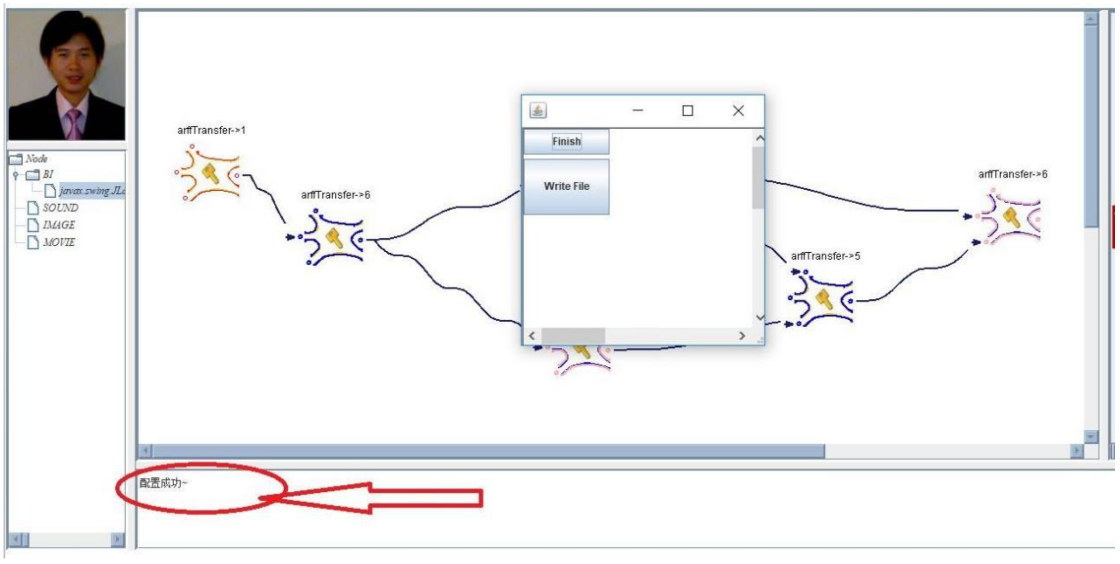
4.2 流操作中相同逻辑节点重用功能



4.3 流操作节点配置功能



4.4 异常消息面板



4.5 其他小功能分析例子略.

5. 适用范围

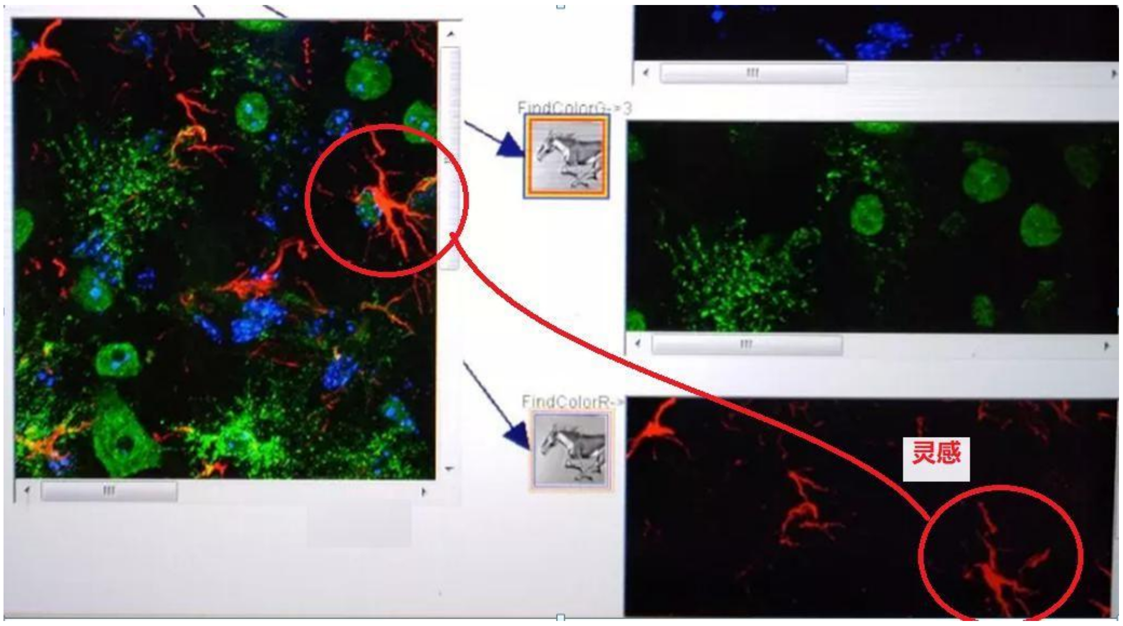
Deta 机器人意识进化分析系统.
Deta 带记忆神经网络耦合基础.
Deta 教育辅导.
Deta 文 本 挖 掘 .
Deta 刑 侦 辅 导 .
Deta 心智训练Deta
商业用语分析.
Deta 各种数据流可视化分析

6. 注意

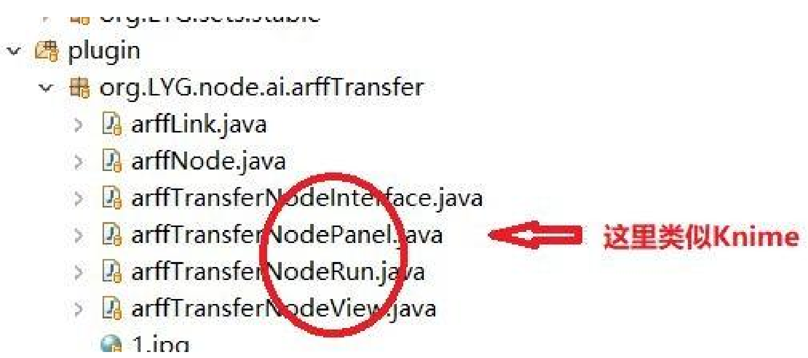
注意 1: 该作品免费版本使用权由国际软件研发协议apache-2.0 证书保护. 任何单位任意修改集成使用时请标注 Deta 公司 关键字: “浏阳德塔软件开发有限公司” 或者 “罗瑶光”
注意 5: 当前版本是 1.0.2, 一直在优化中,有任何bug 请直接联系作者.
QQ: 2080315360 (qq: 腾讯)
WECHAT: 15116110525 (WECHAT 微信)
TEL: 15116110525 (tel: 电话号码)
EMAIL: 2080315360@qq.com (email: 邮件地址)

7. 感谢

Deta 的神经元细胞 节点皮肤灵感 来自 牛津大学 牛顿霍华德教授的一些图片如下：



Deta 的节点包例子 3 个文件的命名采用 Knime 的方式如下：



```
plugin
  org.LYG.node.ai.arffTransfer
    arffLink.java
    arffNode.java
    arffTransferNodeInterface.java
    arffTransferNodePanel.java
    arffTransferNodeRun.java
    arffTransferNodeView.java
    1.jpg
```

Deta 项目设计 采用 Mind Master 软件.
Deta 项目研发 采用 Eclipse IDE 软件.
Deta 项目测试 采用 JUNIT API 软件.
Deta 项目作品 主要采用 JAVA JDK8+.
Deta 项目编码和算法基础能力来自作者 在印度基督大学 学习的 数据结构 课程. 同时感谢Knime 为作者研究提供了启蒙基础（2009 年）. 作者长期使用 联想笔记本 windows 10 操作系统开发此项目, 电脑装 Avaster 杀毒软件保证其高效研发环境. 感谢 github 和 gitee 备份, 节省了作者 大量的存储硬盘, 同时方便 查阅, 逻辑的鼠标键盘 给作者 提供了迅捷 的输入输出 便利 .当然 电信的网络, 老爸,老妈, 都要感谢的.

8 研发需要清单

8.1 Java 编辑器.

8.2 Jdk8+. Java 虚拟机运行环境.

8.3 Junit 测试包.

8.4 一台连网的电脑.

研发源码

```
*****************************************************************************************
package org.LYG.document.load;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileInputStream;
import java.io.InputStream;
import java.io.InputStreamReader;
import java.util.HashMap;
import java.util.Map;
import org.LYG.GUI.nodeEdit.LinkList;
import org.LYG.GUI.nodeEdit.LinkNode;
import org.LYG.GUI.nodeEdit.Sort;
import org.LYG.GUI.nodeView.NodeShow;
//准备把响应事件移植到这里。
import org.LYG.sets.stable.StableData;
public class LoadFile{
    @SuppressWarnings({StableData.TAG_STATIC_ACCESS, StableData.TAG_RESOURCE})
    public static LinkNode Load(LinkNode first, NodeShow nodeView, File file, LinkList thislist) {
        //get path
        try {
            InputStream in= new FileInputStream(file);
            BufferedReader cReader= new BufferedReader(new InputStreamReader(in));
            String ctempString= null;
            Map<String, String> currentNodeMap= new HashMap<>();
            while ((ctempString= cReader.readLine())!= null) {
                if(!ctempString.contains("######################"))
                    { if(ctempString.contains(":")&& ctempString.split(":").length>1)
                    {
                        currentNodeMap.put(ctempString.split(":")[0], ctempString.split(":")[1]);
                    }
                }else {
                    LinkNode node= new LinkNode();
                    node.beconnect= currentNodeMap.containsKey("beconnect")
?currentNodeMap.get("beconnect").contains("false")? false: true: false;
                    node.dBeconnect= currentNodeMap.containsKey("dBeconnect")?
 currentNodeMap.get("dBeconnect").contains("false")? false: true: false;
                    node.dBeconnectID= currentNodeMap.containsKey("dBeconnectID")?
Integer.parseInt(currentNodeMap.get("dBeconnectID")):0;
                    node.dBeconnectPrimaryKey= currentNodeMap.containsKey("dBeconnectPrimaryKey")?
currentNodeMap.get("dBeconnectPrimaryKey"):"null";
                    node.dBeconnectX= currentNodeMap.containsKey("dBeconnectX")?
Integer.parseInt(currentNodeMap.get("dBeconnectX")):0;
```

```
                    node.dBeconnectY= currentNodeMap.containsKey("dBeconnectY")?
Integer.parseInt(currentNodeMap.get("dBeconnectY")):0;
                    node.dBeconnetName= currentNodeMap.containsKey("dBeconnetName")?
 currentNodeMap.get("dBeconnetName"):"null";
                    node.flash= currentNodeMap.containsKey("flash")?
Integer.parseInt(currentNodeMap.get("flash")):0;
                    node.ID= currentNodeMap.containsKey("NodeID")?
Integer.parseInt(currentNodeMap.get("NodeID")):0;
                    node.leftChoose= currentNodeMap.containsKey("leftChoose")?
currentNodeMap.get("leftChoose").contains("false")? false: true: false;
                    node.mBeconnect= currentNodeMap.containsKey("mBeconnect")?
currentNodeMap.get("mBeconnect").contains("false")? false: true: false;
                    node.mBeconnectID= currentNodeMap.containsKey("mBeconnectID")?
Integer.parseInt(currentNodeMap.get("mBeconnectID")):0;
                    node.mBeconnectPrimaryKey= currentNodeMap.containsKey("mBeconnectPrimaryKey")?
currentNodeMap.get("mBeconnectPrimaryKey"):"null";
                    node.mBeconnectX= currentNodeMap.containsKey("mBeconnectX")?
 Integer.parseInt(currentNodeMap.get("mBeconnectX")):0;
                    node.mBeconnectY= currentNodeMap.containsKey("mBeconnectY")?
Integer.parseInt(currentNodeMap.get("mBeconnectY")):0;
                    node.mBeconnetName=
currentNodeMap.containsKey("mBeconnetName")?currentNodeMap.get("mBeconnetName"):"null";
                    node.name=
currentNodeMap.containsKey("NodeName")?currentNodeMap.get("NodeName"):"null";
                    node.rightChoose= currentNodeMap.containsKey("rightChoose")?
currentNodeMap.get("rightChoose").contains("false")? false: true: false;
                    node.tBeconnect= currentNodeMap.containsKey("tBeconnect")?
currentNodeMap.get("tBeconnect").contains("false")? false: true: false;
                    node.tBeconnectID= currentNodeMap.containsKey("tBeconnectID")?
Integer.parseInt(currentNodeMap.get("tBeconnectID")):0;
                    node.tBeconnectPrimaryKey= currentNodeMap.containsKey("tBeconnectPrimaryKey")?
currentNodeMap.get("tBeconnectPrimaryKey"):"null";
                    node.primaryKey= currentNodeMap.containsKey("primaryKey")?
currentNodeMap.get("primaryKey"):"null";
                    node.tBeconnectX= currentNodeMap.containsKey("tBeconnectX")?
Integer.parseInt(currentNodeMap.get("tBeconnectX")):0;
                    node.tBeconnectY= currentNodeMap.containsKey("tBeconnectY")?
Integer.parseInt(currentNodeMap.get("tBeconnectY")):0;
                    node.tBeconnetName= currentNodeMap.containsKey("tBeconnetName")?
currentNodeMap.get("tBeconnetName"):"null";
                    node.x= currentNodeMap.containsKey("NodeCoordinationX")?
Integer.parseInt(currentNodeMap.get("NodeCoordinationX")):0;
                    node.y= currentNodeMap.containsKey("NodeCoordinationY")?
Integer.parseInt(currentNodeMap.get("NodeCoordinationY")):0;
                    node= thislist.addNodeOnlyWithFace(node, nodeView.first);
                    if(null== first) {
                        first= node;
                    }else {
                        first.next= node;
                        node.pre= first;
                        first= first.next;
                    }
                    currentNodeMap.clear();
                }
            }
        }catch(Exception loadE)
            { loadE.printStackTrace()
            ;
        }
        first= new Sort().sort(first);
        return first;
    }
}
**************************************************************************************
package org.LYG.document.save;
import java.io.File;
import java.io.FileWriter;
import org.LYG.GUI.nodeEdit.LinkNode;
public class SaveAndUpdateFile{
    public static void update(String fileCurrentpath, LinkNode first) {
        //delete file
        File file= new File(fileCurrentpath);
        if(file.exists()&& file.isFile()) {
            file.delete();
        }
        //save
        String fileSavepath= fileCurrentpath;
        System.out.println(fileSavepath);
        //create file and save
        try {
            FileWriter fileWriter= new FileWriter(fileSavepath);
            LinkNode node= first;
            while(null!= node) {
                //挨个取。没难度。逐个把信息写入文件。
                //节点坐标，节点名， 节点关联，
                String NodeCoordinationX= ""+ node.x;
                String NodeCoordinationY= ""+ node.y;
                String NodeName= ""+ node.name;
                String NodeID=""+ node.ID;
                String flash=""+ node.flash;
                String beconnect= ""+ node.beconnect;
                String leftChoose= ""+ node.leftChoose;
                String rightChoose= ""+ node.rightChoose;
                String tBeconnect= ""+ node.tBeconnect;
                String tBeconnectX= ""+ node.tBeconnectX;
                String tBeconnectY= ""+ node.tBeconnectY;
                String tBeconnetName= ""+ node.tBeconnetName;
                String tBeconnectID= ""+ node.tBeconnectID;
                String tBeconnectPrimaryKey= ""+ node.dBeconnectPrimaryKey;
                String mBeconnect= ""+ node.mBeconnect;
                String mBeconnectX= ""+ node.mBeconnectX;
                String mBeconnectY= ""+ node.mBeconnectY;
                String mBeconnetName= ""+ node.mBeconnetName;
                String mBeconnectID= ""+ node.mBeconnectID;
                String mBeconnectPrimaryKey= ""+ node.mBeconnectPrimaryKey;
                String dBeconnect= ""+ node.dBeconnect;
                String dBeconnectX= ""+ node.dBeconnectX;
                String dBeconnectY= ""+ node.dBeconnectY;
                String dBeconnetName= ""+ node.dBeconnetName;
                String dBeconnectID= ""+ node.dBeconnectID;
                String dBeconnectPrimaryKey= ""+ node.dBeconnectPrimaryKey;
                String primaryKey= ""+ node.primaryKey;
                String NodeConfiguration= "";
                //配置
                fileWriter.write("\r\n");
                fileWriter.write("NodeCoordinationX:"+ NodeCoordinationX);
                fileWriter.write("\r\n");
                fileWriter.write("NodeName:"+ NodeName);
                fileWriter.write("\r\n");
                fileWriter.write("NodeCoordinationY:"+ NodeCoordinationY);
                fileWriter.write("\r\n");
                fileWriter.write("NodeID:"+ NodeID);
                fileWriter.write("\r\n");
                fileWriter.write("flash:"+ flash);
                fileWriter.write("\r\n");
                fileWriter.write("beconnect:"+ beconnect);
                fileWriter.write("\r\n");
                fileWriter.write("leftChoose:"+ leftChoose);
                fileWriter.write("\r\n");
                fileWriter.write("rightChoose:"+ rightChoose);
                fileWriter.write("\r\n");
                fileWriter.write("tBeconnect:"+ tBeconnect);
                fileWriter.write("\r\n");
                fileWriter.write("tBeconnectX:"+ tBeconnectX);
                fileWriter.write("\r\n");
                fileWriter.write("tBeconnectY:"+ tBeconnectY);
                fileWriter.write("\r\n");
                fileWriter.write("tBeconnetName:"+ tBeconnetName);
                fileWriter.write("\r\n");
                fileWriter.write("tBeconnectID:"+ tBeconnectID);
                fileWriter.write("\r\n");
                fileWriter.write("tBeconnectPrimaryKey:"+ tBeconnectPrimaryKey);
                fileWriter.write("\r\n");
                fileWriter.write("mBeconnect:"+ mBeconnect);
                fileWriter.write("\r\n");
                fileWriter.write("mBeconnectX:"+ mBeconnectX);
```

```
                fileWriter.write("\r\n");
                fileWriter.write("mBeconnectY:"+ mBeconnectY);
                fileWriter.write("\r\n");
                fileWriter.write("mBeconnetName:"+ mBeconnetName);
                fileWriter.write("\r\n");
                fileWriter.write("mBeconnectID:"+ mBeconnectID);
                fileWriter.write("\r\n");
                fileWriter.write("mBeconnectPrimaryKey:"+ mBeconnectPrimaryKey);
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnect:"+ dBeconnect);
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnectX:"+ dBeconnectX);
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnectY:"+ dBeconnectY);
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnetName:"+ dBeconnetName);
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnectID:"+ dBeconnectID);
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnectPrimaryKey:"+ dBeconnectPrimaryKey);
                fileWriter.write("\r\n");
                fileWriter.write("primaryKey:"+ primaryKey);
                fileWriter.write("\r\n");
                fileWriter.write("NodeConfiguration:"+ NodeConfiguration);
                fileWriter.write("\r\n");
                //分割
                String split="##############################";
                fileWriter.write("\r\n");
                fileWriter.write(split);
                fileWriter.flush();
                if(null== node.next) {
                    break;
                }
                node= node.next;
            }
            fileWriter.close();
        }catch(Exception saveFile) {
        }
    }
}
***************************************************************************************
package org.LYG.document.save;
import java.awt.FileDialog;
import java.awt.Frame;
import java.io.File;
import java.io.FileWriter;
import org.LYG.GUI.nodeEdit.LinkNode;
import comp.filenameFilter.TXTFilter;
//准备把响应事件移植到这里。
```

```
public class SaveAsANewFile{
    public static void Save(LinkNode first) {
        FileDialog filedialog= new FileDialog(new Frame(), " 在 当前 文 件夹 下 创建 一 个档 案 名",
FileDialog.LOAD);
        filedialog.setFilenameFilter(new TXTFilter(".etl"));
        filedialog.setVisible(true);
        String fileSavepath= filedialog.getDirectory()+ filedialog.getFile();
        System.out.println(fileSavepath);
        if(new File(fileSavepath).isFile()&& fileSavepath.contains(".etl"))
            { System.out.println("文档已经存在。");
            return;
        }
        fileSavepath= fileSavepath+ ".etl";
        System.out.println(fileSavepath);
        //create file and save
        try {
            FileWriter fileWriter= new FileWriter(fileSavepath);
            LinkNode node = first;
            while(node!=null) {
                //挨个取。没难度。逐个把信息写入文件。
                //节点坐标，节点名，  节点关联，
                String NodeCoordinationX= ""+ node.x;
                String NodeCoordinationY= ""+ node.y;
                String NodeName= ""+ node.name;
                String NodeID=""+ node.ID;
                String flash=""+ node.flash;
                String beconnect= ""+ node.beconnect;
                String leftChoose= ""+ node.leftChoose;
                String rightChoose= ""+ node.rightChoose;
                String tBeconnect= ""+ node.tBeconnect;
                String tBeconnectX= ""+ node.tBeconnectX;
                String tBeconnectY= ""+ node.tBeconnectY;
                String tBeconnetName= ""+ node.tBeconnetName;
                String tBeconnectID= ""+ node.tBeconnectID;
                String tBeconnectPrimaryKey= ""+ node.dBeconnectPrimaryKey;
                String mBeconnect= ""+ node.mBeconnect;
                String mBeconnectX= ""+ node.mBeconnectX;
                String mBeconnectY= ""+ node.mBeconnectY;
                String mBeconnetName= ""+ node.mBeconnetName;
                String mBeconnectID= ""+ node.mBeconnectID;
                String mBeconnectPrimaryKey= ""+ node.mBeconnectPrimaryKey;
                String dBeconnect= ""+ node.dBeconnect;
                String dBeconnectX= ""+ node.dBeconnectX;
                String dBeconnectY= ""+ node.dBeconnectY;
                String dBeconnetName= ""+ node.dBeconnetName;
                String dBeconnectID= ""+ node.dBeconnectID;
                String dBeconnectPrimaryKey= ""+ node.dBeconnectPrimaryKey;
                String primaryKey= ""+ node.primaryKey;
                String NodeConfiguration= "";
```

```
//配置
fileWriter.write("\r\n");
fileWriter.write("NodeCoordinationX:"+ NodeCoordinationX);
fileWriter.write("\r\n");
fileWriter.write("NodeName:"+ NodeName);
fileWriter.write("\r\n");
fileWriter.write("NodeCoordinationY:"+ NodeCoordinationY);
fileWriter.write("\r\n");
fileWriter.write("NodeID:"+ NodeID);
fileWriter.write("\r\n");
fileWriter.write("flash:"+ flash);
fileWriter.write("\r\n");
fileWriter.write("beconnect:"+ beconnect);
fileWriter.write("\r\n");
fileWriter.write("leftChoose:"+ leftChoose);
fileWriter.write("\r\n");
fileWriter.write("rightChoose:"+ rightChoose);
fileWriter.write("\r\n");
fileWriter.write("tBeconnect:"+ tBeconnect);
fileWriter.write("\r\n");
fileWriter.write("tBeconnectX:"+ tBeconnectX);
fileWriter.write("\r\n");
fileWriter.write("tBeconnectY:"+ tBeconnectY);
fileWriter.write("\r\n");
fileWriter.write("tBeconnetName:"+ tBeconnetName);
fileWriter.write("\r\n");
fileWriter.write("tBeconnectID:"+ tBeconnectID);
fileWriter.write("\r\n");
fileWriter.write("tBeconnectPrimaryKey:"+ tBeconnectPrimaryKey);
fileWriter.write("\r\n");
fileWriter.write("mBeconnect:"+ mBeconnect);
fileWriter.write("\r\n");
fileWriter.write("mBeconnectX:"+ mBeconnectX);
fileWriter.write("\r\n");
fileWriter.write("mBeconnectY:"+ mBeconnectY);
fileWriter.write("\r\n");
fileWriter.write("mBeconnetName:"+ mBeconnetName);
fileWriter.write("\r\n");
fileWriter.write("mBeconnectID:"+ mBeconnectID);
fileWriter.write("\r\n");
fileWriter.write("mBeconnectPrimaryKey:"+ mBeconnectPrimaryKey);
fileWriter.write("\r\n");
fileWriter.write("dBeconnect:"+ dBeconnect);
fileWriter.write("\r\n");
fileWriter.write("dBeconnectX:"+ dBeconnectX);
fileWriter.write("\r\n");
fileWriter.write("dBeconnectY:"+ dBeconnectY);
fileWriter.write("\r\n");
fileWriter.write("dBeconnetName:"+ dBeconnetName);
```

```
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnectID:"+ dBeconnectID);
                fileWriter.write("\r\n");
                fileWriter.write("dBeconnectPrimaryKey:"+ dBeconnectPrimaryKey);
                fileWriter.write("\r\n");
                fileWriter.write("primaryKey:"+ primaryKey);
                fileWriter.write("\r\n");
                fileWriter.write("NodeConfiguration:"+ NodeConfiguration);
                fileWriter.write("\r\n");
                //分割
                String split="##############################";
                fileWriter.write("\r\n");
                fileWriter.write(split);
                fileWriter.flush();
                if(null== node.next) {
                    break;
                }
                node=node.next;
            }
            fileWriter.close();
        }catch(Exception saveFile) {
        }
    }
}
****************************************************************************************
package org.LYG.GUI.extOSGI;
import org.LYG.GUI.nodeEdit.Sort;
import org.LYG.GUI.nodeEdit.LinkNode;
public class OSGI_chansfer {
    public OSGI_chansfer(LinkNode node, LinkNode
        first){ first = new Sort().sort(first);
        LinkNode linkNode = new LinkNode();
        linkNode = first;
        while(null !=
            linkNode){ if(node.tBeconnect&&node.tBe
            connectID==
linkNode.ID&&node.tBeconnetName.equals(linkNode.name)
                    &&
                (node.tBeconnectPrimaryKey.equalsIgnoreCase(linkNode.primaryKey))){ node.t
                hisFace.thisRun.toptablein = linkNode.thisFace.thisView.tableout;
                node.thisFace.thisRun.topgin = linkNode.thisFace.thisView.gout;
                return;
            }
            if(node.mBeconnect&&node.mBeconnectID==
linkNode.ID&&node.mBeconnetName.equals(linkNode.name)
                    &&
                (node.mBeconnectPrimaryKey.equalsIgnoreCase(linkNode.primaryKey))){ node.t
                hisFace.thisRun.midtablein = linkNode.thisFace.thisView.tableout;
                node.thisFace.thisRun.midgin = linkNode.thisFace.thisView.gout;
                return;
            }
            if(node.dBeconnect&&node.dBeconnectID==
linkNode.ID&&node.dBeconnetName.equals(linkNode.name)
                    &&
                (node.dBeconnectPrimaryKey.equalsIgnoreCase(linkNode.primaryKey))){ node.t
                hisFace.thisRun.downtablein = linkNode.thisFace.thisView.tableout;
                node.thisFace.thisRun.downgin = linkNode.thisFace.thisView.gout;
                return;
            }
            if(null !=
                linkNode.next){ break;
            }
            linkNode=linkNode.next;
        }
    }
}
*************************************************************************************
package org.LYG.GUI.extOSGI;
import java.io.IOException;
import javax.swing.JTextPane;
import org.LYG.GUI.OSGI.*;
import org.LYG.node.ai.arffTransfer.arffTransferNodeInterface;
public class OSGI_rigester{
    JTextPane text; Object[][]
    tableData_old;
    public OSGI_rigester(Object[][] tableData_old, JTextPane
        text){ this.text = text;
        this.tableData_old = tableData_old;
    }
    public NodeOSGI Rigester(NodeOSGI first, LinkOSGI link) throws IOException{
        //注册
        ObjectInterface arffTransferNode = new arffTransferNodeInterface();
        first = link.addNode(first, arffTransferNode);
        return first;
    }
}
*************************************************************************************
package org.LYG.GUI.Flash;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.ComponentEvent;
import java.awt.event.ComponentListener;
import java.awt.event.ItemEvent;
import java.awt.event.ItemListener;
import java.awt.event.MouseEvent;
import java.awt.event.MouseListener;
import java.awt.event.MouseMotionListener;
import javax.sound.sampled.UnsupportedAudioFileException;
import javax.swing.JApplet;
import javax.swing.JOptionPane;
import javax.swing.JSplitPane;
import javax.swing.JTextPane;
import javax.swing.JScrollPane;
import javax.swing.UIManager;
import java.awt.Color;
import java.awt.Dimension;
import java.awt.FileDialog;
import java.awt.Frame;
import java.awt.MenuItem;
import java.awt.PopupMenu;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.IOException;
import javax.swing.event.TreeSelectionEvent;
import javax.swing.event.TreeSelectionListener;
import javax.swing.tree.DefaultMutableTreeNode;
import javax.swing.tree.TreePath;
import org.LYG.GUI.extOSGI.OSGI_chansfer;
import org.LYG.GUI.nodeEdit.LinkList;
import org.LYG.GUI.nodeEdit.Sort;
import org.LYG.GUI.nodeEdit.LinkNode;
import org.LYG.GUI.nodeEdit.UpdateRelatedLine;
import org.LYG.GUI.nodeInfo.NodeInfo;
import org.LYG.GUI.nodeProject.NodeProject;
import org.LYG.GUI.nodeView.CacuString;
import org.LYG.GUI.nodeView.NodeShow;
import org.LYG.GUI.platForm.UnicornJSplitPane;
import org.LYG.document.load.LoadFile;
import org.LYG.document.save.SaveAndUpdateFile;
import org.LYG.document.save.SaveAsANewFile;
import org.LYG.sets.stable.StableData;
import comp.filenameFilter.TXTFilter;
public class GUIsample extends JApplet implements MouseMotionListener
, MouseListener, ItemListener, ActionListener, Runnable{
    private static final long serialVersionUID = 5270675501794340912L;
    public GUIsample() {
        getContentPane().setBackground(new Color(255,255,255));
    }
    public String fileCurrentpath;
    public int w, h;
    public int flash= 0;
    public int count= 0;
    public String currentNodeName;
    public int currentNodeID;
    public String currentNodePrimaryKey;
    public LinkList first;
//  public LinkNode first;
```

```
public int currentx, currenty;
public int choose= 0;
public int oldx, oldy;
public int newx, newy;
public int isOperation= 0;
public String treeNodeName;
public NodeShow nodeView;
public NodeProject nodeProject;
public NodeInfo nodeInfo;
public UnicornJSplitPane mainSplitPane;
public UnicornJSplitPane leftSplitPane;
public UnicornJSplitPane rightSplitPane;
public UnicornJSplitPane righttopSplitPane;
public JScrollPane righttopScrollPane;
public JScrollPane rightdownScrollPane;
public JScrollPane rightrightScrollPane;
public JTextPane rightBotJTextPane;
public ThisCanvas canvas;
public PopupMenu popupMenu, nodeMenu, itemMenu, engineMenu;
public MenuItem save, saveAs, delete, load;
public MenuItem menuItem;
public MenuItem configre, run, show, dnode, dline;
public Thread thread, threadApplet;
private JTextPane text;
private Object[][] tableData_old;
public void run() {
    try {
        Thread.sleep(100);
    } catch (InterruptedException e1)
        { e1.printStackTrace();
    }
    nodeProject.setBounds(0, 0, leftSplitPane.getWidth()
            , leftSplitPane.getDividerLocation());
    nodeProject.jPanel.newimg= nodeProject.img.getScaledInstance(nodeProject.getWidth()
            , nodeProject.getHeight(), java.awt.Image.SCALE_SMOOTH);
    nodeProject.jPanel.update(getGraphics()); nodeProject.validate();
    while(true){
         try{
            Thread.sleep(1000);
            this.validate();
        }catch (InterruptedException e) {}
        //repaint();
    }
}
public void
    start(){ if(thread ==
    null){
        thread =  new Thread(this);
        thread.start();
        }
    }
    public void stop() {
    }
    public void Registrar() {
        load.addActionListener(new java.awt.event.ActionListener()
            { @SuppressWarnings({StableData.TAG_RESOURCE,
            StableData.TAG_STATIC_ACCESS}) public void actionPerformed(ActionEvent e)
            {
                try {
                    javax.swing.JOptionPane jOptionPane= new JOptionPane
(StableData.ATTENSION_LOAD_ENSURE);
                    int confirm= jOptionPane.showConfirmDialog
(canvas, StableData.ATTENSION_LOAD_ENSURE);
                    if(0!= confirm)
                        { rightBotJTextPane.setText(StableData.ATTENSION_CANCELLED_OPERATION);
                        rightBotJTextPane.validate();
                        return;
                    }
                    FileDialog filedialog= new FileDialog
(new Frame(), StableData.ATTENSION_LOAD_HISTORY
                            , FileDialog.LOAD);
                    filedialog.setFilenameFilter(new TXTFilter(StableData.FILE_FORMAT_ETL));
                    filedialog.setVisible(true);
                    fileCurrentpath= filedialog.getDirectory()+ filedialog.getFile();
                    System.out.println(fileCurrentpath);
                    if(null== fileCurrentpath|| fileCurrentpath.isEmpty()|| !fileCurrentpath.contains
                            (StableData.FILE_FORMAT_ETL)) {
                        System.out.println(StableData.ATTENSION_RECHOICE);
                        return;
                    }
                    File file= new File(fileCurrentpath);
                    if(!file.isFile()) {
                        System.out.println(StableData.ATTENSION_RECHOICE);
                        return;
                    }
                    LinkNode needDeleteNode= first.first;
                    while(needDeleteNode!= null) {
                        first.first= first.deletNode(first.first, needDeleteNode.name,
 needDeleteNode.ID
                                , needDeleteNode.primaryKey);
                        if(null== needDeleteNode.next) {
                            break;
                    }
                    needDeleteNode= needDeleteNode.next;
                }
                canvas.repaint();
                first.first= LoadFile.Load(first.first, nodeView, file, first);
            }catch(Exception loadE)
                { loadE.printStackTrace()
                ;
            }
            canvas.repaint();
            righttopScrollPane.validate();
        }
    });
    save.addActionListener(new java.awt.event.ActionListener()
        { @SuppressWarnings({StableData.TAG_UNUSED,
        StableData.TAG_STATIC_ACCESS}) public void actionPerformed(ActionEvent e)
        {
            if(null== fileCurrentpath)
                { System.out.println(StableData.ATTENSION_UNCURRENT_CHOICE)
                ; return;
            }
            javax.swing.JOptionPane jOptionPane= new
JOptionPane(StableData.ATTENSION_UPDATE_ENSURE
                    + fileCurrentpath + StableData.MARK_QUESTION);
            int confirm= jOptionPane.showConfirmDialog(canvas, StableData.ATTENSION_UPDATE_ENSURE
                    + fileCurrentpath + StableData.MARK_QUESTION);
            if(0!= confirm) {
                rightBotJTextPane.setText(StableData.ATTENSION_CANCELLED_OPERATION);
                rightBotJTextPane.validate();
                return;
            }
            SaveAndUpdateFile.update(fileCurrentpath, first.first);
        }
    });
    saveAs.addActionListener(new java.awt.event.ActionListener()
        { @SuppressWarnings(StableData.TAG_UNUSED)
        public void actionPerformed(ActionEvent e)
            { SaveAsANewFile.Save(first.first);
        }
    });
    //delete
    delete.addActionListener(new java.awt.event.ActionListener()
        { @SuppressWarnings(StableData.TAG_STATIC_ACCESS)
        public void actionPerformed(ActionEvent e)
            { try {
                javax.swing.JOptionPane jOptionPane
= new JOptionPane(StableData.ATTENSION_CANCEL_ENSURE);
                int confirm= jOptionPane.showConfirmDialog(canvas,
 StableData.ATTENSION_CANCEL_ENSURE);
```

```
                           if(0!= confirm)
                               { rightBotJTextPane.setText(StableData.ATTENSION_CANCELLED_OPERATION);
                               rightBotJTextPane.validate();
                               return;
                             }
LinkNode node= first.first;
       while(node!= null) {
              first.first= first.deletNode(first.first, node.name, node.ID,
                 if(null== node.next) { break;
                               }
                               node= node.next;
                           }
                           node= node.next;
                           canvas.repaint();
                       }catch(Exception E)
                           { canvas.repaint()
                           ;
                       }
                       rightBotJTextPane.setText(StableData.ATTENSION_DELETE);
                       rightBotJTextPane.validate();
                   }
               });
```

```
            leftSplitPane.addPropertyChangeListener(new java.beans.PropertyChangeListener()
                { public void propertyChange(java.beans.PropertyChangeEvent evt) {
                    if (evt.getPropertyName().equals(JSplitPane.DIVIDER_LOCATION_PROPERTY)) {
                        //action code
                        nodeProject.setBounds(0, 0,leftSplitPane.getWidth(),leftSplitPane
                                .getDividerLocation());
                        nodeProject.jPanel.newimg = nodeProject.img.getScaledInstance
                                (nodeProject.getWidth(), nodeProject.getHeight()
                                        ,java.awt.Image.SCALE_SMOOTH );
                        nodeProject.jPanel.repaint();
                        nodeProject.validate();
                    }
                }
            });
            mainSplitPane.addPropertyChangeListener(new java.beans.PropertyChangeListener()
                { public void propertyChange(java.beans.PropertyChangeEvent evt) {
                    if (evt.getPropertyName().equals(JSplitPane.DIVIDER_LOCATION_PROPERTY)) {
                        //action code
                        nodeProject.setBounds(0, 0,mainSplitPane.getDividerLocation()
                                , leftSplitPane.getDividerLocation());
                        nodeProject.jPanel.newimg=
      nodeProject.img.getScaledInstance(nodeProject.getWidth()
                                , nodeProject.getHeight(),java.awt.Image.SCALE_SMOOTH );
                        nodeProject.jPanel.repaint();
                        nodeProject.validate();
                    }
                }
            });
            righttopScrollPane.addComponentListener(new
                ComponentListener(){ public void
                componentHidden(ComponentEvent arg0) {}
                public void componentMoved(ComponentEvent arg0) {}
                public void componentResized(ComponentEvent arg0) {
                    righttopScrollPane.validate();});
}
public void componentShown(ComponentEvent arg0) {}
            getContentPane().addComponentListener(new
                ComponentListener(){ public void
                componentHidden(ComponentEvent arg0) {}  public void
                componentMoved(ComponentEvent arg0) {}
                public void componentResized(ComponentEvent arg0)
                    { w=getContentPane().getWidth();
                    h=getContentPane().getHeight();
                    mainSplitPane.setBounds(10, 50, w-20, h-80);
                    mainSplitPane.setDividerLocation(0.11);
                    leftSplitPane.setDividerLocation(0.25);
                    rightSplitPane.setDividerLocation(0.85);
                    righttopSplitPane.setDividerLocation(0.9);
                    nodeProject.setBounds(0, 0,mainSplitPane.getDividerLocation()
                    , leftSplitPane.getDividerLocation());
                nodeProject.jPanel.newimg = nodeProject.img.getScaledInstance
                    (nodeProject.getWidth(), nodeProject.getHeight()
                        , java.awt.Image.SCALE_SMOOTH );
                nodeProject.jPanel.repaint();
                nodeProject.validate(); mainSplitPane.validate();
                System.out.println(w + "<>" + h);
            }
            public void componentShown(ComponentEvent arg0) {
            }
        });
        addMouseListener(this);
        addMouseMotionListener(this);
        nodeProject.addMouseListener(this);
        nodeView.addMouseListener(this);
        nodeView.tree.addMouseListener(this);
        nodeView.tree.addTreeSelectionListener(new TreeSelectionListener()
            { public void valueChanged(TreeSelectionEvent evt) {
                DefaultMutableTreeNode                note=                (DefaultMutableTreeNode)
   nodeView.tree.getLastSelectedPathComponent();
                String tr = null;
                if(note!= null){
                    tr= new CacuString().cauString(note.toString());
                }
                if(tr!=null){
                    treeNodeName= new String(tr);
                    rightBotJTextPane.setText("节点名："+ treeNodeName);
                    rightBotJTextPane.validate();
                }
            }
        });
        menuItem.addActionListener(new java.awt.event.ActionListener()
            { public void actionPerformed(ActionEvent e) {
                if(treeNodeName!=null){
                     try {
                        first.first=    first.addNode(first.first,     treeNodeName,     100,     50,
   nodeView.first);

    righttopScrollPane.validate();
} catch (CloneNotSupportedException e1) {
                        rightBotJTextPane.setText(StableData.NODE_ADD_ERROR);
                        rightBotJTextPane.validate();
                    } catch (InstantiationException e1)
                        { rightBotJTextPane.setText(StableData.NODE_ADD_ERROR);
                        rightBotJTextPane.validate();
                    } catch (IllegalAccessException e1)
                        { rightBotJTextPane.setText(StableData.NODE_ADD_ERROR);
                        rightBotJTextPane.validate();
                    } catch (IOException e1)
```

```
                        { rightBotJTextPane.setText(StableData.NODE_ADD_ERROR);
                        rightBotJTextPane.validate();
                    }
                    rightBotJTextPane.setText("节点名："+ "treeNodeName");
                    rightBotJTextPane.validate();
                }
            }
        });
        configre.addActionListener(new java.awt.event.ActionListener()
            { public void actionPerformed(ActionEvent e) {
                LinkNode node= new LinkNode();
                first.first= new Sort().sort(first.first);
                node= first.first;
                while(node!= null){
                    if(node.name.equals(canvas.currentNodeName)&&node.ID== canvas.currentNodeID
                            && node.primaryKey.equals(canvas.currentNodePrimaryKey)){
                        try {
                            node.thisFace.config(rightBotJTextPane);
                            node.thisFace.thisPanel.setLocation(node.x, node.y);
                            node.thisFace.thisPanel.setSize(300, 300);
                            node.thisFace.thisPanel.setResizable(true);
                            node.thisFace.thisPanel.jsp.setBounds(0,                              0,
    node.thisFace.thisPanel.getWidth()-10
                                    , node.thisFace.thisPanel.getHeight()-45);
                            node.thisFace.thisPanel.jp.setPreferredSize(new Dimension(800,600));
                            node.thisFace.thisPanel.setBackground(Color.BLUE);
                            node.thisFace.thisPanel.setVisible(true);
                            node.thisFace.thisPanel.validate();
                            new OSGI_chansfer(node, first.first);
                        } catch (IOException
                            e1){ rightBotJTextPane.setText(StableData.NODE_UPDATE_ER
                            ROR); rightBotJTextPane.validate();
                        }
                    }
                    node= node.next;
                }


            }
        });
rightBotJTextPane.setText(StableData.NODE_UPDATE_SUCCESS);
rightBotJTextPane.validate();
        run.addActionListener(new java.awt.event.ActionListener()
            { public void actionPerformed(ActionEvent e) {
                LinkNode node= new LinkNode();
                first.first= new Sort().sort(first.first);
                node= first.first;
                while(node!= null){
                    if(node.name.equals(canvas.currentNodeName)&&node.ID == canvas.currentNodeID
                        && node.primaryKey.equals(canvas.currentNodePrimaryKey)){
                    try {
                        node.thisFace.execute(rightBotJTextPane);
                    } catch (FileNotFoundException e1)
                        { rightBotJTextPane.setText(StableData.NODE_EXEC_ERROR);
                        rightBotJTextPane.validate();
                    } catch (IOException e1)
                        { rightBotJTextPane.setText(StableData.NODE_EXEC_ERROR);
                        rightBotJTextPane.validate();
                    } catch (UnsupportedAudioFileException e2)
                        { rightBotJTextPane.setText(StableData.NODE_EXEC_ERROR);
                        rightBotJTextPane.validate();
                    } catch (InterruptedException e3)
                        { rightBotJTextPane.setText(StableData.NODE_EXEC_ERROR);
                        rightBotJTextPane.validate();
                    }
                }
                node= node.next;
            }
            rightBotJTextPane.setText(StableData.NODE_EXEC_SUCCESS);
            rightBotJTextPane.validate();
        }
    });
    show.addActionListener(new java.awt.event.ActionListener()
        { public void actionPerformed(ActionEvent e) {
            LinkNode node= new LinkNode();
            first.first= new Sort().sort(first.first);
            node= first.first;
            while(node!=
                null){ if(node.name.equals(canvas.currentNodeName)&&node.ID==canvas.currentNodeID
                        &&
                    node.primaryKey.equals(canvas.currentNodePrimaryKey)){ if(!no
                    de.thisFace.showed){
                        try {
                            node.thisFace.view(rightBotJTextPane);
                            node.thisFace.thisView.setLocation(node.x, node.y);
                            node.thisFace.thisView.setSize(500, 500);
                            node.thisFace.thisView.setResizable(true);
                            node.thisFace.thisView.jsp.setBounds(0,                          0,
node.thisFace.thisPanel.getWidth()-10
                                , node.thisFace.thisPanel.getHeight()-45);
                            node.thisFace.thisView.jp.setPreferredSize(new Dimension(800,600));
                            node.thisFace.thisView.setVisible(true);
                            node.thisFace.thisView.validate();
                        } catch (Exception e1) {
                            //e1.printStackTrace();
                            rightBotJTextPane.setText(StableData.NODE_INSPECT_ERROR);
                            rightBotJTextPane.validate();
                        }
                    }else{
                        node.thisFace.thisView.setVisible(true);
                    }
                }
                node=node.next;
            }
            rightBotJTextPane.setText(StableData.NODE_INDICATE_SUCCESS);
            rightBotJTextPane.validate();
        }
    });
    dnode.addActionListener(new java.awt.event.ActionListener()
        { public void actionPerformed(ActionEvent e) {
            LinkNode node=new LinkNode();
            first.first=new Sort().sort(first.first);
            node=first.first;
            while(node!=null){
                if(node.name.equals(canvas.currentNodeName)&&node.ID== canvas.currentNodeID
                        && node.primaryKey.equalsIgnoreCase(canvas.currentNodePrimaryKey) ){
                    first.first= first.deletNode(first.first, node.name, node.ID,
node.primaryKey);
                    new UpdateRelatedLine(first.first, canvas.currentNodeName,
canvas.currentNodeID
                            , canvas.currentNodePrimaryKey);
                }
```

```
                    node= node.next;
                }
                canvas.repaint();
            }
        });
        dline.addActionListener(new java.awt.event.ActionListener()
            { public void actionPerformed(ActionEvent e) {
                LinkNode node=new LinkNode();
                first.first=new Sort().sort(first.first);
                node=first.first;
                while(node!=null){ if(node.beconnect&&node.name.equals(canvas.currentNodeNa
                    me)&&
node.ID==canvas.currentNodeID
                            &&
                        node.primaryKey.equals(canvas.currentNodePrimaryKey)){ node.b
                        econnect=false;
                        node.tBeconnect=false;
                        node.mBeconnect=false;
                        node.dBeconnect=false;
                    }
                    node= node.next;
                }
                canvas.repaint();
            }
        });
    }
    public void
        init(){ try {
            CreatMap();
        } catch (IOException e)
            { e.printStackTrace();
        }
        Registrar();
        this.resize(w,h);
    }
    public void init(Object[][] tableData_old,JTextPane
        text){ try {
            this.text= text;
            this.tableData_old= tableData_old;
            CreatMap();
        } catch (IOException e)
            { e.printStackTrace();
        }
        Registrar();
        this.resize(w,h);
    }
    private void CreatMap() throws IOException
        { w= 1446- 130;
        h= 820- 110;
```

```
getContentPane().setLayout(null);
UIManager.put("SplitPaneUI", "org.LYG.GUI.platForm.UnicornSplitPaneUI");
UIManager.put("ScrollBarUI", "org.LYG.GUI.platForm.UnicornScrollBarUI");
UIManager.put("TreeUI", "org.LYG.GUI.platForm.UnicornTreeUI");
currentNodeName= new String("");
first= new LinkList();
nodeInfo= new NodeInfo();
nodeView= new NodeShow(this.tableData_old, this.text);
nodeView.tree.setBackground(Color.white);
nodeView.setBounds(10, 168, 137, 222);
nodeProject= new NodeProject();
nodeProject.setBounds(10, 38, 137, 124);
mainSplitPane = new UnicornJSplitPane();
mainSplitPane.setAutoscrolls(true);
//mainSplitPane.setEnabled(false);//
mainSplitPane.setBounds(10, 50, w-20, h-80);
mainSplitPane.setVisible(true);
getContentPane().add(mainSplitPane);
leftSplitPane= new UnicornJSplitPane();
leftSplitPane.setOrientation(JSplitPane.VERTICAL_SPLIT);
mainSplitPane.setLeftComponent(leftSplitPane);
leftSplitPane.setLeftComponent(nodeProject);
leftSplitPane.setRightComponent(nodeView);
rightSplitPane= new UnicornJSplitPane();
rightSplitPane.setOrientation(JSplitPane.VERTICAL_SPLIT);
mainSplitPane.setRightComponent(rightSplitPane);
righttopSplitPane= new UnicornJSplitPane();
rightSplitPane.setLeftComponent(righttopSplitPane);
rightBotJTextPane= new JTextPane();
rightBotJTextPane.setText("你好，亲~");
nodeMenu= new PopupMenu();
canvas= new ThisCanvas(threadApplet, first, nodeView, nodeMenu, rightBotJTextPane);
canvas.setPreferredSize(new Dimension(1500,1000));
canvas.setEnabled(true);
righttopScrollPane= new JScrollPane();
righttopScrollPane.setViewportView(canvas);
righttopSplitPane.setLeftComponent(righttopScrollPane);
rightrightScrollPane= new JScrollPane();
righttopSplitPane.setRightComponent(nodeInfo);
rightdownScrollPane= new JScrollPane(rightBotJTextPane);
rightSplitPane.setRightComponent(rightdownScrollPane);
popupMenu= new PopupMenu();
menuItem= new MenuItem();
menuItem.setLabel("add");
popupMenu.add(menuItem);
configre= new MenuItem();
configre.setLabel("配置");
run= new MenuItem();
run.setLabel(" 运 行 ");
```

```
        show= new MenuItem();
        show.setLabel(" 显 示 ");
        dnode= new MenuItem();
        dnode.setLabel(" 删 除 该 节 ");
        dline= new MenuItem();
        dline.setLabel(" 删 除 链 接 ");
        nodeMenu.add(configre);
        nodeMenu.add(run);
        nodeMenu.add(show);
        nodeMenu.add(dnode);
        nodeMenu.add(dline);
        getContentPane().add(popupMenu);
        getContentPane().add(nodeMenu);
        engineMenu= new PopupMenu();
        load= new MenuItem();
        load.setLabel(StableData.CONFIG_LOAD);
        save= new MenuItem();
        save.setLabel(StableData.CONFIG_UPDATE);
        saveAs= new MenuItem();
        saveAs.setLabel(StableData.CONFIG_SAVE);
        delete= new MenuItem();
        delete.setLabel(StableData.CONFIG_DELETE);
        engineMenu.add(load); engineMenu.add(save);
        engineMenu.add(saveAs);
        engineMenu.add(delete);
        getContentPane().add(engineMenu);
        getContentPane().setVisible(true);
    }
    public void actionPerformed(ActionEvent arg0) {}
    public void itemStateChanged(ItemEvent arg0) {}
    public void mouseClicked(MouseEvent arg0) {}
    public void mouseEntered(MouseEvent arg0) {}
    public void mouseExited(MouseEvent arg0) {}
    public void mousePressed(MouseEvent arg0) {}
    public void mouseReleased(MouseEvent arg0) {
        TreePath path = nodeView.tree.getPathForLocation(arg0.getX(), arg0.getY());
        if (path != null){
            nodeView.tree.setSelectionPath(path);
            if (arg0.getButton() == 3){
                popupMenu.show(nodeView.tree, arg0.getX(), arg0.getY());
            }else {
                engineMenu.show(canvas, 0, 0);
            }
        }else {
            engineMenu.show(canvas, 0, 0);
        }
    }
    public void mouseDragged(MouseEvent arg0) {}
    public void mouseMoved(MouseEvent arg0) {}
```

```
}
*****************************************************************************************
package org.LYG.GUI.Flash;
import java.awt.Color;
import java.awt.Graphics;
import java.awt.Graphics2D;
import java.awt.MenuItem;
import java.awt.PopupMenu;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.ItemEvent;
import java.awt.event.ItemListener;
import java.awt.event.MouseEvent;
import java.awt.event.MouseListener;
import java.awt.event.MouseMotionListener;
import javax.swing.JPanel;
import javax.swing.JScrollPane;
import javax.swing.JTextPane;
import org.LYG.GUI.nodeEdit.CheckRange;
import org.LYG.GUI.nodeEdit.ChooseCheck;
import org.LYG.GUI.nodeEdit.DrawArrow;
import org.LYG.GUI.nodeEdit.DrawFlashSide;
import org.LYG.GUI.nodeEdit.DynamicLineUpdater;
import org.LYG.GUI.nodeEdit.LinkList;
import org.LYG.GUI.nodeEdit.LinkNode;
import org.LYG.GUI.nodeEdit.Sort;
import org.LYG.GUI.nodeInfo.NodeInfo;
import org.LYG.GUI.nodeProject.NodeProject;
import org.LYG.GUI.nodeView.NodeShow;
import org.LYG.GUI.platForm.UnicornJSplitPane;
import org.LYG.sets.stable.StableData;
public class ThisCanvas extends JPanel implements MouseMotionListener
, MouseListener, ItemListener, ActionListener,
    Runnable{ private static final long serialVersionUID
    = 1L; public Thread threadApplet;
    public String fileCurrentpath;
    public int w, h;
    public int flash= 0;
    public int count= 0;
    public String currentNodeName;
    public int currentNodeID;
    public String currentNodePrimaryKey;
    public LinkList first;
    public int currentx, currenty;
    public int choose= 0;
    public int oldx, oldy;
    public int newx, newy;
    public int isOperation= 0;
    public String treeNodeName;
public NodeShow nodeView;
public NodeProject nodeProject;
public NodeInfo nodeInfo;
public UnicornJSplitPane mainSplitPane;
public UnicornJSplitPane leftSplitPane;
public UnicornJSplitPane rightSplitPane;
public UnicornJSplitPane righttopSplitPane;
public JScrollPane righttopScrollPane;
public JScrollPane rightdownScrollPane;
public JScrollPane rightrightScrollPane;
public JTextPane rightBotJTextPane;
public PopupMenu popupMenu, nodeMenu, itemMenu, engineMenu;
public MenuItem save, saveAs, delete, load;
public MenuItem menuItem;
public MenuItem configre, run, show, dnode, dline;
public ThisCanvas(Thread threadApplet, LinkList first, NodeShow nodeView
        , PopupMenu nodeMenu, JTextPane
    rightBotJTextPane){ this.setLayout(null);
    this.addMouseListener(this);
    this.addMouseMotionListener(this);
    this.start();
    this.setOpaque(false);
    this.threadApplet= threadApplet;
    this.first= first;
    this.nodeView= nodeView;
    this.nodeMenu= nodeMenu;
    this.rightBotJTextPane= rightBotJTextPane;
}
@SuppressWarnings(StableData.TAG_DEPRECATION)
public void run() {
    while(true){
         try{
            Thread.sleep(1000);
            this.updateUI();
        }catch (InterruptedException e)
            { threadApplet.destroy();
            e.printStackTrace();
        }
    }
}
public void
    start(){ if(null==
    threadApplet){
        threadApplet =  new Thread(this);
        threadApplet.start();
    }
}
@SuppressWarnings("deprecation")
public void stop() {
    threadApplet.destroy();
}
public void actionPerformed(ActionEvent arg0) {}
public void itemStateChanged(ItemEvent arg0) {}
public void mouseClicked(MouseEvent arg0) {}
public void mouseEntered(MouseEvent arg0) {}
public void mouseExited(MouseEvent arg0) {}
public void mousePressed(MouseEvent arg0) {
    isOperation = 1;
    oldx = arg0.getX();
    oldy = arg0.getY();
    currentx = arg0.getX();
    currenty = arg0.getY();
    LinkNode node= new ChooseCheck().chooseCheckNode(first.first, arg0);
    currentNodeName = node.name;
    currentNodeID = node.ID;
    currentNodePrimaryKey = node.primaryKey;
    rightBotJTextPane.setText("坐标位："+arg0.getX()+"|"+arg0.getY());
    rightBotJTextPane.validate();
}
public void mouseReleased(MouseEvent
    arg0){ isOperation = 0;
    currentx = arg0.getX();
    currenty = arg0.getY();
    LinkNode node = first.first;
    while(node != null){
        if(node.rightChoose
            &&  !node.leftChoose){ if(oldx ==
            arg0.getX()&&oldy == arg0.getY()){
                nodeMenu.show(this, arg0.getX(), arg0.getY());
            }
            else{
                new CheckRange(first.first, node,arg0);
            }
        }
        node.setchoose(false);
        node.rightChoose = false;
        node = node.next;
    }
}
public void mouseDragged(MouseEvent e)
    { isOperation=1;
    try {
        Thread.sleep(100);
    } catch (InterruptedException e1)
        { e1.printStackTrace();
    }
    currentx= e.getX();
    currenty= e.getY();
    first.first= new Sort().sort(first.first);
    LinkNode node= first.first;
    Graphics g= getGraphics();
    Graphics2D g2= (Graphics2D)g;
    g2.setColor(Color.black);
    while(null!= node){
        if(node.leftChoose&& !node.rightChoose){
             node.setxy(e.getX(), e.getY());
            new DynamicLineUpdater().exec(first.first, node);
        }
        if(!node.leftChoose&&node.rightChoose){
            new DrawArrow(g2,oldx, oldy, e.getX(), e.getY());
        }
        node= node.next;
        this.update(g);
        g.dispose();
    }
}
public void mouseMoved(MouseEvent arg0) {
}
public void paint(Graphics g){
nodeView.validate(); Graphics2D g2= (Graphics2D)g;
    g2.clearRect(0, 0, this.getWidth(), this.getHeight());
    first.first = new Sort().sort(first.first);
    LinkNode node= first.first;
    while(node!= null){
        if(node.x< 0){
            node.x= 10;
        }
        if(node.x> (this.getWidth()-
            100)){ node.x=
            this.getWidth()-100;
        }
        if(node.y < 0){
            node.y = 10;
        }
        if(node.y > (this.getHeight()-
            100)){ node.y =
            this.getHeight()-100;
        }
        g.drawImage(node.thisFace.thisImage, node.x+19, node.y+12, this);
        if(node.flash > 100){
            node.flash = 0;
        }
        if(0 == isOperation) {
            new DrawFlashSide(g2, node.x, node.y, node.flash++ % 3);
        }else {
            new DrawFlashSide(g2, node.x, node.y, node.flash);
        }
```

```
            g2.setColor(Color.black);
            g.drawString(node.name + "->" + node.ID,node.x - 5, node.y-20);
            g2.setColor(new Color(25, 25, 112));
            if(node.beconnect){ if(n
                ode.tBeconnect){
                    new DrawArrow(g2, node.tBeconnectX+62, node.tBeconnectY+28, node.x+14, node.y-6);
                    if(!node.leftChoose&&node.rightChoose){
                        g2.setColor(Color.black);
                        new DrawArrow(g2, oldx, oldy, currentx, currenty);
                        g2.setColor(new Color(25,25,112));
                    }
                }
                if(node.mBeconnect){
                    new DrawArrow(g2, node.mBeconnectX+62, node.mBeconnectY+28, node.x-4, node.y+25);
                    if(!node.leftChoose&& node.rightChoose){
                        g2.setColor(Color.black);
                        new DrawArrow(g2, oldx, oldy, currentx, currenty);
                        g2.setColor(new Color(25, 25, 112));
                    }
                }
                if(node.dBeconnect){
                    new DrawArrow(g2, node.dBeconnectX+ 62, node.dBeconnectY+ 28, node.x+ 6, node.y+
55);

if(!node.leftChoose&&
    node.rightChoose){ g2.setColor(Color.black);
    new DrawArrow(g2, oldx, oldy, currentx, currenty); g2.setColor(new
    Color(25, 25, 112));
                    }
                }
            }else if(!node.leftChoose&&
                node.rightChoose){ g2.setColor(Color.black)
                ;
                new DrawArrow(g2, oldx, oldy, currentx, currenty);
                g2.setColor(new Color(25, 25, 112));
            }
            node = node.next;
        }
    }
}
***************************************************************************************
package org.LYG.GUI.nodeEdit;
import java.awt.event.MouseEvent;
public class CheckRange{
    public CheckRange(LinkNode first,LinkNode node, MouseEvent arg0)
        { LinkNode linkNode=first;
        int x,y;
        x= arg0.getX();
        y= arg0.getY();
        while(null != linkNode){
            if((x>linkNode.x-20)&& (x<linkNode.x+100)&& (y>linkNode.y-100)&& (y<linkNode.y+16)
                    && (!node.primaryKey.equalsIgnoreCase(linkNode.primaryKey))){
                linkNode.beconnect= true;
                linkNode.tBeconnect= true;
                linkNode.tBeconnectX= node.x;
                linkNode.tBeconnectY= node.y;
                linkNode.tBeconnectID= node.ID;
                linkNode.tBeconnectPrimaryKey= node.primaryKey;
                linkNode.tBeconnetName= new String(node.name);
                return;
            }
            if((x>linkNode.x-20)&& (x<linkNode.x+50)&& (y>linkNode.y+16)&& (y<linkNode.y+32)
                    && (!node.primaryKey.equalsIgnoreCase(linkNode.primaryKey))){
                linkNode.beconnect= true;
                linkNode.mBeconnect= true;
                linkNode.mBeconnectX= node.x;
                linkNode.mBeconnectY= node.y;
                linkNode.mBeconnectID= node.ID;
                linkNode.mBeconnectPrimaryKey= node.primaryKey;
                linkNode.mBeconnetName= new String(node.name);
                return;
            }
            if((x>linkNode.x-20)&& (x<linkNode.x+50)&& (y>linkNode.y+32)&& (y<linkNode.y+100)
                    &&
                (!node.primaryKey.equalsIgnoreCase(linkNode.primaryKey))){ linkNo
                de.beconnect= true;
                linkNode.dBeconnect= true;
                linkNode.dBeconnectX= node.x;
                linkNode.dBeconnectY= node.y;
                linkNode.dBeconnectID= node.ID;
                linkNode.dBeconnectPrimaryKey= node.primaryKey;
                linkNode.dBeconnetName= new String(node.name);
                return;
            }
            linkNode= linkNode.next;
        }
    }
}
**************************************************************************************
package org.LYG.GUI.nodeEdit;
import java.awt.*;
public class DrawArrow{
    public DrawArrow(Graphics2D g2, int x, int y, int connectX, int connectY)
        { x+= 10;
        connectX-= 10;
        g2.setStroke(new BasicStroke(2, BasicStroke.CAP_SQUARE, BasicStroke.JOIN_ROUND));
        drawCurve(g2, x, y, connectX, connectY, 6);
        DrawSinLine.drawHead(connectX-8, connectY-3, g2);
    }
    private void drawCurve(Graphics2D g2, int x, int y, int connectX, int connectY, double scale)
        { double distanceX = Math.abs(x - connectX);
        double distanceY = Math.abs(y -  connectY);
        double signOfPointX = (x - connectX < 0)? 1: -1;
        double signOfPointY = (y - connectY < 0)? 1: -1;
        double averageOfDistanceY = (distanceX == 0)?0: distanceY/distanceX;
        double signOfPointYWithaverageOfDistanceY= averageOfDistanceY*signOfPointY;
        double oldRegisterY=0;
        boolean firstTime= true;
        if(signOfPointX == 1) {
            for(int c = 0, i = x; i < connectX - 16; c+= 8, i+= 8) {
                double registerY = y + signOfPointYWithaverageOfDistanceY * c + scale
                        * Math.sin(averageOfDistanceY * c / 6);
                g2.drawLine(i, true== firstTime? (int)registerY: (int)oldRegisterY
                        , i+8, (int)registerY);
                oldRegisterY= registerY;
                firstTime= false;
            }
        }
        if(signOfPointX == -1) {
            for(int c = 0, i = x; i > connectX + 2; c+= 8, i-= 8) {
                double registerY = y + signOfPointYWithaverageOfDistanceY * c + scale
                        * Math.sin(averageOfDistanceY * c / 6 );
                g2.drawLine(i, true== firstTime? (int)registerY: (int)oldRegisterY
                        , i-8, (int)registerY);
                oldRegisterY=registerY;
                firstTime= false;
            }
        }
    }
}
***************************************************************************************
package org.LYG.GUI.nodeEdit;
import java.awt.Color;
import java.awt.Graphics2D;
public class DrawFlashSide{
    public DrawFlashSide(Graphics2D g2, int x, int y, int flash)
        { if(0 >= flash){
            g2.setColor(Color.blue);
            DrawSinLine.drawCosLine(x, y, g2);
            g2.setColor(Color.pink);
            DrawSinLine.drawSinLine(x, y, g2);
        }
        if(1 ==
            flash){ g2.setColor(Color.ORANGE);
            DrawSinLine.drawCosLine(x, y, g2);
            g2.setColor(Color.blue);
            DrawSinLine.drawSinLine(x, y, g2);
        }
        if(2 <=
            flash){ g2.setColor(Color.ORANGE);
            DrawSinLine.drawCosLine(x, y, g2);
            g2.setColor(Color.RED);
            DrawSinLine.drawSinLine(x, y, g2);
        }
        drawConnect(g2, x, y);
    }
    //for cell postfix
    private void drawConnect(Graphics2D g2, int x, int y)
        { g2.drawOval(x + 10, y - 8, 4, 4);
        g2.drawOval(x - 8, y + 22, 4, 4);
        g2.drawOval(x + 2, y + 52, 4, 4);
        g2.drawOval(x + 62, y + 26, 4, 4);
    }
}
*************************************************************************************
package org.LYG.GUI.nodeEdit;
import java.awt.Graphics2D;
import org.LYG.GUI.theme.neroCell.DrawArrowHead;
import org.LYG.GUI.theme.neroCell.DrawNeroCellMask31;
import org.LYG.GUI.theme.neroCell.DrawNeroCellMask32;
public class DrawSinLine{
    public static void drawCosLine(int x0, int y0, Graphics2D g2) {
        for(int y = 0; y < DrawNeroCellMask31.neroShape.length; y++)
            { for(int x = 0; x < DrawNeroCellMask31.neroShape[0].length; x++)
            {
                if(1 == DrawNeroCellMask31.neroShape[y][x])
                    { g2.drawLine(x + x0, y + y0, x + x0, y +
                    y0);
                }
            }
        }
    }
    public static void drawSinLine(int x0, int y0, Graphics2D g2)
        { for(int y = 0; y < DrawNeroCellMask32.neroShape.length; y++)
        {
            for(int x = 0; x < DrawNeroCellMask32.neroShape[0].length; x++)
                { if(1 == DrawNeroCellMask32.neroShape[y][x]) {
                    g2.drawLine(x + x0, y + y0, x + x0, y + y0);
                }
            }
        }
    }
    public static void drawHead(int x0, int y0, Graphics2D g2)
        { for(int y = 0; y < DrawArrowHead.neroShape.length; y++)
        {
            for(int x = 0; x < DrawArrowHead.neroShape[0].length; x++)
```

```
                { if(1 == DrawArrowHead.neroShape[y][x]) {
                    g2.drawLine(x + x0, y + y0, x + x0, y + y0);
                }
            }
        }
    }
}
**************************************************************************************
package org.LYG.GUI.nodeEdit;
public class DynamicLineUpdater{
    public void exec(LinkNode first,LinkNode
        node){ LinkNode linkNode= first;
        while(null != linkNode)
            { if(linkNode.primaryKey.equalsIgnoreCase(node.tBeconnectPrimaryKey)){
                node.tBeconnectX= linkNode.x;
                node.tBeconnectY= linkNode.y;
            }
            if(linkNode.tBeconnectPrimaryKey.equalsIgnoreCase(node.primaryKey)){ linkNode.tB
                econnectX= node.x;
                linkNode.tBeconnectY= node.y;
            }
            if(linkNode.primaryKey.equalsIgnoreCase(node.mBeconnectPrimaryKey)){ node.mBecon
                nectX= linkNode.x;
                node.mBeconnectY= linkNode.y;
            }
            if(linkNode.mBeconnectPrimaryKey.equalsIgnoreCase(node.primaryKey)){ linkNode.mB
                econnectX= node.x;
                linkNode.mBeconnectY= node.y;
            }
            if(linkNode.primaryKey.equalsIgnoreCase(node.dBeconnectPrimaryKey)){ node.dBecon
                nectX= linkNode.x;
                node.dBeconnectY= linkNode.y;
            }
            if(linkNode.dBeconnectPrimaryKey.equalsIgnoreCase(node.primaryKey)){ linkNode.dB
                econnectX= node.x;
                linkNode.dBeconnectY= node.y;
            }
            linkNode= linkNode.next;
        }
        linkNode = null;
    }
    public DynamicLineUpdater() {
    }
}
**************************************************************************************
package org.LYG.GUI.nodeEdit;
import java.io.IOException;
import org.LYG.GUI.OSGI.*;
public class LinkList{
```

```
int index= 0;
String key;
public LinkNode first;
public int sum_of_nude= 0;
public LinkList(){}
public boolean search(LinkNode linkNode, String
    key){ if(null== linkNode){
        return false;
    }
    if(linkNode.name.equals(key)){
         return true;
    }
    while(null !=
        linkNode.next){ linkNode=linkN
        ode.next;
        if(linkNode.name.equals(key)){
            while(null !=
                linkNode.pre){ linkNode=
                linkNode.pre;
            }
            return true;
        }
    }
    return false;
}
public LinkNode addNodeOnlyWithFace(LinkNode linkNode, NodeOSGI nOSGI)
        throws CloneNotSupportedException, InstantiationException
        , IllegalAccessException, IOException
    { NodeOSGI currentOSGI= nOSGI;
    while(null!= currentOSGI && null!=
        currentOSGI.pre){ currentOSGI= currentOSGI.pre;
    }
    if(null!=
        linkNode){ while(null!=
        currentOSGI){
            if(currentOSGI.thisName.equals(linkNode.name)){ linkNode.this
                Face= currentOSGI.currentFace.luoyaoguang();
                sum_of_nude++;
                index++;
                return linkNode;
            }
            currentOSGI= currentOSGI.next;
        }
    }
    index++;
    sum_of_nude++;
    return linkNode;
}
public LinkNode addNode(LinkNode linkNode, String treeNodeName,int x,int y,NodeOSGI nOSGI )
```

```
        throws CloneNotSupportedException, InstantiationException, IllegalAccessException
        , IOException
    { NodeOSGI currentOSGI=
    nOSGI;
    while(null!= currentOSGI && null!=
        currentOSGI.pre){ currentOSGI= currentOSGI.pre;
    }
    if(null==
        linkNode){ while(null!=
        currentOSGI){
            if(currentOSGI.thisName.equals(treeNodeName)){
                linkNode= new LinkNode();
                linkNode.addName(treeNodeName,x,y,++index);
                linkNode.thisFace= currentOSGI.currentFace.luoyaoguang();
                linkNode.next= null;
                linkNode.pre= null;
                sum_of_nude++;
                return linkNode;
            }
            currentOSGI=currentOSGI.next;
        }
    }
    while(null!=
        linkNode.next){ linkNode
        = linkNode.next;
    }
    while(null!=
        currentOSGI){ if(currentOSGI.thisName.equals(t
        reeNodeName)){
            //linkNode=new linkNode();
            LinkNode node = new LinkNode();
            node.addName(treeNodeName, x, y, ++index);
            node.thisFace= currentOSGI.currentFace.luoyaoguang();
            node.pre= linkNode;
            linkNode.next= node;
            sum_of_nude ++;
            return linkNode;
        }
        currentOSGI = currentOSGI.next;
    }
    while(null !=
        linkNode.pre){ linkNode
        = linkNode.pre;
    }
    sum_of_nude++;
    return linkNode;
}
public LinkNode deletNode(LinkNode linkNode, String name, int ID, String
    primaryKey){ if(null!= linkNode){
            if(linkNode.name.equals(name)&& linkNode.ID== ID
                    &&
                linkNode.primaryKey.equalsIgnoreCase(primaryKey)){ if(nul
                l!= linkNode.next){
                    linkNode= linkNode.next;
                    linkNode.pre= null;
                    return linkNode;
                }
                if(null==
                    linkNode.next){ linkN
                    ode= null; return
                    linkNode;
                }
            }
            while(null!=
                linkNode.next){ linkNode
                = linkNode.next;
                if(linkNode.name.equals(name)&& linkNode.ID== ID
                        &&
                    linkNode.primaryKey.equalsIgnoreCase(primaryKey)){ if(nul
                    l!= linkNode.next){
                        @SuppressWarnings("unused")
                        LinkNode node= linkNode;
                        linkNode= linkNode.next;
                        linkNode.pre= linkNode.pre.pre;
                        linkNode.pre.next= linkNode;
                        node= null;
                        linkNode= new Sort().sort(linkNode);
                        return linkNode;
                    }
                    if(null==
                        linkNode.next){ linkNod
                        e= linkNode.pre;
                        linkNode.next= null;
                        linkNode= new Sort().sort(linkNode);
                        return linkNode;
                    }
                }
            }
        }
        return linkNode;
    }
}
*****************************************************************************************
package org.LYG.GUI.nodeEdit;
import org.LYG.GUI.OSGI.ObjectInterface;
public class LinkNode extends Thread{
    public String primaryKey= "";
    public int flash= 0;
public Boolean beconnect;
public Boolean leftChoose;
public Boolean rightChoose;
public Boolean tBeconnect;
public int tBeconnectX;
public int tBeconnectY;
public String tBeconnetName;
public String tBeconnectPrimaryKey= "";
public int tBeconnectID;
public Boolean mBeconnect;
public int mBeconnectX;
public int mBeconnectY;
public String mBeconnetName;
public String mBeconnectPrimaryKey= "";
public int mBeconnectID;
public Boolean dBeconnect;
public int dBeconnectX;
public int dBeconnectY;
public String dBeconnetName;
public String dBeconnectPrimaryKey= "";
public int dBeconnectID;
public String name;
public LinkNode pre;
public LinkNode next;
public int  ID;
public int x, y;
public ObjectInterface thisFace;
public LinkNode(){}
public void addName(String thisName, int x1,int y1,int
    id1){ beconnect= false;
    rightChoose= false;
    leftChoose= false;
    tBeconnect= false;
    mBeconnect= false;
    dBeconnect= false;
    x= x1;
    y= y1;
    name= new String(thisName);
    ID= id1;
    tBeconnectPrimaryKey= "";
    mBeconnectPrimaryKey= "";
    dBeconnectPrimaryKey= "";
    tBeconnectID= 0;
    mBeconnectID= 0;
    dBeconnectID= 0;
    primaryKey=""+ Math.random();
}
public void setxy(int x1,int
    y1){ x= x1;
```

```
        y= y1;
    }
    public void setchoose(Boolean
        choose){ leftChoose= choose;
    }
}
**************************************************************************************
package org.LYG.GUI.nodeEdit;
public class UpdateRelatedLine{
    public UpdateRelatedLine(LinkNode first, String currentNodeName
            , int currentNodeID, String
        currentNodePrimaryKey){ first = new Sort().sort(first);
        while(null!= first) {
            if(first.tBeconnect&& first.tBeconnetName.equals(currentNodeName)
                    && first.tBeconnectID==currentNodeID
                    &&
                first.tBeconnectPrimaryKey.equalsIgnoreCase(currentNodePrimaryKey)){ first.
                tBeconnect= false;
            }
            if(first.mBeconnect&& first.mBeconnetName.equals(currentNodeName)
                    && first.mBeconnectID==currentNodeID
                    &&
                first.mBeconnectPrimaryKey.equalsIgnoreCase(currentNodePrimaryKey)){ first.
                mBeconnect= false;
            }
            if(first.dBeconnect&& first.dBeconnetName.equals(currentNodeName)
                    && first.dBeconnectID==currentNodeID
                    &&
                first.dBeconnectPrimaryKey.equalsIgnoreCase(currentNodePrimaryKey)){ first.
                dBeconnect= false;
            }
            if(null== first.next)
                { break;
            }
            first= first.next;
        }
    }
}
**************************************************************************************
package org.LYG.GUI.nodeInfo;
import javax.swing.ImageIcon;
import javax.swing.JScrollPane;
import java.awt.*;
import javax.swing.*;
@SuppressWarnings({"unchecked","rawtypes"})
public class NodeInfo extends JScrollPane {
    private static final long serialVersionUID= 866589699634559456L;
    String[] countryStrings= {"china", "ca", "denmark", "fr", "genmany"
            , "india", "norway", "uk", "us"};
    private ImageIcon[] images= {
            new ImageIcon(this.getClass().getResource("china.gif")),
            new ImageIcon(this.getClass().getResource("us.gif")),
            new ImageIcon(this.getClass().getResource("denmark.gif")),
            new ImageIcon(this.getClass().getResource("fr.gif")),
            new ImageIcon(this.getClass().getResource("germany.gif")),
            new ImageIcon(this.getClass().getResource("india.gif")),
            new ImageIcon(this.getClass().getResource("norway.gif")),
            new ImageIcon(this.getClass().getResource("uk.gif")),
            new ImageIcon(this.getClass().getResource("ca.gif")) };
    public NodeInfo() {
        Integer[] intArray= new Integer[countryStrings.length];
        JComboBox countryList= new JComboBox(intArray);
        countryList.setMaximumRowCount(5);
        for (int i= 0; i< countryStrings.length; i++)
            { intArray[i]= new Integer(i);
            if (images[i]!= null)
                { images[i].setImage(images[i].getImage().getScaledInstance
                        (50, 50, Image.SCALE_DEFAULT));
                images[i].setDescription(countryStrings[i]);
            }
        }
        countryList.removeAllItems();
        for(int i=0; i<images.length; i++) {
            countryList.addItem(images[i]);
        }
        this.setViewportView(countryList);
        this.validate();
    }
}
*****************************************************************************************
package org.LYG.GUI.nodeProject;
import java.awt.Graphics;
import java.awt.Graphics2D;
import  java.awt.Image;
import javax.swing.ImageIcon;
import javax.swing.JPanel;
import javax.swing.JScrollPane;
public class NodeProject extends JScrollPane {
    private static final long serialVersionUID = 866589699634559456L;
    private ImageIcon images;
    public Image newimg;
    public MyPanel jPanel;
    public Image img;
    public NodeProject() {
        images= new ImageIcon(this.getClass().getResource("LUO.jpg"));
        img= images.getImage();
        jPanel= new MyPanel();
        jPanel.repaint();
        this.setViewportView(jPanel);
    }
    public class MyPanel extends JPanel
        { public Image newimg;
        private static final long serialVersionUID = 1L;
        public MyPanel(){
            setLayout(null);
        }
        public void paint(Graphics g) {
            ((Graphics2D) g).drawImage(newimg, 0, 0, this);
        }
    }
}
************************************************************************************
package org.LYG.GUI.nodeView;
public class CacuString {
    public String cauString(String
        tr){ String currentstr = new
        String("");
        if(tr.equals("Node")){return null;}
        char[] a = new char[tr.length()];
        for(int i = 0;i < tr.length(); i++) {
            a[i] = tr.charAt(i);
        }
        for(int i = 0;i < tr.length(); i++){
            if(a[i] == 't' && a[i + 1] == 'e' && a[i + 2] == 'x' && a[i + 3] ==
                't'){ for(int j = i + 5; a[j] != ','; j++){
                    currentstr = currentstr + a[j];
                }
                return currentstr;
            }
        }
        return currentstr;
    }
}
************************************************************************************
package org.LYG.GUI.nodeView;
import java.awt.Font;
import javax.swing.ImageIcon;
import javax.swing.JLabel;
import javax.swing.JScrollPane;
import javax.swing.JTextPane;
import javax.swing.JTree;
import java.awt.event.*;
import java.io.IOException;
import javax.swing.tree.*;
import org.LYG.GUI.OSGI.*;
import org.LYG.GUI.extOSGI.*;
import org.LYG.GUI.platForm.UnicornTreeCellRenderer;
```

```
public class NodeShow extends JScrollPane implements MouseListener, ItemListener, ActionListener
    { private static final long serialVersionUID = 1L;
    public JTree tree;
    public NodeOSGI first;
    public LinkOSGI link;
    DefaultTreeModel treeModel;
    DefaultMutableTreeNode root;
    ImageIcon test;
    public String labelname;
    JTextPane text; Object[][]
    tableData_old;
    public NodeShow(Object[][] tableData_old, JTextPane text) throws
        IOException{ this.text= text;
        this.tableData_old= tableData_old;
        link= new LinkOSGI();
        first= new OSGI_rigester(this.tableData_old, this.text).Rigester(first, link);
        DefaultMutableTreeNode root = new DefaultMutableTreeNode("Node");
        treeModel= new DefaultTreeModel(root);
        tree= new JTree(treeModel);
        tree.setExpandsSelectedPaths(true);
        tree.getSelectionModel().setSelectionMode(TreeSelectionModel.SINGLE_TREE_SELECTION);
        tree.putClientProperty("JTree.lineStyle", "Horizontal");
        tree.setEditable(false);
        UnicornTreeCellRenderer myCellRenderer = new UnicornTreeCellRenderer();
        myCellRenderer.setFont(new Font("Serif", Font.ITALIC, 12));
        tree.setCellRenderer(myCellRenderer);
        DefaultMutableTreeNode BI = new DefaultMutableTreeNode("BI");
        DefaultMutableTreeNode SOUND = new DefaultMutableTreeNode("SOUND");
        DefaultMutableTreeNode IMAGE = new DefaultMutableTreeNode("IMAGE");
        DefaultMutableTreeNode MOVIE = new DefaultMutableTreeNode("MOVIE");
        root.add(BI);
        root.add(SOUND);
        root.add(IMAGE);
        root.add(MOVIE);
        if(first!=null){
            if(first.currentFace.position        ==
                null){ JLabel label;
                label = new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node = new DefaultMutableTreeNode(label);
                root.add(node);
            }
            else
                if(first.currentFace.position.equals("BI")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                BI.add(node);
            }
            else
                if(first.currentFace.position.equals("SOUND")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                SOUND.add(node);
            }
            else
                if(first.currentFace.position.equals("IMAGE")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                IMAGE.add(node);
            }
            else
                if(first.currentFace.position.equals("MOVIE")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                MOVIE.add(node);
            }
            else{
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                root.add(node);
            }
            while(first.next!=null)
                { first=first.next;
                if(first.currentFace.position==null){
                    JLabel label;
                    label=new JLabel();
                    label.setIcon(first.thisIcon);
                    label.setText(first.thisName);
                    DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                    root.add(node);
                }
                else
```

```
                if(first.currentFace.position.equals("BI")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                BI.add(node);
            }
            else
                if(first.currentFace.position.equals("SOUND")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                SOUND.add(node);
            }
            else
                if(first.currentFace.position.equals("MOVIE")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                MOVIE.add(node);
            }
            else
                if(first.currentFace.position.equals("IMAGE")){
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                IMAGE.add(node);
            }
            else{
                JLabel label;
                label=new JLabel();
                label.setIcon(first.thisIcon);
                label.setText(first.thisName);
                DefaultMutableTreeNode node=new DefaultMutableTreeNode(label);
                root.add(node);
            }
        }
    }
    this.setViewportView(tree);
    //add(tree);
}
public void actionPerformed(ActionEvent e) {
    }
    public void itemStateChanged(ItemEvent arg0) {
    }
    public void mouseClicked(MouseEvent arg0) {
    }
    public void mouseEntered(MouseEvent arg0) {
    }
    public void mouseExited(MouseEvent arg0) {
    }
    public void mousePressed(MouseEvent arg0) {
    }
    public void mouseReleased(MouseEvent arg0) {
    }
}
```

****

```
package org.LYG.GUI.OSGI;
public class LinkOSGI{
    public NodeOSGI addNode(NodeOSGI currentNode, ObjectInterface currentFace)
        { if(null== currentNode){
            currentNode= new NodeOSGI();
            currentNode.addName(currentFace);
            currentNode.next= null;
            currentNode.pre= null;
            return currentNode;
        }
        while(currentNode.next!=
            null){ currentNode=
            currentNode.next;
        }
        NodeOSGI node= new NodeOSGI();
        node.addName(currentFace);
        node.pre= currentNode;
        currentNode.next= node;
        while(currentNode.pre!= null){
            currentNode= currentNode.pre;
        }
        return currentNode;
    }
}
```

****

```
package org.LYG.GUI.OSGI;
import javax.swing.ImageIcon;
public class NodeOSGI{
    public NodeOSGI next;
    public NodeOSGI pre;
    public ObjectInterface currentFace;
    public ImageIcon thisIcon;
    public String thisName;
    @Override
    public Object clone()
        { NodeOSGI obj =
        null; try{
            obj = (NodeOSGI)super.clone();
        }catch(CloneNotSupportedException e)
            { e.printStackTrace();
        }
        return obj;
    }
    public
        NodeOSGI(){ next=
        null; pre=null;
        currentFace=null;
        thisIcon=null;
        thisName=null;
    }
    public void addName(ObjectInterface
        thisface){ next=null;
        pre=null; currentFace=thisface;
        thisIcon=currentFace.thisIcon;
        thisName=new String(currentFace.thisName);
    }
}
***************************************************************************************
package org.LYG.GUI.OSGI;
import java.awt.Image;
import java.io.FileNotFoundException;
import java.io.IOException;
import javax.sound.sampled.UnsupportedAudioFileException;
import javax.swing.ImageIcon;
import javax.swing.JTextPane;
public class ObjectInterface implements
    Cloneable{ public ImageIcon thisIcon;
    public Image thisImage;
    public String thisName;
    public String position;
    public ObjectPanel thisPanel;
    public ObjectRun thisRun;
    public ObjectView thisView;
    public ObjectInterface thisInterface;
    public boolean showed = false;
    public ObjectInterface luoyaoguang() throws CloneNotSupportedException
    , IOException  {
        return thisInterface;
    }
    public
        ObjectInterface(){ th
        isIcon = null;
        thisImage = null;
        thisName = null;
        thisPanel = new ObjectPanel();
        thisRun = new ObjectRun();
        thisView = new ObjectView();
    }
    public void config(JTextPane rightBotJTextPane) throws IOException{
    }
    public void execute(JTextPane rightBotJTextPane) throws FileNotFoundException
    , IOException, UnsupportedAudioFileException, InterruptedException{
    }
    public void view(JTextPane rightBotJTextPane) throws Exception{
    }
}
*************************************************************************************
package org.LYG.GUI.OSGI;
import java.awt.Panel;
import java.awt.ScrollPane;
import javax.swing.JFrame;
public class ObjectPanel extends JFrame implements
    Cloneable{ private static final long serialVersionUID =
    1L;
    public boolean close = false;
    public ObjectPanel addr;
    public ScrollPane  jsp;
    public String textPane;
    public Panel jp;
    public int h;
    public int w;
    protected ObjectPanel(){
    }
    public void config() {
    }
    public ObjectPanel luoyaoguang()
        { return addr;
    }
}
*************************************************************************************
package org.LYG.GUI.OSGI;
import java.util.Map;
import javax.sound.sampled.AudioInputStream;
import javax.swing.JPanel;
import javax.swing.JTable;
public class ObjectRun extends JPanel implements
    Cloneable{ private static final long serialVersionUID =
    1L;  public ObjectRun addr;
    public JTable toptablein;
    public Map<String, Integer> topMapIn;
    public int[][] topgin;
    public String topsin;
    public AudioInputStream topaisin;
//  public LYGFileIO toplygin;
    public JTable midtablein;
    public int[][] midgin;
    public AudioInputStream midaisin;
//  public LYGFileIO midlygin;
    public JTable downtablein;
    public int[][] downgin;
    public AudioInputStream downaisin;
//  public LYGFileIO downlygin;
    public ObjectRun(){
    }
    @Override
    public ObjectRun clone()
        { return addr;
    }
}
****************************************************************************************
package org.LYG.GUI.OSGI;
import java.awt.Panel;
import java.awt.ScrollPane;
import java.awt.image.BufferedImage;
import java.util.Map;
import javax.sound.sampled.AudioInputStream;
import javax.swing.JFrame;
import javax.swing.JTable;
public class ObjectView extends JFrame implements
    Cloneable{ private static final long serialVersionUID =
    1L;
    public ObjectView addr;
    public ScrollPane jsp;
    public Panel  jp;
    public int h;
    public int w;
    public boolean close=false;
    public JTable tableout;
    public Map<String, Integer> topMapOut;
    public int[][] gout;
    public AudioInputStream aisout;
    public AudioInputStream aiscurout;
//  public LYGFileIO lygout;
    public BufferedImage imageout;
    public ObjectView() {
    }
    public void view() throws Exception{
    }
    public ObjectView clone()
        { return addr;
    }
```

```
}
*************************************************************************************************
package org.LYG.GUI.theme.neroCell;
public class DrawArrowHead{
    public static final int[][] neroShape= {
            {0, 0, 1, 0, 0, 0, 0, 0, 0, 0},
            {0, 0, 1, 1, 1, 1, 0, 0, 0, 0},
            {0, 0, 1, 1, 1, 1, 1, 1, 1, 0},
            {1, 1, 1, 1, 1, 1, 1, 1, 1, 1},
            {0, 0, 1, 1, 1, 1, 1, 1, 1, 0},
            {0, 0, 1, 1, 1, 1, 0, 0, 0, 0},
            {0, 0, 1, 0, 0, 0, 0, 0, 0, 0},
        };

}
*************************************************************************************************
package org.LYG.GUI.theme.neroCell;
public class DrawNeroCellMask31{
    public static final int[][] neroShape= {
    {0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
    {0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
    {0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
    {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
    {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
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        {0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1},
        {1, 0, 0, 0, 0, 0, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0},
        {1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},

            };
}
****************************************************************************************
package org.LYG.sets.stable;
public interface StableData {
        public static final String ATTENSION_UNCURRENT_CHOICE= "当前没有选中文档。";
        public static final String ATTENSION_UPDATE_ENSURE= "确认更新在该文档:";
        public static final String ATTENSION_CANCELLED_OPERATION= "亲，您刚取消了当前操作~";
        public static final String ATTENSION_RECHOICE= "不是.etl格式文档，请重新选择。";
        public static final String ATTENSION_CANCEL_ENSURE= "再次确认要删除吗？是否已经保存？";
        public static final String ATTENSION_DELETE= "亲，当前ETL流删除的干干净净~";
        public static final String ATTENSION_LOAD_ENSURE= "再次确认要导入吗？当前已经保存？";
        public static final String ATTENSION_LOAD_HISTORY= "选择历史档案";
        public static final String FILE_FORMAT_ETL= ".etl";
        public static final String NODE_ADD_ERROR= "节点添加失败~请重试。";
        public static final String NODE_UPDATE_ERROR= "节点配置失败~请重试。";
        public static final String NODE_UPDATE_SUCCESS= "配置成功~";
        public static final String NODE_EXEC_ERROR=   "节点运行失败~请重试。";
        public static final String NODE_INSPECT_ERROR="节点查看失败，请重试~";
        public static final String NODE_INDICATE_SUCCESS= "显示成功~";
        public static final String NODE_EXEC_SUCCESS= " 运 行 成 功 ~";
        public static final String TAG_DEPRECATION= "deprecation";
        public static final String TAG_STATIC_ACCESS= "static-access";
        public static final String TAG_UNUSED= "unused";
        public static final String TAG_UNCHECKED= "unchecked";
        public static final String TAG_RAW_TYPES= "rawtypes";
        public static final String TAG_SERIAL= "serial";
        public static final String TAG_RESOURCE= "resource";
        public static final String CONFIG_LOAD= "载入已有ETL";
        public static final String CONFIG_UPDATE= "保存并更新当前ETL";
        public static final String CONFIG_SAVE= "创建一个新的文档并保存";
        public static final String CONFIG_DELETE= "删除当前ETL";
        public static final String DOC_CREATE= "在当前文件夹下创建一个档案名";
        public static final String DOC_EXIST= "文档已经存在。";
        public static final String MARK_QUESTION= "？";   //......
}
```

****

```
package org.LYG.GUI.platForm;
import javax.swing.JSplitPane;
@SuppressWarnings("serial")
public class UnicornJSplitPane extends JSplitPane {
}
```

****

```
package org.LYG.GUI.platForm;
import javax.swing.plaf.basic.BasicScrollBarUI ;
public final class UnicornScrollBarUI extends BasicScrollBarUI {
}
```

****

```
package org.LYG.GUI.platForm;
import javax.swing.plaf.basic.BasicSplitPaneUI;
public class UnicornSplitPaneUI extends BasicSplitPaneUI {
}
```

****

```
package org.LYG.GUI.platForm;
```

```
import javax.swing.tree.*;
@SuppressWarnings("serial")
public class UnicornTreeCellRenderer extends DefaultTreeCellRenderer {
}
**************************************************************************************
package org.LYG.GUI.platForm;
import javax.swing.plaf.basic.*;
public class UnicornTreeUI extends BasicTreeUI {
}
**************************************************************************************
package org.LYG.document.delete;
import  javax.swing.JTextPane;
import org.LYG.GUI.Flash.ThisCanvas;
import org.LYG.GUI.nodeEdit.LinkList;
import org.LYG.GUI.nodeEdit.LinkNode;
import org.LYG.sets.stable.StableData;
public class DeleteFile{
    @SuppressWarnings(StableData.TAG_STATIC_ACCESS)
    public void delete(JTextPane rightBotJTextPane, LinkNode first, LinkList thislist, ThisCanvas canvas)
{}
}
```

节点 部分例子代码:

```
**************************************************************************************
package org.LYG.node.ai.arffTransfer;
import java.awt.*;
import java.io.FileNotFoundException;
import java.io.IOException;
import javax.swing.*;
import org.LYG.GUI.OSGI.*;
public class arffTransferNodeInterface extends
    ObjectInterface{ public arffTransferNodeInterface() throws
    IOException{
        thisIcon=new ImageIcon(this.getClass().getResource("1.jpg"));
        thisName=new String("arffTransfer");
        position=new String("BI");
        Image img = ((ImageIcon) thisIcon).getImage();
        Image newimg = img.getScaledInstance(30,30,java.awt.Image.SCALE_SMOOTH );
        thisImage=img.getScaledInstance(30,30,java.awt.Image.SCALE_SMOOTH );
        thisIcon = new ImageIcon(newimg);
    }
    public void config(JTextPane jTextPane) throws
        IOException{ thisView=new arffTransferNodeView();
        thisRun=new arffTransferNodeRun();
        thisPanel=new arffTransferNodePanel((arffTransferNodeRun) thisRun);
        thisPanel.config();
        showed=false;
    }
    public void execute(JTextPane jTextPane)  throws FileNotFoundException,
        IOException{ ((arffTransferNodeRun) thisRun).run((arffTransferNodeView)
        thisView);
    }
    public void view(JTextPane jTextPane)  throws
        Exception{ thisView.view();
        showed=true;
    }
    public ObjectInterface luoyaoguang() throws CloneNotSupportedException, IOException
        { thisInterface = new arffTransferNodeInterface();
        return thisInterface;
    }
}
**************************************************************************************
package org.LYG.node.ai.arffTransfer;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.JButton;
import org.LYG.GUI.OSGI.*;
import java.awt.FileDialog;
import java.awt.Frame;
import java.awt.Panel;
import java.awt.ScrollPane;
import java.awt.Color;
public class arffTransferNodePanel extends
    ObjectPanel{ private static final long
    serialVersionUID = 1L; private FileDialog
    filedialog;
    public arffTransferNodePanel(final arffTransferNodeRun
        thisRun){ setLayout(null);
        jsp = new ScrollPane();
        add(jsp);
        jp=new Panel();
        jp.setLayout(null);
        jp.setBackground(Color.white);
        JButton button = new JButton("Finish");
        button.setBounds(0, 0, 100, 30);
        button.addActionListener(new ActionListener(){
            public void actionPerformed(ActionEvent
                e){ System.out.println(e.getSource());
                    close=true;
                    thisRun.value=1;
            }
        });
        jp.add(button);
        JButton readfile= new JButton("Write File");
        readfile.setBounds(0, 35, 100, 65);
        readfile.addActionListener(new ActionListener(){
            public void actionPerformed(ActionEvent arg0) {
                 filedialog=new FileDialog(new Frame(),"filechoose",FileDialog.LOAD);
                 filedialog.setVisible(true);
                thisRun.filepath=filedialog.getDirectory()+filedialog.getFile();
                System.out.println(thisRun.filepath);
               }
            });
        jp.add(readfile);
        jsp.add(jp);
        close=false;
    }
    public void
        config(){ System.out.println("co
        nfigued");
    }
}
*****************************************************************************************
package org.LYG.node.ai.arffTransfer;
import java.io.BufferedWriter;
import java.io.File;
import java.io.FileOutputStream;
import  java.io.IOException;
import java.io.OutputStreamWriter;
import org.LYG.GUI.OSGI.*;
public class arffTransferNodeRun extends
    ObjectRun{ private static final long
    serialVersionUID = 1L; public int value = 0;
    public String filepath;
    public arffTransferNodeRun( ) throws IOException{
    }
    public void run(final arffTransferNodeView thisView) throws
        IOException{ System.out.println("runed" + value);
        System.out.println(toptablein.getModel().getValueAt(0, 0));
        System.out.println("runed" + value);
        File file= new File(filepath);
        file.createNewFile();
        BufferedWriter wr = new BufferedWriter
(new OutputStreamWriter(new FileOutputStream(file),"GBK"));
        arffLink link= new arffLink();
        arffNode node= new arffNode();
        wr.write("@relation "+"'ARFF'"+"\n");
        for(int i= 0;i< toptablein.getModel().getColumnCount();
            i++){ if(toptablein.getModel().getColumnName(i).contains("String")){
                wr.write("@attribute " + "'" + toptablein.getModel().getColumnName(i) + i + "'" + " {");
                for(int j=0; j<toptablein.getModel().getRowCount(); j++){
                    Object obj = toptablein.getModel().getValueAt(j, i);
                    if(obj != null) {
                        if(!link.search(node,
                            obj.toString())){ link.addNode(node,
                            obj.toString());
                            wr.write("'"+obj.toString()+"'");
                            wr.write(",");
                        }
                    }
                }
                wr.write("}\n");
            }
            if(toptablein.getModel().getColumnName(i).contains("Number")){
                wr.write("@attribute "+"'"+toptablein.getModel().getColumnName(i)+i+"'"+" real");
                wr.write("\n");
            }

            if(toptablein.getModel().getColumnName(i).contains("Date")){
                wr.write("@attribute "+"'"+toptablein.getModel().getColumnName(i)+i+"'"+" string");
                wr.write("\n");
            }
        }
        wr.write("@data\n");
        for(int i=0; i<toptablein.getModel().getRowCount();
            i++){ for(int j=0;
            j<toptablein.getModel().getColumnCount();j++){
                if(toptablein.getModel().getColumnName(j).contains("String")
                        ||toptablein.getModel().getColumnName(j).contains("Date")){
                     Object obj = toptablein.getModel().getValueAt(i, j);
                    if(obj != null)
                        { wr.write("'"+obj.toString()+"'")
                        ; wr.write(",");
                    }
                }else{
                    Object obj = toptablein.getModel().getValueAt(i, j);
                    if(obj != null) {
                        wr.write(obj.toString());
                        wr.write(",");
                    }
                }
            }
            wr.write("\n");
        }
        System.out.println("=== 完 成 省 份 : ");
        System.out.println("全部完成。。。。。。。。");
        wr.flush();
        wr.close();
        thisView.tableout=toptablein;
        //thisView.out=new JTable(content,spec);
    }
}
*****************************************************************************************
package org.LYG.node.ai.arffTransfer;
import java.awt.Color;
import java.awt.Dimension;
import java.awt.Panel;
import java.awt.ScrollPane;
import javax.swing.JButton;
import javax.swing.JScrollPane;
import org.LYG.GUI.OSGI.*;
public class arffTransferNodeView extends
    ObjectView{ private static final long
    serialVersionUID = 1L; public JButton button;
    public arffTransferNodeView(){
    }
    public void view(){
        jsp = new ScrollPane();
        jp=new Panel();
        jp.setBackground(Color.yellow);
        JScrollPane j=new JScrollPane();
        tableout.setBackground(new Color(240, 128, 128));
        tableout.setPreferredSize(new Dimension(200,200));
        tableout.setVisible(true);
        j.setViewportView(tableout);
        jp.add(j);
        jsp.add(jp);
        add(jsp);
        close=false;
    }
    @Override
    public ObjectView clone() {
        addr = (ObjectView)super.clone();
        return addr;
    }
}
```

****

```
package org.LYG.node.ai.arffTransfer;
public class
    arffNode{ public String
    thisName; public
    arffNode next; public
    arffNode pre; public
    arffNode(){
        next=null;
        pre=null;
        thisName=null;
    }
    public void addName(String
        name){ next=null;
        pre=null;
        thisName=name;
        thisName=new String(name);
    }
}
```

****

```
package org.LYG.node.ai.arffTransfer;
public class arffLink{
    public boolean search(arffNode first2, String key){
        while(first2 != null && first2.pre !=
            null){ first2 = first2.pre;
        }
        if(first2 == null || first2.thisName ==
            null){ return false;
        }
        if(first2.thisName.equals(key)){ retu
            rn true;
        }
        while(first2.next !=
            null){ first2 =
            first2.next;
            if(first2.thisName.equals(key)){ while(f
                irst2.pre != null){
                    first2 = first2.pre;
                }
                return true;
            }
        }
        return false;
    }
    public arffNode addNode(arffNode currentnode, String name) {
        if(currentnode ==
            null){ currentnode = new
            arffNode();
            currentnode.addName(name);
            currentnode.next = null;
            currentnode.pre = null;
            return currentnode;
        }
        while(currentnode.next !=
            null){ currentnode =
            currentnode.next;
        }
        arffNode node = new arffNode();
        node.addName(name);
        node.pre = currentnode;
        currentnode.next = node;
        while(currentnode.pre != null){
            currentnode = currentnode.pre;
        }
        return currentnode;
    }
}
```

****

```
package org.LYG.GUI.theme.neroCell;
public class DrawNeroCellMask33{
```

```java
public static final int[][] neroShape = {
{0,0,0,0,0,1,1,1,1,1,0,0,0,0,0,0,0,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,1,1,1,1,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1},
{0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1},
{0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1},
{1,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,0,0,0},
{1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0},
{1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0},
{1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0},
{1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0},
{1,1,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0},
{1,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1},
{0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,1,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1},
{0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,0,0,0,0,0},
{0,0,0,0,0,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1},
{0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},
{0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0},};}
```

第四节 DNA 元基索引版本 见git备份， 下面这段canvas函数我把界面的鼠标操作时候，去掉画图闪烁的机制设计了一遍，所以就写在这。这本书很厚了，不想添加冗余源码。奇特略

```
package OSI.OPE.AOPM.VECS.IDUQ.OVU.PQE.flash;
import java.awt.Color;
import java.awt.Graphics;
import java.awt.Graphics2D;
import java.awt.MenuItem;
import java.awt.PopupMenu;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.ItemEvent;
import java.awt.event.ItemListener;
import java.awt.event.MouseEvent;
import java.awt.event.MouseListener;
import java.awt.event.MouseMotionListener;
import javax.swing.JPanel;
import javax.swing.JScrollPane;
import javax.swing.JTextPane;

import OSI.OPE.MSQ.OVU.PQE.nodeInfo.NodeInfo;
import OSI.OPE.MSQ.OVU.PQE.nodeProject.NodeProject;
import SVQ.stable.StableAnnotation;
import OSI.OPE.OVQ.MSQ.OVU.PQE.platForm.UnicornJSplitPane;
import OSI.OPE.OVU.MVQ.OVU.PQE.nodeView.NodeShow;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.CheckRangeVPS;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.ChooseQ_VPS;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.DrawArrowVPS;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.DrawFlashSide;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.DynamicLineU_VPS;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.LinkList;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.LinkNode;
import OSI.OPE.OVU.MVU.OVU.PQE.nodeEdit.Sort;
//作者: 罗瑶光
public class ThisCanvas extends JPanel implements MouseMotionListener
, MouseListener, ItemListener, ActionListener, Runnable{
       private static final long serialVersionUID = 1L;
       public Thread threadApplet;
       public String fileCurrentpath;
       public int w, h;
       public boolean isInit= false;
       public int flash= 0;
       public int count= 0;
       public int mouseDirection= 0;
       public String currentNodeName;
       public int currentNodeID;
       public String currentNodePrimaryKey;
       public LinkList first;
       public int currentX, currentY;
       public int choose= 0;
       public int oldX, oldY;
       public int newx, newy;
       public int is_O= 0;
       public String treeNodeName;
       public NodeShow nodeView;
       public NodeProject nodeProject;
       public NodeInfo nodeInfo;
       public UnicornJSplitPane mainSplitPane;
       public UnicornJSplitPane leftSplitPane;
       public UnicornJSplitPane rightSplitPane;
       public UnicornJSplitPane righttopSplitPane;
       public JScrollPane righttopScrollPane;
       public JScrollPane rightdownScrollPane;
       public JScrollPane rightrightScrollPane;
       public JTextPane rightBotJTextPane;
       public PopupMenu popupMenu, nodeMenu, itemMenu, engineMenu;
       public MenuItem save, saveAs, delete, load;
       public MenuItem menuItem;
       public MenuItem configre, run, show, dNode, dLine;
       public ChooseQ_VPS chooseCheck;
       public DynamicLineU_VPS dynamicLineUpdater;
       public DrawArrowVPS drawArrow;
       public CheckRangeVPS checkRange;
       public ThisCanvas(Thread threadApplet, LinkList first, NodeShow nodeView
               , PopupMenu nodeMenu, JTextPane rightBotJTextPane){
              this.setLayout(null);
```

```
        this.addMouseListener(this);
        this.addMouseMotionListener(this);
        this.start();
        this.setOpaque(false);
        this.threadApplet= threadApplet;
        this.first= first;
        this.nodeView= nodeView;
        this.nodeMenu= nodeMenu;
        this.rightBotJTextPane= rightBotJTextPane;
        chooseCheck= new ChooseQ_VPS();
        dynamicLineUpdater= new DynamicLineU_VPS();
        drawArrow= new DrawArrowVPS();
        checkRange= new CheckRangeVPS();
        this.setBackground(Color.white);
}
@SuppressWarnings(StableAnnotation.TAG_DEPRECATION)
public void run() {
        while(true){
                try{
                        Thread.sleep(80);
                        this.updateUI();
                }catch (InterruptedException e) {
                        //threadApplet.destroy(); //jdk16 没有了destroy
                        threadApplet.stop();
                        e.printStackTrace();
                }
        }
}
public void start(){
        if(null== threadApplet){
                threadApplet =  new Thread(this);
                threadApplet.start();
        }

}
@SuppressWarnings(StableAnnotation.TAG_DEPRECATION)
public void stop() {
        //threadApplet.destroy(); //jdk16 没有了destroy
        threadApplet.stop();
}

public void actionPerformed(ActionEvent arg0) {}

public void itemStateChanged(ItemEvent arg0) {}

public void mouseClicked(MouseEvent arg0) {}

public void mouseEntered(MouseEvent arg0) {}

public void mouseExited(MouseEvent arg0) {}

public void mousePressed(MouseEvent arg0) {
        is_O= 1;
        oldX= arg0.getX();
        oldY= arg0.getY();
        currentX= arg0.getX();
        currentY= arg0.getY();
        Object[] node= chooseCheck.chooseCheckNode(first.first, arg0);
        currentNodeName= (String) node[0];
        currentNodeID= (int) node[1];
        currentNodePrimaryKey= (String) node[2];
        rightBotJTextPane.setText("坐标位:"+ arg0.getX()+ "|"+ arg0.getY());
        rightBotJTextPane.validate();
}

public void mouseReleased(MouseEvent arg0){
        is_O= 0;
        currentX= arg0.getX();
        currentY= arg0.getY();
        LinkNode node= first.first;
        while(null!= node){
                if(node.rightChoose&& !node.leftChoose){
                        if(oldX== arg0.getX()&&oldY == arg0.getY()){
```

```
                        nodeMenu.show(this, arg0.getX(), arg0.getY());
                    }
                    else{
                        checkRange.doCheckRange(first.first, node,arg0);
                    }
                }
                node.I_choose(false);
                node.rightChoose= false;
                node.actionNodeLeft= false;
                node.actionNodeRight= false;
                node= node.next;
            }
    }

    public void mouseDragged(MouseEvent e) {
            is_O= 1;
            try {
                Thread.sleep(32);//1000/25=40
            } catch (InterruptedException e1) {
                e1.printStackTrace();
            }
            currentX= e.getX();
            currentY= e.getY();
            LinkNode node= first.first;
            Graphics g= getGraphics();
            Graphics2D graphics2D= (Graphics2D)g;
            graphics2D.setColor(Color.black);
            boolean needUpdate= false;
            LinkNode actionNode= null;
            while(null!= node){
                if(node.rightChoose) {
                    graphics2D.setColor(new Color(240, 240, 240));
                    g.fillRect(node.x+19, node.y+12, 30, 30);
                }
                if(node.leftChoose|| node.rightChoose) {
                    needUpdate= true;
                }
                if(node.leftChoose&& !node.rightChoose){
                    node.actionNodeLeft= true;
                    node.actionNodeRight= false;
                    node.I_xy(e.getX(), e.getY());
                    actionNode= node;
                    //移动后 节点输出坐标和连线更新
                }else {
                    node.actionNodeLeft= false;
                    node.actionNodeRight= true;
                }
                node= node.next;
            }
            if(needUpdate) {
                this.update(g);
                g.dispose();
                if(null!= actionNode) {
                    actionNode.actionNodeLeft= false;
                    actionNode.actionNodeRight= false;
                }
            }
            newx= currentX;
            newy= currentY;
    }

    public void mouseMoved(MouseEvent arg0) {
    }

    public void paint(Graphics g){
            try {
                nodeView.validate();
                Graphics2D graphics2D= (Graphics2D)g;
                //graphics2D.clearRect(0, 0, this.getWidth(), this.getHeight());
                first.first= Sort.sort(first.first);
                LinkNode node= first.first;
                while(node!= null){
                    node.x= node.x< 0? 10: node.x;
                    node.x= node.x> this.getWidth()- 100? this.getWidth()- 100: node.x;
                    node.y= node.y< 0? 10: node.y;
                    node.y= node.y> this.getHeight()- 100? this.getHeight()- 100: node.y;
                    if(!node.actionNodeLeft&& !node.leftChoose) {
                           g.drawImage(node.thisFace.thisImage, node.x+ 19, node.y+ 12, this);
                    }
                    node.flash= node.flash> 100? 0: node.flash;
                    //如果一个节点是移动节点 或者这个节点的连接前序节点是移动节点
                    if(node.actionNodeLeft) {
                           DrawFlashSide.D_FlashSide(graphics2D, node.oldx, node.oldy);
                    }
                    if(0== is_O) {
                           DrawFlashSide.drawFlashSide(graphics2D, node.x, node.y, node.flash++ % 3);
                    }else {
                           DrawFlashSide.drawFlashSide(graphics2D, node.x, node.y, node.flash);
                    }
                    if(node.actionNodeLeft) {
                           graphics2D.setColor(new Color(240, 240, 240));
                           g.drawString(node.name+ "->"+ node.ID, node.oldx- 5, node.oldy- 20);
                    }
                    graphics2D.setColor(Color.black);
                    g.drawString(node.name+ "->"+ node.ID, node.x- 5, node.y- 20);
                    graphics2D.setColor(new      Color(25, 25, 112));
                    if(node.beconnect){
                           if(node.tBeconnect){
                                  arrowTargetTop(node, graphics2D);
                           }if(node.mBeconnect){
                                  arrowTargetMed(node, graphics2D);
                           }if(node.dBeconnect){
                                  arrowTargetBot(node, graphics2D);
                           }
                    }else if(!node.leftChoose&& node.rightChoose){
                           arrowTargetLink(graphics2D, oldX, oldY, newx, newy, currentX, currentY);
                    }
                    if(node.actionNodeLeft) {
                           node.oldx= node.x;
                           node.oldy= node.y;
                    }
                    node= node.next;
             }
      }catch(Exception e) {
             e.printStackTrace();
      }
}

//下面 这些函数是 已调试通过的 按sonar qube最高认证编写方法进行ThisCanvas函数迭代化简，因为函数call 严重消耗指令计
算时间
//，浪费算能，大家可以继续用原来的ThisCanvasBackup函数替换，
//作者罗瑶光
private void arrowTargetTop(LinkNode node, Graphics2D graphics2D) {
      //记录arrow 同时 下一次画图，清除该上一次 arrow
      arrowTargetThis(node, graphics2D, node.tBeconnectX+ 62, node.tBeconnectY+ 28
                    , node.oldx+ 14, node.oldy- 6, node.x+ 14, node.y- 6);
      if(node.tNode.actionNodeLeft) {
             arrowTargetNext(graphics2D, node.tBeconnectX+ 62, node.tBeconnectY+ 28
                           , node.x+ 14, node.y- 6);
             node.tBeconnectX= node.tNode.x;
             node.tBeconnectY= node.tNode.y;
      }
      if(!node.leftChoose&& node.rightChoose){
             arrowTargetLink(graphics2D, oldX, oldY, newx, newy, currentX, currentY);
      }
}


private void arrowTargetMed(LinkNode node, Graphics2D graphics2D) {
      arrowTargetThis(node, graphics2D, node.mBeconnectX+ 62, node.mBeconnectY+ 28
                    , node.oldx- 4, node.oldy+ 25, node.x- 4, node.y+ 25);
      if(node.mNode.actionNodeLeft) {
             arrowTargetNext(graphics2D, node.mBeconnectX+ 62, node.mBeconnectY+ 28
                           , node.x- 4, node.y+ 25);
             node.mBeconnectX= node.mNode.x;
             node.mBeconnectY= node.mNode.y;
```

```
        }
        if(!node.leftChoose&& node.rightChoose){
               arrowTargetLink(graphics2D, oldX, oldY, newx, newy, currentX, currentY);
        }
    }

    private void arrowTargetBot(LinkNode node, Graphics2D graphics2D) {
        arrowTargetThis(node, graphics2D, node.dBeconnectX+ 62, node.dBeconnectY+ 28
                      , node.oldx+ 6, node.oldy+ 55, node.x+ 6, node.y+ 55);
        if(node.dNode.actionNodeLeft) {
               arrowTargetNext(graphics2D, node.dBeconnectX+ 62, node.dBeconnectY+ 28
                             , node.x+ 6, node.y+ 55);
               node.dBeconnectX= node.dNode.x;
               node.dBeconnectY= node.dNode.y;
        }
        if(!node.leftChoose&& node.rightChoose){
               arrowTargetLink(graphics2D, oldX, oldY, newx, newy, currentX, currentY);
        }
    }

    private void arrowTargetThis(LinkNode node, Graphics2D graphics2D, int tX, int tY
               , int oX, int oY,int x, int y) {
        if(node.actionNodeLeft) {
               graphics2D.setColor(new Color(240, 240, 240));
               drawArrow.doDrawArrow(graphics2D, tX, tY, oX, oY);
               graphics2D.setColor(new      Color(25, 25, 112));
        }
        drawArrow.doDrawArrow(graphics2D, tX, tY, x, y);
    }

    private void arrowTargetNext(Graphics2D graphics2D, int tX, int tY, int oX, int oY) {
        graphics2D.setColor(new Color(240, 240, 240));
        drawArrow.doDrawArrow(graphics2D, tX, tY, oX, oY);
        graphics2D.setColor(new      Color(25, 25, 112));
        drawArrow.doDrawArrow(graphics2D, tX, tY, oX, oY);
    }

    private void arrowTargetLink(Graphics2D graphics2D, int oX, int oY, int nX, int nY
               , int cX, int cY) {
        graphics2D.setColor(new      Color(240, 240, 240));
        drawArrow.doDrawArrow(graphics2D, oX, oY, nX, nY);
        graphics2D.setColor(Color.black);
        drawArrow.doDrawArrow(graphics2D, oX, oY, cX, cY);
        graphics2D.setColor(new      Color(25, 25, 112));
    }
}
```