

# lab5 实验报告

等价确认工具使用QT框架开发，IDE使用QT Creator

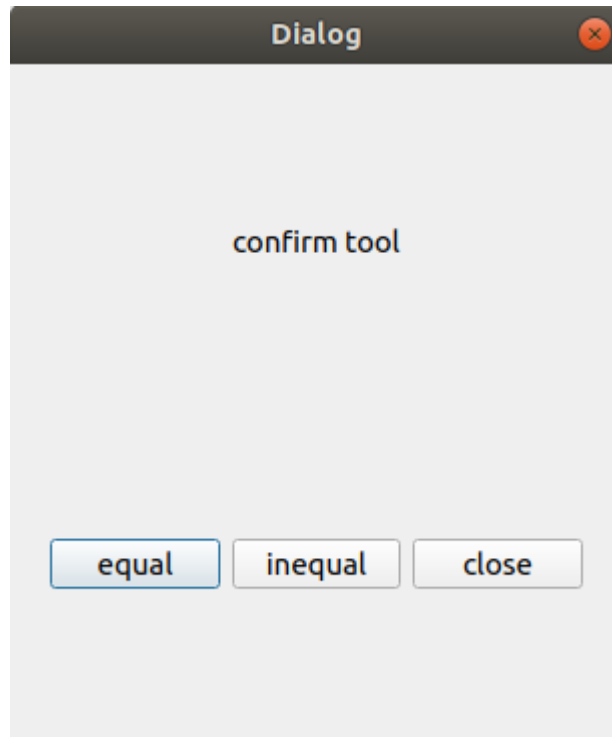
## 一、模块介绍

设计的等价确认工具可以划分为三个模块：数据结构及初始页面initial模块，等价确认页面menu模块，结果保存result模块。

首先初始化页面，读取程序对名。等价确认模块是主体模块，将加载等价判断工具output文件夹中equal.csv文件和inequal.csv文件的记录，需要用户进行确认。程序默认需要与output文件夹放置在同一目录下，运行后在同级目录生成confirm文件夹，其中有equal.csv和inequal.csv两个文件，即为人工确认后的等价、不等价程序对。

## 二、关键代码介绍

initial模块含文件数据结构class file，包括文件路径和文件内容，以及read\_data()，get\_data()方法，是等价判断模块的数据结构复用。class initial继承自QDialog，是初始界面。init()方法从equal.csv和inequal.csv文件读取程序对名，放入全局变量vector<pair<string, string>> equals和vector<pair<string, string>> inequals中。可以选择首先对equal.csv中的记录或inequal.csv中的记录进行确认。



`class menu` 继承自 `QWidget`，含成员 `equal_index`，`inequal_index` 记录访问到的程序对序号。  
`initial` 类中含一个 `menu` 类 `my_menu`。在选择 `equal` 或 `inequal` 后，`initial` 类发送信号，`menu` 类接受信号后调用槽函数 `display()` 展示源码，进行人工确认，选择等价或不等价，点击发送信号调用 `menu` 类中 `yes()` 或 `no()` 槽函数，判断是否继续进行其他程序对的人工确认，发送 `next_equal` 或 `next_inequal` 信号，`menu` 类接受这两个信号调用 `display()`，直至结束关闭窗口。

Form

<pre>#include &lt;iostream&gt;  using namespace std;  int main() {     return 0; }</pre>	<pre>#include&lt;iostream&gt; using namespace std; int main(){     cout&lt;&lt;"YES";     return 0; }</pre>
--	---

不等价

class 结束时menu类发送 `finish()` 信号，initial类接受信号调用 `save()`，即令结果保存result类将人工确认后的结果存于文件中，结束运行。

### 三、git 操作

分为4个分支，master，initial，menu，result代表上述模块。

git log

```
commit 876efc86850fc2aba717791c7fae6a2a3929a2b4 (HEAD -> menu)
Author: Woodie-Shi <woodie.shichenglu@foxmail.com>
Date:   Wed Nov 30 14:47:31 2022 +0800

    add hint

commit 684f8e629e3c686f41c27c4142a136c866a04162 (origin/menu)
Author: Woodie-Shi <woodie.shichenglu@foxmail.com>
Date:   Wed Nov 30 11:54:25 2022 +0800

    menu weget

commit e511cc7b041c3c1a0bd394974c1c489cd06c4f63 (origin/master, master)
Author: Woodie-Shi <woodie.shichenglu@foxmail.com>
Date:   Wed Nov 30 11:42:58 2022 +0800

    qtpro

commit 5608ccfd3f51282df3f1620051dd6f83002bcc60
Author: Woodie-Shi <woodie.shichenglu@foxmail.com>
Date:   Wed Nov 30 11:38:23 2022 +0800

    commit
:
```

git push

```
oslab@oslab-VirtualBox:~/Software Engineering/lab5/confirmingqt$ git push origin
menu
Username for 'https://github.com': Woodie-Shi
Password for 'https://Woodie-Shi@github.com':
对象计数中: 6, 完成.
Delta compression using up to 4 threads.
压缩对象中: 100% (5/5), 完成.
写入对象中: 100% (6/6), 644 bytes | 644.00 KiB/s, 完成.
Total 6 (delta 3), reused 0 (delta 0)
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To https://github.com/Woodie-Shi/SE.git
684f8e6..876efc8  menu -> menu
```

git merge

```

VirtualBox:~/Software Engineering/lab5/confirmingqt$ git merge initial
更新 e511cc7..2e2900a
Fast-forward
 lab5/confirmingqt/file.cpp      | 27 +++++
 lab5/confirmingqt/file.h       | 29 +++++
 lab5/confirmingqt/initial.cpp  | 74 +++++
 lab5/confirmingqt/initial.h    | 35 +++++
 lab5/confirmingqt/initial.ui   | 58 +++++
 5 files changed, 223 insertions(+)
 create mode 100644 lab5/confirmingqt/file.cpp
 create mode 100644 lab5/confirmingqt/file.h
 create mode 100644 lab5/confirmingqt/initial.cpp
 create mode 100644 lab5/confirmingqt/initial.h
 create mode 100644 lab5/confirmingqt/initial.ui

```

```

VirtualBox:~/Software Engineering/lab5/confirmingqt$ git merge menu
Merge made by the 'recursive' strategy.
 lab5/confirmingqt/menu.cpp | 142 +++++
 lab5/confirmingqt/menu.h   | 36 +++++
 lab5/confirmingqt/menu.ui  | 74 +++++
 3 files changed, 252 insertions(+)
 create mode 100644 lab5/confirmingqt/menu.cpp
 create mode 100644 lab5/confirmingqt/menu.h
 create mode 100644 lab5/confirmingqt/menu.ui

```

```

VirtualBox:~/Software Engineering/lab5/confirmingqt$ git merge result
Merge made by the 'recursive' strategy.
 lab5/confirmingqt/result.cpp | 34 +++++
 lab5/confirmingqt/result.h   | 24 +++++
 2 files changed, 58 insertions(+)
 create mode 100644 lab5/confirmingqt/result.cpp
 create mode 100644 lab5/confirmingqt/result.h

```

github页面:

Woodie-Shi / SE

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master

SE / lab5 / confirmingqt /

Go to file

Add file

...

Woodie-Shi Merge branch 'result' for confirming tool.

7268d10 3 minutes ago History

..		
confirming.pro	qtpro	5 hours ago
confirming.pro.user	qtpro	5 hours ago
file.cpp	data structure and init weget	4 hours ago
file.h	data structure and init weget	4 hours ago
initial.cpp	data structure and init weget	4 hours ago
initial.h	data structure and init weget	4 hours ago
initial.ui	data structure and init weget	4 hours ago
main.cpp	qtpro	5 hours ago
menu.cpp	add hint	1 hour ago
menu.h	menu weget	4 hours ago
menu.ui	add hint	1 hour ago
result.cpp	final result	4 hours ago
result.h	final result	4 hours ago

#### 四、说明

直接使用了QT Creator配置项目，文件夹中confirming文件即为等价确认程序。