

**软件工程报告**

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| 综合设计题目： | 航班信息管理系统 |
| 姓 名： | 潘翔 |
| 学 院： | 计算机科学与技术学院 |
| 专 业： | 物联网工程 |
| 班 级： | IOT1601 |
| 学 号： | U20161489 |
| 指导教师： |  |

|  |  |
| --- | --- |
| 分数 |  |
| 教师签名 |  |

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# 1 课程任务概述

软件功能学习部分：练习DBMS软件的使用

SQL联系部分：练习SQL语句的使用

数据库系应用系统设计：自行选择所擅长的DBMS软件以及数据库应用系统（客户端程序或者网站）的程序开发工具，参考后面的题目例子，拟定一个自己感兴趣的数据库应用系统题目，完成该小型数据库应用系统的设计与实现工作。主要内容包括：需求调研与分析、总体设计、数据库设计、详细设计与实现、测试等环节的工作。

# 4 数据库应用系统设计

## 4.1 系统设计目标

自行选择所擅长的DBMS软件以及数据库应用系统（客户端程序或者网站）的程序开发工具，参考后面的题目例子，拟定一个自己感兴趣的数据库应用系统题目，完成该小型数据库应用系统的设计与实现工作。主要内容包括：需求调研与分析、总体设计、数据库设计、详细设计与实现、测试等环节的工作。

选择题目:机票预订系统

### 4.1.1 系统功能的基本要求：

* 每个航班信息的输入。
* 每个航班的坐位信息的输入；
* 当旅客进行机票预定时，输入旅客基本信息，系统为旅客安排航班，打印取票通知和帐单；
* 旅客在飞机起飞前一天凭取票通知交款取票；
* 旅客能够退订机票；
* 能够查询每个航班的预定情况、计算航班的满座率。

### 4.1.2 数据库要求：

在数据库中至少应该包含下列数据表：

* 航班信息表；
* 航班坐位情况表；
* 旅客订票信息表；
* 取票通知表；
* 帐单。

使用C/S架构

## 4.2 需求分析

1. 进行用户行为约束，对于普通用户，某些操作一旦进行无法更改：
   1. 航班选座
   2. 订单确认
2. 用户行为的时间约束：
   1. 旅客在飞机起飞前一天凭取票通知交款取票
   2. 用户检票时间约束
3. 系统查询设计，完成满足指定要求的查询

## 4.3 总体设计

### 4.3.1系统功能模块划分

系统总体分为：航班查询，航班预订，订单管理，账单管理，通知系统

1. 航班查询：进行航班的查询操作
   1. 模糊查询：利用时间，地点，价格等条件查询航班
   2. 精确查询：利用航班号查询
2. 航班预订：进行航班预订的相关操作
   1. 座位选取
   2. 订单生成和确认
   3. 于订单管理模块，账单管理模块交互
3. 订单管理：进行订单的相关操作
   1. 管理订单状态，已经完成的订单和约束订单无法操作
   2. 更新订单状态
4. 账单管理：生成系统的账单

### 4.3.2 系统架构方案

系统采用B/S架构，各模块之间进行较为清晰的接口定义，使模块之间尽量解耦合和独立，采用QT框架，C++语言开发，使用QSqlQuery模块与MySql(Mariadb)进行交互。

1. 用户权限：使用DB中的tabel来进行管理
2. 用户操作约束：在前端界面进行判断，SQL语句仅处理正常逻辑，便于系统实现和鲁棒性

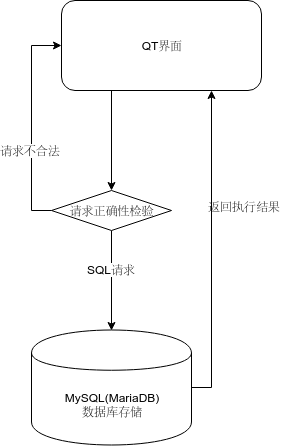


图4-1 系统B/S架构图

## 4.4 数据库设计

### 4.4.1 系统操作流程图

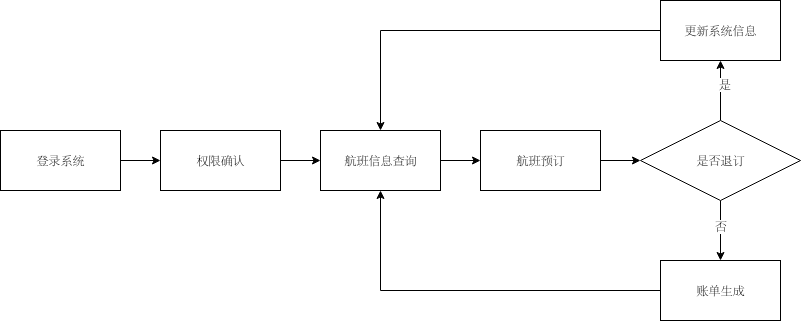


图4-2 系统操作流程图

### 4.4.2 系统操作表格图

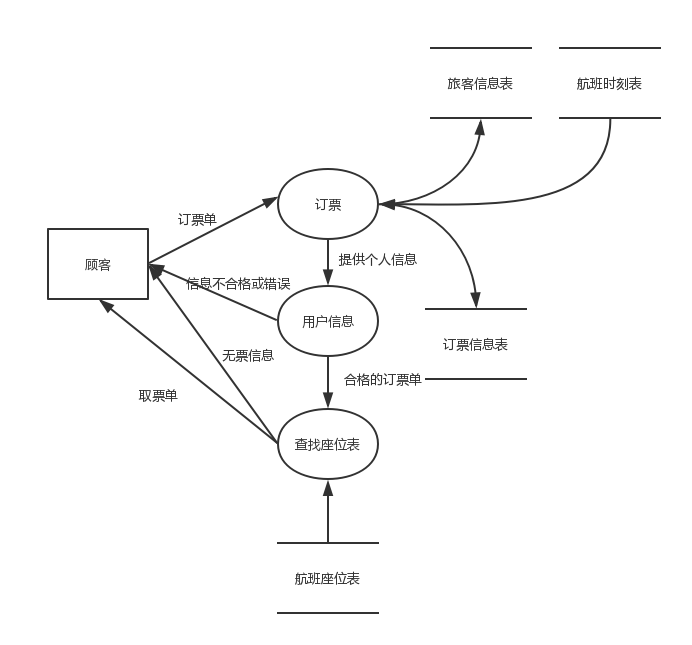


图4-3 操作表格图

### 4.4.3 E-R图

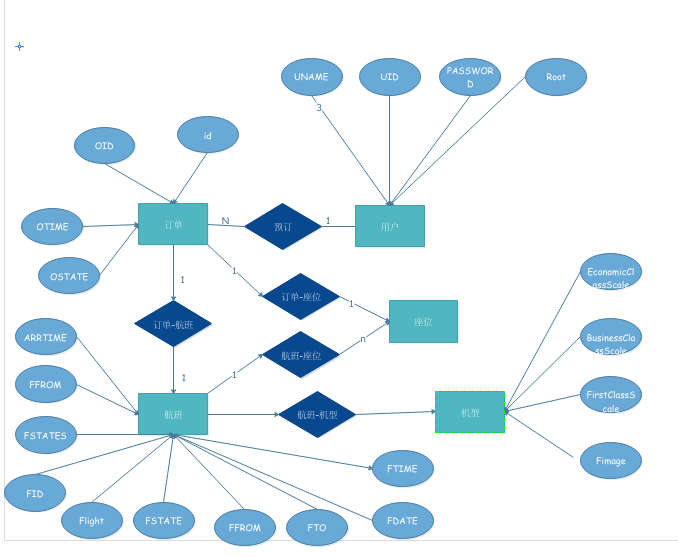


图4-4 系统设计E-R图

### 4.4.4 数据流图

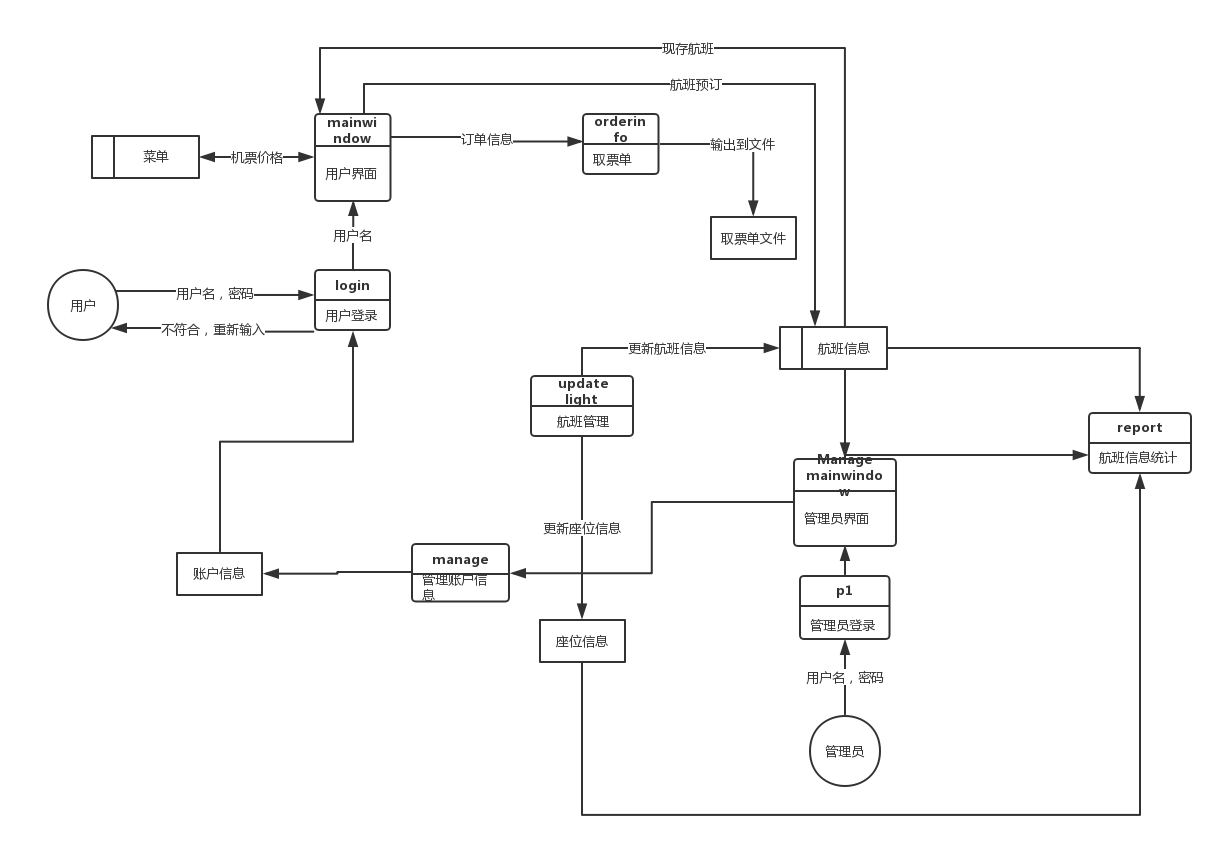


图4-5 系统设计数据流图

### 4.4.5 数据库逻辑结构设计

1. 用户权限表：对于用户的行为和权限进行约束管理，同时便于统计用户信息
   1. 用户名 UID
   2. 用户姓名 UNAME
   3. 密码 PASSWORD
   4. 用户权限
2. 航班信息表：用于航班信息的管理
   1. 航班号 FID
   2. 航空公司 Flight
   3. 飞机机型 FMODEL
   4. 航班状态：FSTATE
      1. 已降落 landed
      2. 延误 delayed
      3. 登机口 gate
      4. 登机 boarding
      5. 登机手续办理 [check-in](https://www.baidu.com/s?wd=check-in&tn=SE_PcZhidaonwhc_ngpagmjz&rsv_dl=gh_pc_zhidao" \t "/home/wings/Documents\\x/_blank)
   5. 起飞城市：FFROM
   6. 飞往城市：FTO
   7. 起飞日期：DATA
   8. 起飞时间：TIME
   9. 座位状态：FSTATUS
3. 用户订单/账单表：用于用户订单的管理，账单的生成
   1. 订单号 OID
   2. 航班号 FID
   3. 用户号 UID
   4. 座位号 SID
   5. 订单时间 OTIME
   6. 订单金额 OAMOUNT
   7. 订单状态 OSTATE
4. 航班座位表
   1. 航班号 FID
   2. 座位号 SID
5. 航班模型表
   1. 飞机型号 FMODEL
   2. 舱位设置 矩阵形式

### 4.4.6 数据表格设计

1. 用户权限表

用户权限表用作用户的登录验证，进入系统后的权限验证。

表4-1 用户权限表

|  |  |  |  |
| --- | --- | --- | --- |
| 属性 | 约束 | 数据类型 | 说明 |
| UID | Primary key | int | 用户编号 |
| USERNAME | unique | varchar | 用户名 |
| PASSWORD |  | varchar | 密码 |
| Root |  | tinyint(bool) | 是否是管理员 |

1. 航班信息表

航班信息表用作航班信息管理，和航班状态的维护，便于用户查询预订航班。

表4-2 航班信息表

|  |  |  |  |
| --- | --- | --- | --- |
| 属性 | 约束 | 数据类型 | 说明 |
| FID | Primary key | int | 航班编号 |
| Flight | unique | varchar | 用户名 |
| FMODEL | 外码：  Reference 飞机型号FSTATUSinfo(FMODEL) | varchar | 飞机机型 |
| FSTATE |  | varchar | 航班状态 |
| FFROM |  | varchar |  |
| FTO |  | varchar |  |
| FDATE |  | Date |  |
| FTIME |  | Time |  |
| ARRDATE |  | Date |  |
| ARRTIME |  | Time |  |
| FSTATUS |  | varchar | 航班座位情况  (Not Full,FULL) |

1. 飞机型号表：

用于记录飞机型号，存储飞机座位排布图和座位排布信息。

表4-3 飞机型号表

|  |  |  |  |
| --- | --- | --- | --- |
| 属性 | 约束 | 数据类型 | 说明 |
| FMODEL | Primary key | varchar | 飞机机型 |
| Fimage | unique | LONGBLOB | 机型图片 |
| FirstClassScale |  | varchar | 头等舱规模  （如：2排\*每排4个人  2\*4） |
| BussinessClassScale |  | varchar | 商务舱规模  同上 |
| EconomyClassScale |  | varchar | 经济舱规模  同上 |

1. 航班座位表

用于存储航班的座位信息，判断当前航班时候还有位置，并存储座位的等级信息，用于报表输出

表4-4 航班座位表

|  |  |  |  |
| --- | --- | --- | --- |
| 属性 | 约束 | 数据类型 | 说明 |
| FID | 外码：参照航班信息表  FLIGHTinfo(FID) | int | 航班编号 |
| SID | 由FID和SID复合主码 | varchar | 座位号 |
| USABLE |  | Tinyint(bool) | 座位是否可用 |
| SeatRank |  | varchar | 座位等级  (头等舱F  商务舱C  经济舱Y) |

## 4.5 详细设计与实现

### 4.5.1 开发环境与运行环境

操作系统：ArchLinux x64

IDE:Qt Creator

编译器：8.1.1 20180531 (GCC)

数据库:10.1.33-MariaDB MariaDB Server

因Qt框架的跨平台特性，可以发行各平台的发行版本

### 4.5.2 航班事务管理

1. 航班添加

从飞机型号表(FMODELinfo)中利用SQL语句查询出飞机的型号，并设置型号选择款，在界面中进行输入值的约束，将输入值整理为SQL语句插入数据库，同时根据飞机型号查询座位排列，根据座位排列自动编排序号将座位插入座位信息表。

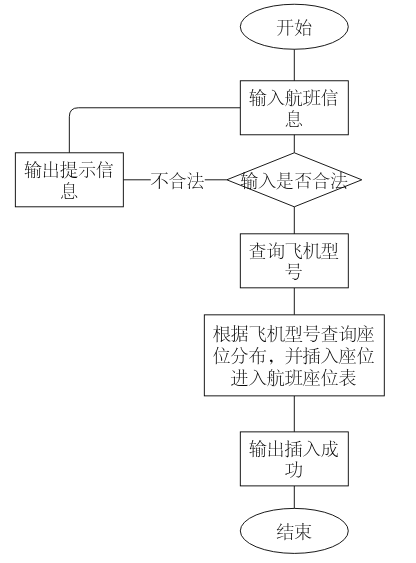


图4-4 航班添加流程图

1. 航班删除

根据删除航班的航班号FID查询是否存在用户订单为此航班，如果存在用户订单为此航班，则拒绝操作，并给出提示信息。否则，正常删除航班信息并删除座位信息。

1. 航班修改

当用户的权限为ROOT管理员权限时，将航班信息总表设置为可修改，但航班号FID为主码，设置锁定。

1. 航班查询

航班总表输出所有的航班，航班查询框根据条件筛选查询。

用户必须输入航班的始飞地和到达地，如果二者为空，给出提示信息。

用户必须输入正确的时间，如未修改时间，给出提示信息：利用初始设置时间，进行修改时间判断，是否修改。

根据输入的条件进行筛选，如果未输入，则默认条件为空。

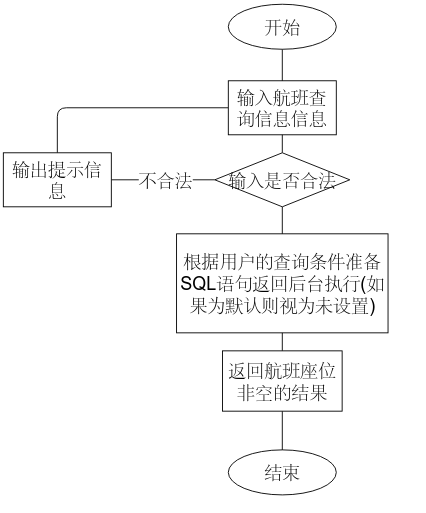


图4-5 航班查询流程图

### 4.5.3 订单事务管理

1. 预订

用户查询航班，选中想要预订的航班，根据选中的航班号FID进行座位查询，如无座位则返回。

进入座位选择界面：

根绝飞机机型的座位排布图自动生成座位的选择按钮阵列，查询飞机机型表获取机型座位分布图并显示，用户每次只能选择一个座位，且已经被预订的座位置为红色，同时用户可以根据上方列表进行选取。

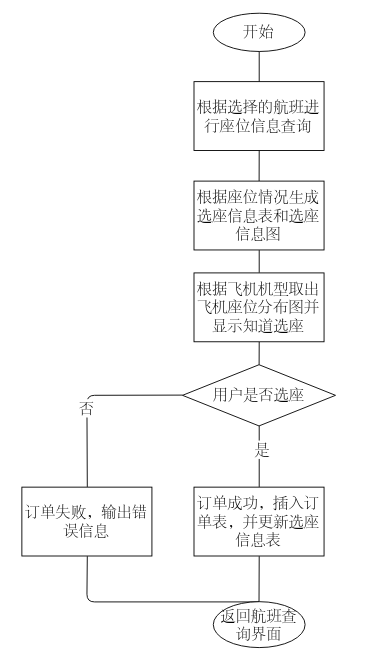


图4-6 选座生成订单流程图

1. 退订

判断订单状态，如订单状态为unfinish，则可以进行退订，同时将座位的状态设置为未占用。

如果订单状态为其他，则输出订单状态错误，无法退订错误信息。

1. 订单取票check-in

校验订单状态：如果订单状态为unfinish则继续

校验当前时间，如当前时间为订单的前一天或者订单的当天，则进行订单的checki-in，调用打印接口进行订单信息的打印输出。

### 4.5.4 权限系统

进入系统时，查询用户表user进行用户名和密码的确认，并查询是否是管理员信息进行相应设置。

如果是管理员：开放航班总表修改权限，开放航班添加删除权限。

### 4.5.5 报表系统

在进行座位选取时，进行座位信息的统计输出。

管理员可以查看所有航空公司最近三个月的统计图：

获取所有的航空公司名称并统计数目。

获取当前月份，并查询各公司在上上个月和上个月的统计情况，调用QT charts进行统计图绘制，并设置表头。

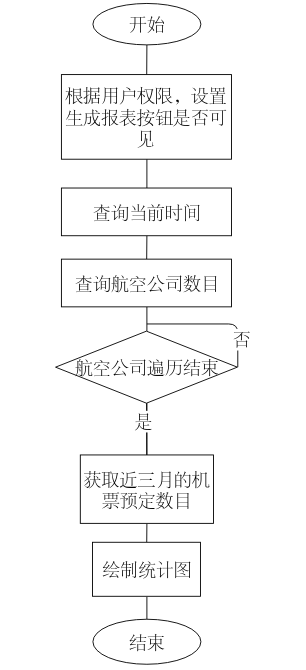


图4-7 统计图生成模块流程图

### 4.5.6 通用数据显示模块

因为QT中提供两种SQL接口，sqlmodel提供利用sql语句显示表格的少量功能，无法进行修改和选中设定一些操作，而sqltabel采用对象映射框架，完全避免的sql语句，为满足实验要求，减少模块耦合性和后期扩展性，继承sqlmodel模块进行重载，完成模块的自动化显示设置功能。

1. 中英文映射

利用SQL语句查询表头，获取表头进行自动设置，因本系统采用英文表头，且较为明晰，故未启用映射为中文。

映射模块：使用map对于表头映射为中文之后进行设置

1. 表头查询：

bool MySqlQueryModel::set\_opTitle()//调用前设置表名

{

QSqlQuery query;

query.prepare("SHOW COLUMNS FROM "+opName);//获取表头

bool isOk = query.exec();

//qDebug() <<"title"<<isOk;

if(!isOk)

{

return false;

}

opTitle.clear();

while (query.next())

{

opTitle.append(query.value(0).toString());

}

QSqlQuery priquery;

//获取主码

priquery.prepare("SHOW COLUMNS FROM FLIGHTinfo where `Key`='PRI'");

isOk = priquery.exec();

priquery.next();

opPRI=priquery.value(0).toString();

for (int i = 0; i < opTitle.size(); ++i)

{

if (opTitle.at(i) ==opPRI)

{

opPRI\_col=i;

break;

}

}

return true;

}

利用SQL语句查询表头并获得主码进行界面访问控制设置

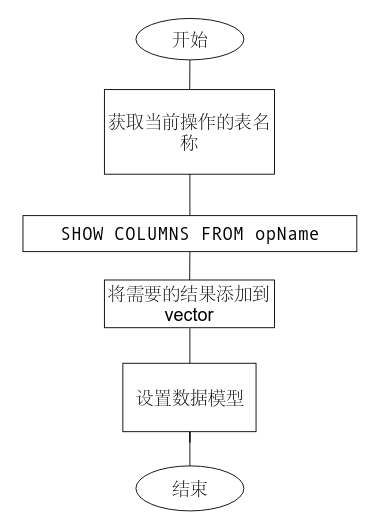


图4-8 表头查询模块流程图

1. 修改限制

利用SHOW COLUMNS FROM FLIGHTinfo where `Key`='PRI' 获取当前的主码，并设置为禁止修改

1. 用户切换窗口

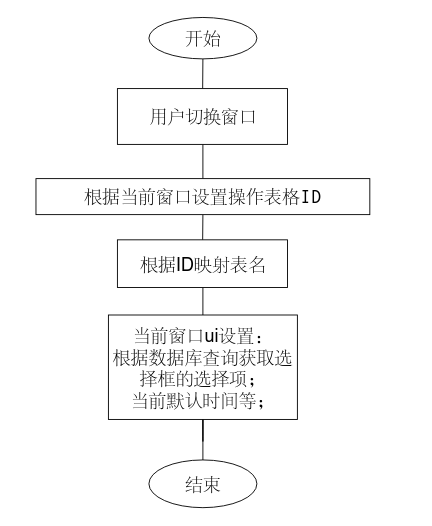


图4-9 用户切换窗口后台操作流程图

## 4.6 系统测试

### 4.6.1 航班事务测试

1. 添加航班

如过未修改时间，则进行提示：

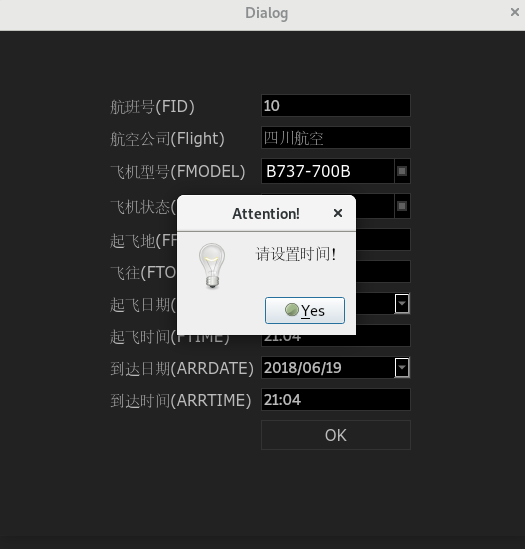


图4-10 添加航班时间错误提示图

如过数据错误(主码冲突)，则进行提示：



图4-11 添加航班主码错误提示图

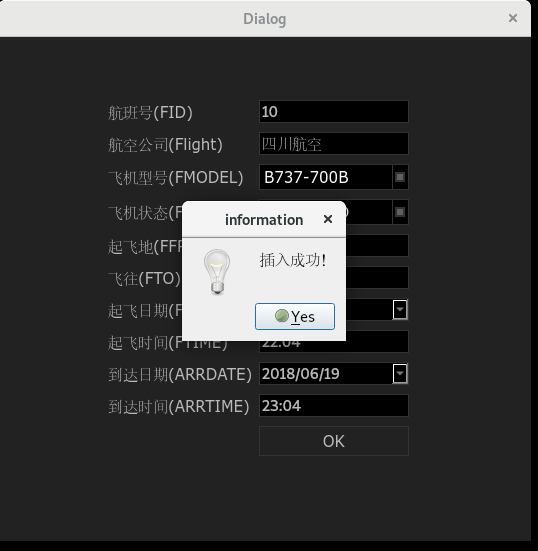


图4-12 添加航班成功提示图

1. 修改航班

管理员可以直接进行修改，如果修改不满足数据要求则不会改变，数据约束在数据库中进行。



图4-13 表格修改航班图

1. 删除航班

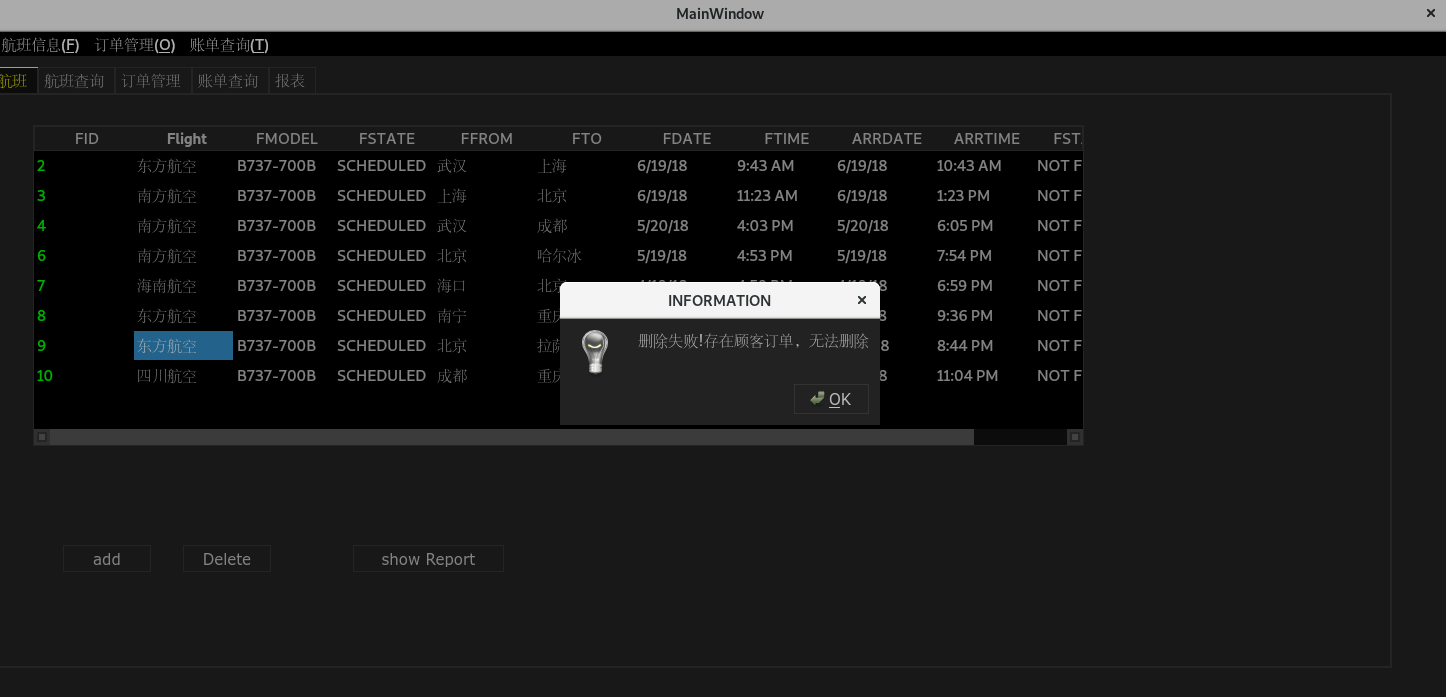


图4-14 删除航班错误图

如果正常删除，同时删除座位



图4-15 删除航班图

1. 航班查询



图4-16 航班查询图

### 4.6.2 订单事务测试

1. 预订

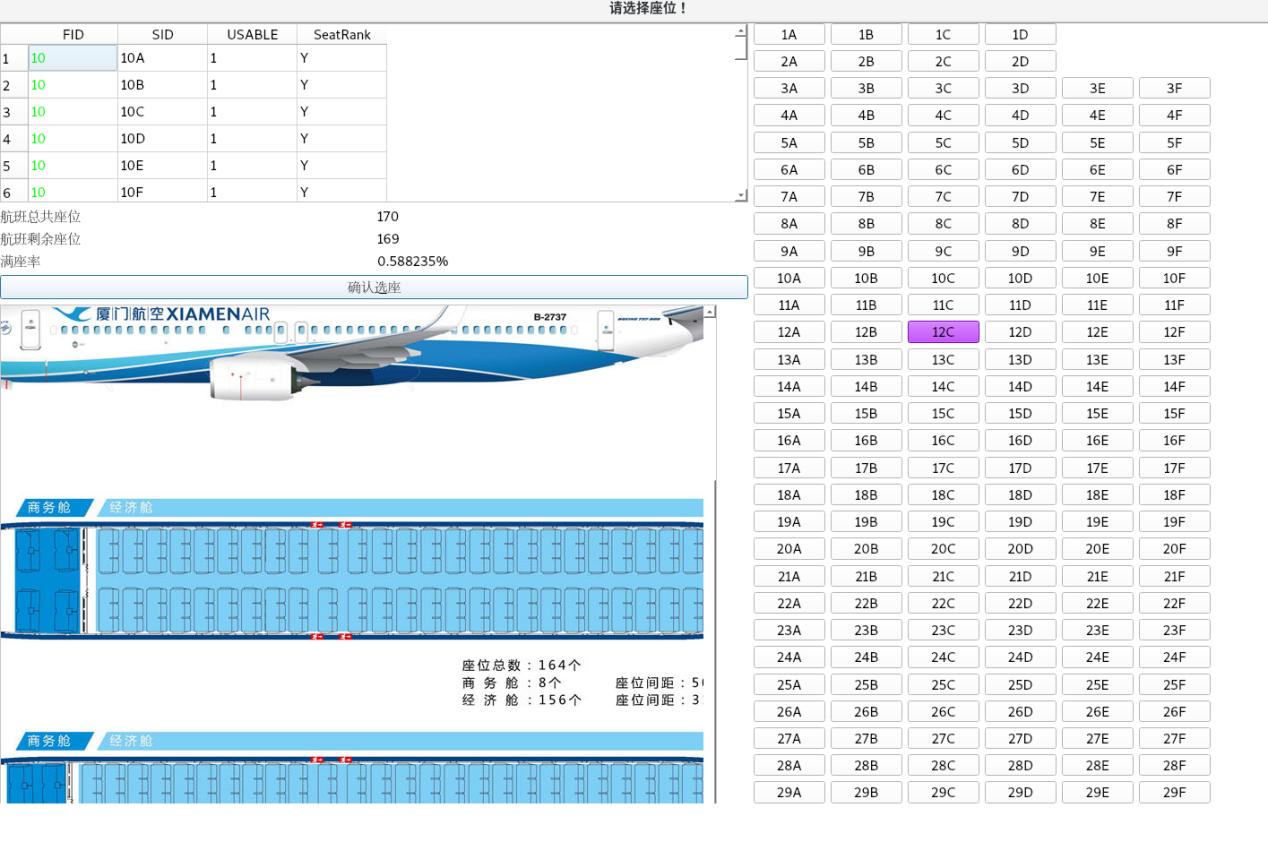


图4-17 选座系统图

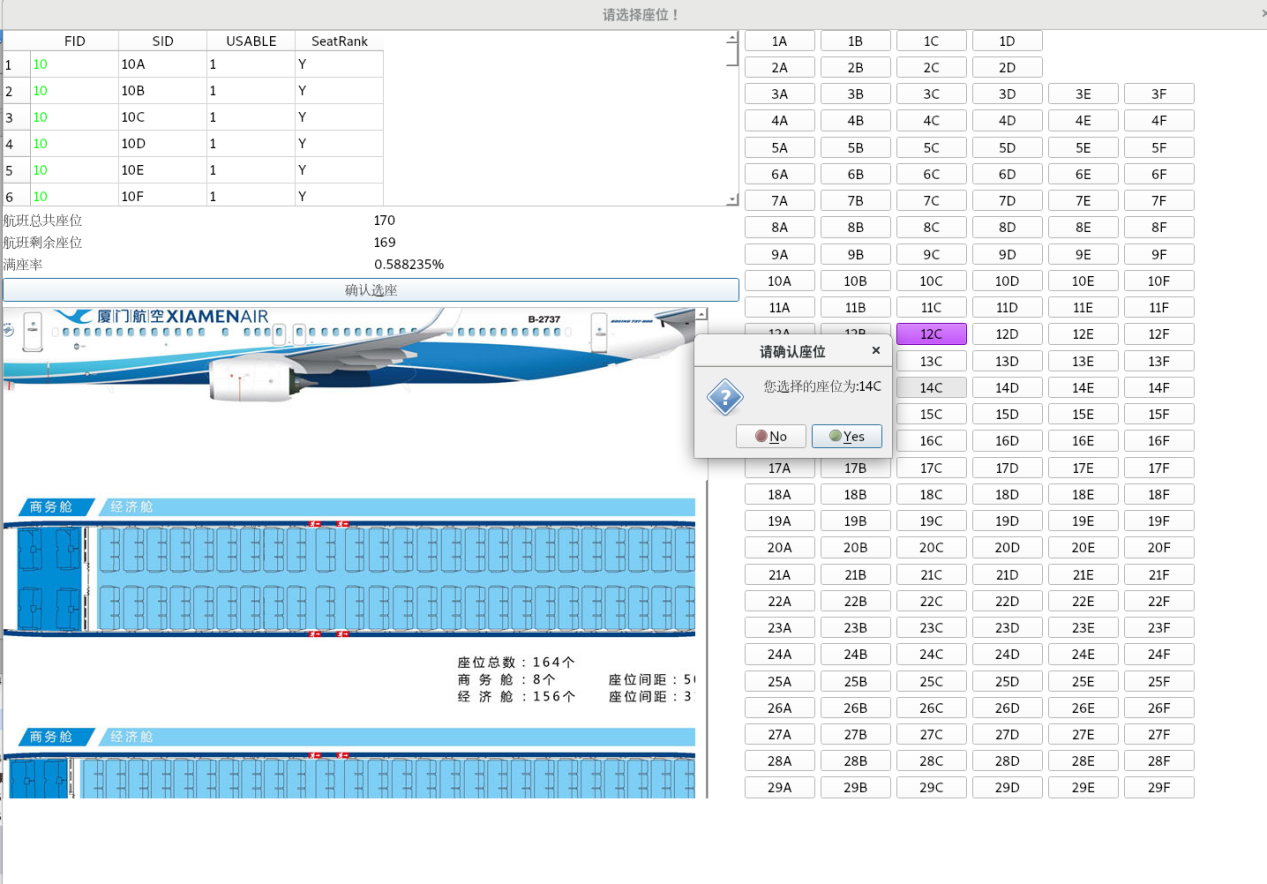


图4-18 确认选座图

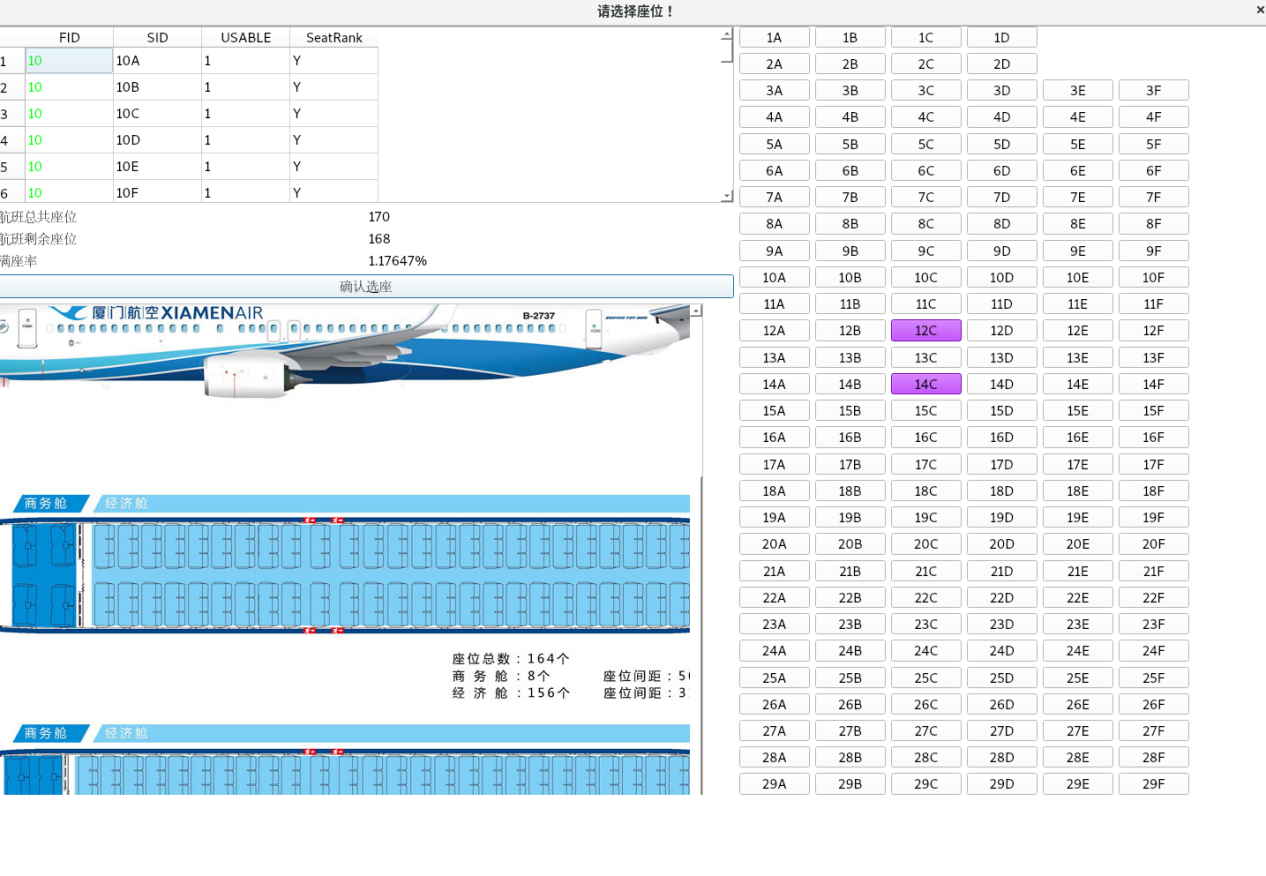


图4-19 再次查询图

1. 退订

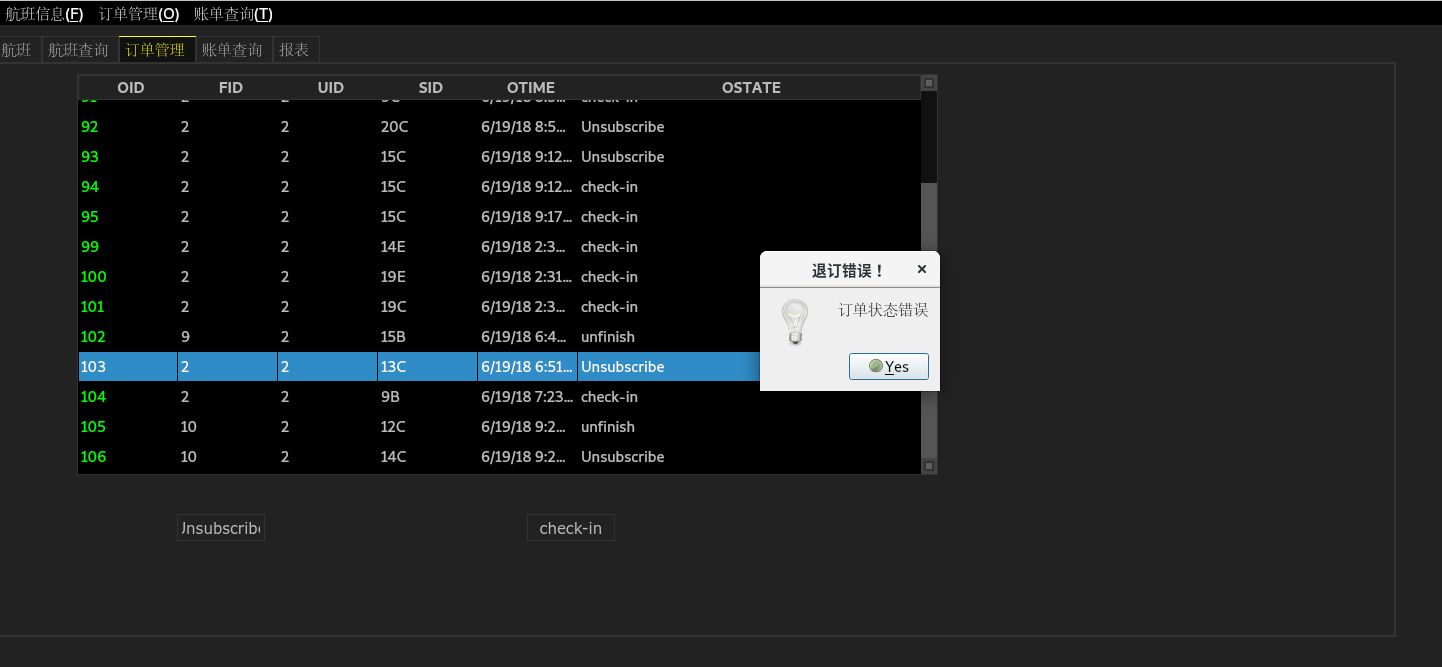


图4-20 退订错误图

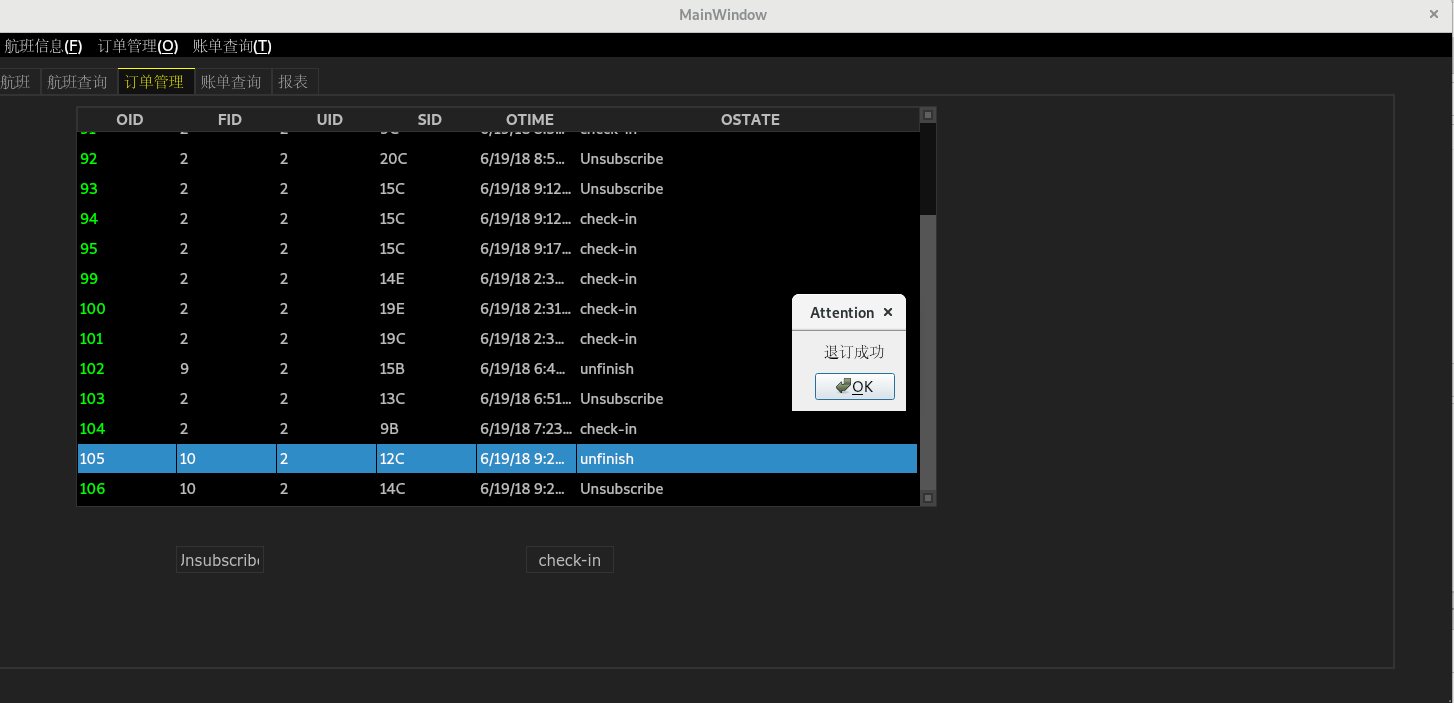


图4-21 退订成功图

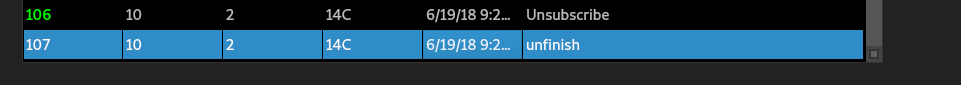


图4-22 退订再次预订图

1. 取票并输出机票

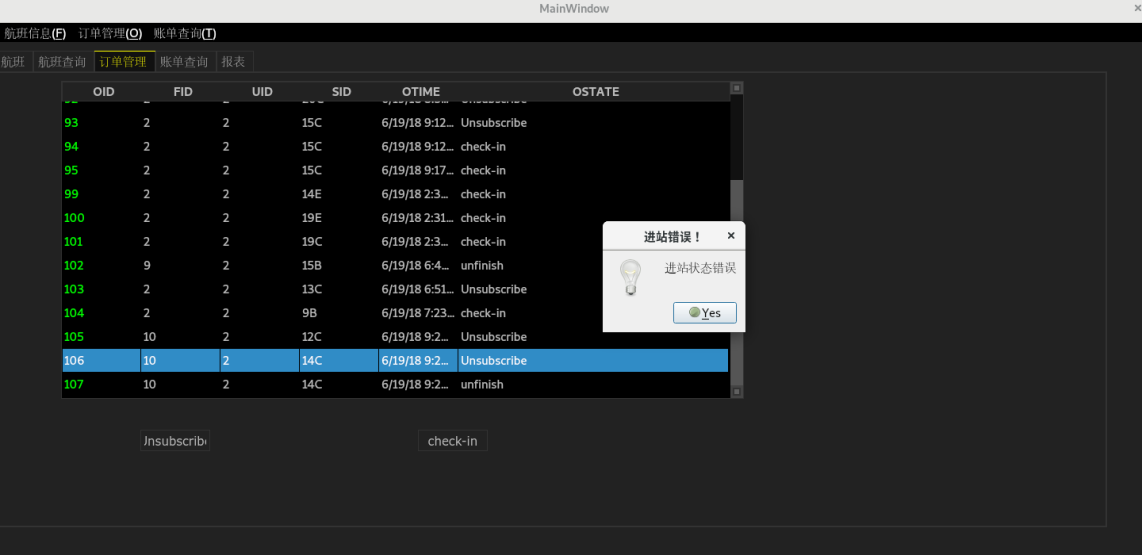


图4-23 检票错误图



图4-24 机票确认图



图4-25 机票模拟打印图（输出到文件）

### 4.6.3 报表测试

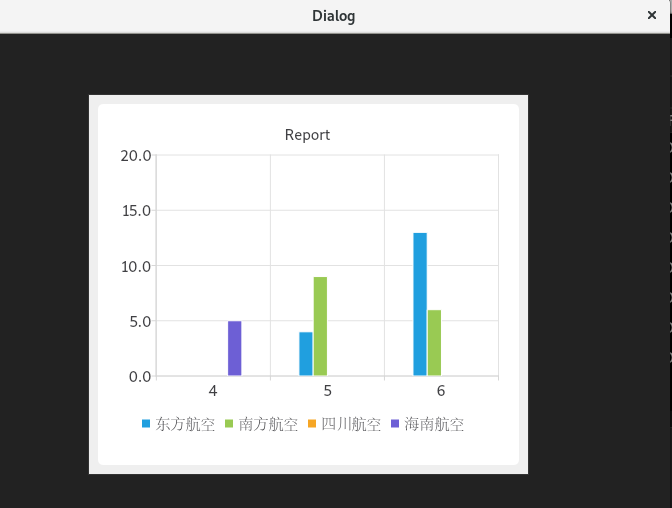


图4-26 报表测试图

## 4.7 系统设计与实现总结

在设计中，进一步熟练了SQL语句的使用，同时对于QT框架的数据模型有了更好的理解，自己能够在框架上继承修改形成自己的框架，而不是仅仅依赖于原有的框架。在界面的实现上，尽可能的采用了自动化布局而不采用手工布局，提高了代码的可拓展性，降低了耦合性，同事在整个设计的过程中，对代码不断的重构，使代码能够精炼的实现功能。

同时，在程序嵌入SQL上，可以利用SQL语句获得执行结果，也可以利用model设置SQL语句获取执行结果，在不同的情境下使用不同的语句。

遇到如下问题：

1. SQL语句中的一些语法如exites在进行复杂嵌套的时候，QT中经常执行不成功，经过反复调试，确认是框架问题，只能手写。
2. SQL语句中的参数绑定，不能绑定表名，在进行自动化设置的时候，只能手动拼接STR进行查询。
3. 由于SQL返回的错误类型模糊，很多情况下只能在前端认为判断错误原因，进行错误提示，此处为较为麻烦之处，可考虑读取log进行错误输出，而不用人工判断，使模型进一步自动化。

数据库设计阶段，对数据库功能、数据字典的设计，加深了对于关系模式、E-R图、范式、数据流图等概念的理解。

数据库操纵类编写，基于QT信号槽的设置，设计过程中，将主要的数据库操作继承子qsqlquery基类进行重载，初期考虑进行使用DAO模型进行对象映射，但此时对于底层的操作可以不提供接口进行权限控制，实现更为简单，故使用mysqlmodel进行基本的数据操作类封装形成基本的DAO模型，并提供清晰的接口，上层只需要更新操纵表，即可以对当前表的相关属性进行自动设置。

后期测试，使用了不同的数据进行测试，且在模块编写中，对模块进行了单元测试，增强了鲁棒性。

整个过程中，对于代码进行了一定程度的重构，以便于对模块的复用。

# 5 课程总结

因为之前有利用过数据库进行过相关软件的编写，故在整个过程中有更多的机会去尝试一些之前没有尝试过的部分，如触发器，事务处理，备份等部分，这些部分能够帮助更好的理解数据库，同时应用好数据库，对于错误的处理，比如进行测试的过程中，可能会造成数据库数据错误，故测试前需要进行备份。

在进行存储过程中，了解到并尝试了其中的一些方法，比如进行二进制文件存储，可以采用存储二进制流的方式，或者进行文件相对地址的存储，应用再进行文件读取。对于航班座位表类似于矩阵的存储，对于现代针对机器学习存在专用的矩阵数据库，而传统数据库中，可以另开一表，但存在一定程度的冗余，可以采用存储矩阵形式和矩阵01表示压缩，但此时如果每次写回数据库，压缩解压操作开销较大，如果存在内存中，一段时间后写回，若出现故障，数据一致性错误，体会到不同的实现方式的不同优缺点，需要根据情形选择。

对于错误的处理，学会了阅读SQL返回的错误代码，但错误提示往往语焉不详，仍然需要人工判断，对于较为复杂的错误处理，仍然有待学习，如系统的崩溃处理。

整个课程过程中，应用了已有的理论知识，并学习到了新的知识，同时发现了自己现有的不足，需要进一步学习。

最后感谢老师在课程上的指导和所参阅资料的提供者。

# 参考文献

[1]QT官方文档

[2]王珊，萨师煊 数据库系统概论（第5版）, 高等教育出版社 2014

[3]CSDN [基于Qt的图表库](http://blog.csdn.net/liang19890820/article/details/54600307)http://blog.csdn.net/liang19890820/article/details/54600307

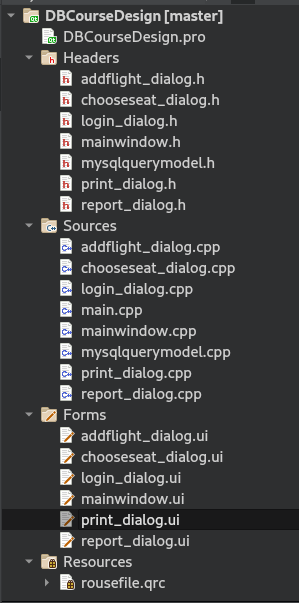
# 附录

## 文件说明

采用驼峰命名法，所有的类名为当前类的功能。

* .h文件为头文件用于函数和信号槽的声明
* .cpp文件用于函数的实现和相关信号槽的绑定
* .ui文件为界面文件

整体架构



整体文件架构图

* addflight\_dialog 添加航班相关事务的处理和界面绘制
* chooseseat\_dialog 添加航班相关事务的处理和界面绘制
* login\_dialog 登录处理和相关权限管理及系统初始化
* Mainwindow 主体窗口绘制和相关响应
* Mysqlquerymodel mysql相关操作的封装和继承重载
* print\_dialog 机票打印和行程单确认相关确认
* report\_dialog 统计报表相关事务的处理和界面绘制
* rousefile.qrc 界面的样式文件及图标文件

## Main

### main.cpp

/\* FileName:main.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description: The main loop of the total Program and link the DB

\*/

#include "mainwindow.h"

#include "login\_dialog.h"

#include <QApplication>

#include <QSqlQuery>

#include <QMessageBox>

#include <QBuffer>

#include <QDir>

int main(int argc, char \*argv[])

{

QApplication a(argc, argv);

QSqlDatabase db = QSqlDatabase::addDatabase("QMYSQL");

db.setHostName("hover");

db.setDatabaseName("DBCourseDesign");

db.setUserName("root");

db.setPassword("990123");

bool ok = db.open();

if(ok)

{

qDebug()<<"成功连接数据库";

}

else

{

QMessageBox::warning(NULL,"警告","无法连接数据库");

}

a.setWindowIcon(QIcon(":/main.ico"));

QString currentPath;

QDir dir;

currentPath=dir.currentPath();

qDebug()<<"path"<<currentPath;

QSqlQuery query;

query.prepare("select \* from `FLIGHTinfo` as f where exists(select \* from `FSTATUSinfo` as s where s.`FID`=f.`FID` and s.`USABLE`='1') and f.`FID`=3;");

bool isOK=query.exec();

while(query.next())

{

qDebug()<<query.value(0).toString();

}

login\_dialog l;

l.db=&db;

l.show();

return a.exec();

}

## Mysqlquerymodel

### mysqlquerymodel.h

/\* FileName:mysqlquerymodel.h

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:This class inherits from the basical QSqlQueryModel to make the module can edit and autofit the UI

\* Main Funciton:

\* 1. Judge the role to control the edit Authority

\* 2. Auto fit the process table and get the tabel title from the DB

\* 3. Implement the title to the DB dictionary mapping, which is choosable

\* 4. Set the table properity automaticly

\*/

#ifndef MYSQLQUERYMODEL\_H

#define MYSQLQUERYMODEL\_H

#include "mainwindow.h"

#include <QSqlQueryModel>

#include <QVector>

#include <QMap>

/\*

\* op tabel

\* 1:user

\* 2:FLIGHTinfo

\* 3:

\*/

class MySqlQueryModel : public QSqlQueryModel

{

Q\_OBJECT

public:

//public var

int opView;

int opTable;

QString opName;

QString opPRI;

int opPRI\_col;

QVector<QString> opTitle; //table title

QVector<QString> addVec; //the vec

class MainWindow\* mw;

QMap<QString,QString> map;

// public function

MySqlQueryModel();

explicit MySqlQueryModel(QObject \*parent = 0);

Qt::ItemFlags flags(const QModelIndex &index) const;

QVariant data(const QModelIndex &item, int role=Qt::DisplayRole) const;

bool addData();

bool deleteData(QModelIndex &index);

bool setData(const QModelIndex &index, const QVariant &value, int role);

bool set\_op();

bool set\_opTitle();

bool set\_opName();

bool set\_opIndex(QModelIndex &index);

void refresh();

private:

//private var

int opRow;

int opCol;

//private funciton

};

#endif // MYSQLQUERYMODEL\_H

### mysqlquerymodel.cpp

/\* FileName:mysqlquerymodel.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:This class inherits from the basical QSqlQueryModel to make the module can edit and autofit the UI

\*/

#include "mysqlquerymodel.h"

#include <QSqlQuery>

#include <QColor>

MySqlQueryModel::MySqlQueryModel(QObject \*parent) :

QSqlQueryModel(parent)

{

// set map

// map["FLIGHT"]

}

Qt::ItemFlags MySqlQueryModel::flags

(

const QModelIndex &index) const //返回表格是否可更改的标志

{

Qt::ItemFlags flags = QSqlQueryModel::flags(index);

if(opView==0)

{

if (index.column()!=0) // value can be changed except first

flags |= Qt::ItemIsEditable;

}

return flags;

}

// add data

bool MySqlQueryModel::addData()

{

return true;

}

// update

bool MySqlQueryModel::setData(const QModelIndex &index, const QVariant &value, int /\* role \*/)

{

set\_op();

QModelIndex temp=index;

set\_opIndex(temp);

qDebug()<<"FIGHTinfo changed";

if (index.column() < 1 || index.column() > opTitle.size())

return false;

// QModelIndex primaryKeyIndex = QSqlQueryModel::index(index.row(), 0);

// int id = data(primaryKeyIndex).toInt(); //获取id号

// qDebug()<<id;

// QSqlQuery query;

// query.prepare("update "+opName+" SET "+opTitle[opCol]+" = :value WHERE "+opPRI+"= :pri");

// query.bindValue(":FID", id);

QSqlQuery query;

QModelIndex data\_index = this->index(index.row(),opPRI\_col);

QVariant data = this->data(data\_index);

qDebug()<<data;

query.prepare("update "+opName+" SET "+opTitle[opCol]+" = :value WHERE "+opPRI+"=:pri");

query.bindValue(":pri", data);

query.bindValue(":value",value);

bool isOk = query.exec();

qDebug() <<isOk;

refresh();

return true;

}

// delete data

bool MySqlQueryModel::deleteData(QModelIndex &index)

{

set\_op();

set\_opIndex(index);

//DELETE FROM 表名称 WHERE 列名称 = 值

qDebug()<<opPRI;

QSqlQuery query;

// get pri

QModelIndex data\_index = this->index(index.row(),opPRI\_col);

QVariant data = this->data(data\_index);

qDebug()<<data;

query.prepare("DELETE FROM "+opName+" WHERE "+opPRI+"= :pri");

query.bindValue(":pri", data);

bool isOk = query.exec();

qDebug() <<"delete"<<isOk;

refresh();

return true;

}

bool MySqlQueryModel::set\_opTitle()

{

QSqlQuery query;

query.prepare("SHOW COLUMNS FROM "+opName);

bool isOk = query.exec();

//qDebug() <<"title"<<isOk;

if(!isOk)

{

return false;

}

opTitle.clear();

while (query.next())

{

opTitle.append(query.value(0).toString());

// Title mapping

}

QSqlQuery priquery;

priquery.prepare("SHOW COLUMNS FROM FLIGHTinfo where `Key`='PRI'");

isOk = priquery.exec();

priquery.next();

opPRI=priquery.value(0).toString();

for (int i = 0; i < opTitle.size(); ++i)

{

if (opTitle.at(i) ==opPRI)

{

opPRI\_col=i;

break;

}

}

return true;

}

void MySqlQueryModel::refresh() //更新显示

{

//qDebug() << "refresh";

switch (this->opTable)

{

case 0:

mw->on\_action\_F\_triggered();

//qDebug() << "refresh";

break;

default:

break;

}

// setQuery("select \* from user");

//

// setHeaderData(1, Qt::Horizontal, QObject::tr("name"));

}

//更改数据显示样式

QVariant MySqlQueryModel::data(const QModelIndex &index, int role) const

{

QVariant value = QSqlQueryModel::data(index, role);

//第一个字段的字体颜色为红色

if (role == Qt::TextColorRole && index.column() == 0)

return qVariantFromValue(QColor(Qt::green));

return value;

}

// set op properity

bool MySqlQueryModel::set\_op()

{

set\_opName();

qDebug()<<set\_opTitle();

return true;

}

bool MySqlQueryModel::set\_opIndex(QModelIndex &index)

{

opRow=index.row();

opCol=index.column();

return true;

}

bool MySqlQueryModel::set\_opName()

{

switch(opTable)

{

case (0):opName="FLIGHTinfo";break;

case (1):opName="ORDERinfo";break;

case (2):opName="FSTATUSinfo";break;

}

return true;

}

## Addflight\_dialog

### addflight\_dialog.h

/\* FileName:addflight\_dialog.h

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:

\* The definition of addflight module

\*/

#ifndef ADDFLIGHT\_DIALOG\_H

#define ADDFLIGHT\_DIALOG\_H

#include <QDialog>

#include <QString>

#include <QSqlQuery>

#include <QLineEdit>

#include <QComboBox>

#include <QTextEdit>

#include <QVector>

#include <QMessageBox>

#include <QDebug>

#include <QChart>

namespace Ui

{

class addFlight\_Dialog;

}

class addFlight\_Dialog : public QDialog

{

Q\_OBJECT

public:

explicit addFlight\_Dialog(QWidget \*parent = 0);

~addFlight\_Dialog();

private:

Ui::addFlight\_Dialog \*ui;

bool isDateChanged=false;

bool isTimeChanged=false;

void setFMODEL\_Combox();

private slots:

void dateChanged();

void timeChanged();

void on\_post\_Button\_clicked();

};

#endif // ADDFLIGHT\_DIALOG\_H

### addflight\_dialog.cpp

/\* FileName:addflight\_dialog.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:

\* The implementation of addflight module

\*/

#include "addflight\_dialog.h"

#include "ui\_addflight\_dialog.h"

addFlight\_Dialog::addFlight\_Dialog(QWidget \*parent) :

QDialog(parent),

ui(new Ui::addFlight\_Dialog)

{

ui->setupUi(this);

// set time edit

ui->dateEdit->setDisplayFormat("yyyy/MM/dd");

ui->dateEdit->setCalendarPopup(true);

ui->timeEdit->setDisplayFormat("HH:mm");

ui->dateEdit->setDateTime(QDateTime::currentDateTime());

ui->timeEdit->setDateTime(QDateTime::currentDateTime());

ui->dateEdit\_2->setDisplayFormat("yyyy/MM/dd");

ui->dateEdit\_2->setCalendarPopup(true);

ui->timeEdit\_2->setDisplayFormat("HH:mm");

ui->dateEdit\_2->setDateTime(QDateTime::currentDateTime());

ui->timeEdit\_2->setDateTime(QDateTime::currentDateTime());

isDateChanged=false;

isTimeChanged=false;

connect(ui->dateEdit,SIGNAL(dateChanged(QDate)),this,SLOT(dateChanged()));

connect(ui->timeEdit,SIGNAL(timeChanged(QTime)),this,SLOT(timeChanged()));

setFMODEL\_Combox();

//set FSTATE\_combox

ui->FSTATE\_comboBox->addItem("SCHEDULED");

ui->FSTATE\_comboBox->addItem("CANCELLED");

//set FID

ui->FID\_lineEdit->setValidator(new QIntValidator(0, 10000, this));

// set qss

QFile qssfile(":/test.qss");

qssfile.open(QFile::ReadOnly);

QString qss;

qss = qssfile.readAll();

setStyleSheet(qss);

}

void addFlight\_Dialog::dateChanged()

{

isDateChanged=true;

}

void addFlight\_Dialog::timeChanged()

{

isTimeChanged=true;

}

void addFlight\_Dialog::setFMODEL\_Combox()

{

// set flight combox

QComboBox\* com=ui->FMODEL\_comboBox;

com->clear();

QSqlQuery query;

QString opName="FMODELinfo";

QString showItem="FMODEL";

query.prepare("select "+showItem+" FROM "+opName+" group by "+showItem);

bool isOk = query.exec();

if(!isOk)

{

return;

}

while (query.next())

{

com->addItem(query.value(0).toString());

}

//com->addItem("ALL");

com->setCurrentIndex(-1);

}

addFlight\_Dialog::~addFlight\_Dialog()

{

delete ui;

}

void addFlight\_Dialog::on\_post\_Button\_clicked()

{

if(isDateChanged==false || isTimeChanged==false)

{

QMessageBox::information(NULL, "Attention!", "请设置时间！", QMessageBox::Yes);

return;

}

QString FDATE=ui->dateEdit->text();

QString FTIME=ui->timeEdit->text();

QString ARRDATE=ui->dateEdit\_2->text();

QString ARRTIME=ui->timeEdit\_2->text();

QVector<QString> vec;

QString FID=ui->FID\_lineEdit->text();

QString Flight=ui->Flight\_lineEdit->text();

QString FMODEL=ui->FMODEL\_comboBox->currentText();

QString FSTATE=ui->FSTATE\_comboBox->currentText();

QString FFROM=ui->FFROM\_lineEdit->text();

QString FTO=ui->FTO\_lineEdit->text();

QString FSTATUS="NOT FULL";

vec.append(FID);

vec.append(Flight);

vec.append(FMODEL);

vec.append(FSTATE);

vec.append(FFROM);

vec.append(FTO);

QVectorIterator<QString> i(vec);

while (i.hasNext())

{

if(i.next().isEmpty()==true)

{

QMessageBox::information(NULL, "Please Fit the form", "请填写完整表单！", QMessageBox::Yes);

return;

}

}

QSqlQuery query;

QString str="";

bool isOK;

str+="insert into FLIGHTinfo values(:FID,:Flight,:FMODEL,:FSTATE,:FFROM,:FTO,:FDATE,:FTIME,:ARRDATE,:ARRTIME,:FSTATUS)";

query.prepare(str);

query.bindValue(":FID",FID);

query.bindValue(":Flight",Flight);

query.bindValue(":FMODEL",FMODEL);

query.bindValue(":FSTATE",FSTATE);

query.bindValue(":FFROM",FFROM);

query.bindValue(":FTO",FTO);

query.bindValue(":FDATE",FDATE);

query.bindValue(":FTIME",FTIME);

query.bindValue(":ARRDATE",ARRDATE);

query.bindValue(":ARRTIME",ARRTIME);

query.bindValue(":FSTATUS",FSTATUS);

isOK=query.exec();

if(!isOK)

{

QMessageBox::information(NULL, "information", "插入失败！数据错误！", QMessageBox::Yes);

qDebug()<<"插入失败!";

return;

}

QMessageBox::information(NULL, "information", "插入成功！", QMessageBox::Yes);

//process FSTATUS info

query.clear();

str="select \* from FMODELinfo where FMODEL = :FMODEL";

query.prepare(str);

query.bindValue(":FMODEL",FMODEL);

isOK=query.exec();

QString F;

QString C;

QString Y;

if(query.next())

{

qDebug()<<query.value(0).toString();

F=query.value(2).toString();

qDebug()<<query.value(2).toString();

C=query.value(3).toString();

qDebug()<<query.value(3).toString();

Y=query.value(4).toString();

qDebug()<<query.value(4).toString();

}

int Frow=F.split("\*")[0].toInt();

int Fcol=F.split("\*")[1].toInt();

int Crow=C.split("\*")[0].toInt();

int Ccol=C.split("\*")[1].toInt();

int Yrow=Y.split("\*")[0].toInt();

int Ycol=Y.split("\*")[1].toInt();

QString SID;

query.clear();

str="insert into FSTATUSinfo values(:FID,:SID,:USABLE,:SeatRank)";

query.prepare(str);

query.bindValue(":FID",FID);

query.bindValue(":USABLE","1");

int begin;

int end;

begin=1;

end=Frow+1;

query.bindValue(":SeatRank","F");

for(int i=begin;i<end;i++)

{

for(int j=0;j<Fcol;j++)

{

SID=QString::number(i,10)+QString('A'+j);

query.bindValue(":SID",SID);

isOK=query.exec();

if(!isOK)

{

qDebug()<<SID<<"插入失败";

}

}

}

begin=Frow+1;

end=Frow+Crow+1;

query.bindValue(":SeatRank","C");

for(int i=begin;i<end;i++)

{

for(int j=0;j<Ccol;j++)

{

SID=QString::number(i,10)+QString('A'+j);

query.bindValue(":SID",SID);

isOK=query.exec();

if(!isOK)

{

qDebug()<<SID<<"插入失败";

}

}

}

begin=Frow+Crow+1;

end=Frow+Crow+Yrow+1;

query.bindValue(":SeatRank","Y");

for(int i=begin;i<end;i++)

{

for(int j=0;j<Ycol;j++)

{

SID=QString::number(i,10)+QString('A'+j);

query.bindValue(":SID",SID);

isOK=query.exec();

if(!isOK)

{

qDebug()<<SID<<"插入失败";

}

}

}

this->close();

}

### addflight\_dialog.ui

<?xml version="1.0" encoding="UTF-8"?>

<ui version="4.0">

<class>addFlight\_Dialog</class>

<widget class="QDialog" name="addFlight\_Dialog">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>533</width>

<height>504</height>

</rect>

</property>

<property name="windowTitle">

<string>Dialog</string>

</property>

<widget class="QWidget" name="gridLayoutWidget">

<property name="geometry">

<rect>

<x>110</x>

<y>60</y>

<width>301</width>

<height>363</height>

</rect>

</property>

<layout class="QGridLayout" name="gridLayout">

<item row="1" column="0">

<widget class="QLabel" name="label\_2">

<property name="text">

<string>航空公司(Flight)</string>

</property>

</widget>

</item>

<item row="4" column="1">

<widget class="QLineEdit" name="FFROM\_lineEdit"/>

</item>

<item row="3" column="1">

<widget class="QComboBox" name="FSTATE\_comboBox">

<property name="editable">

<bool>true</bool>

</property>

</widget>

</item>

<item row="6" column="1">

<widget class="QLineEdit" name="FTO\_lineEdit"/>

</item>

<item row="8" column="0">

<widget class="QLabel" name="label\_8">

<property name="text">

<string>起飞时间(FTIME)</string>

</property>

</widget>

</item>

<item row="2" column="0">

<widget class="QLabel" name="label\_3">

<property name="text">

<string>飞机型号(FMODEL)</string>

</property>

</widget>

</item>

<item row="7" column="0">

<widget class="QLabel" name="label\_7">

<property name="text">

<string>起飞日期(FDATE)</string>

</property>

</widget>

</item>

<item row="10" column="0">

<widget class="QLabel" name="label\_10">

<property name="text">

<string>到达时间(ARRTIME)</string>

</property>

</widget>

</item>

<item row="2" column="1">

<widget class="QComboBox" name="FMODEL\_comboBox">

<property name="editable">

<bool>true</bool>

</property>

</widget>

</item>

<item row="7" column="1">

<widget class="QDateEdit" name="dateEdit">

<property name="displayFormat">

<string>yyyy/mm/dd</string>

</property>

</widget>

</item>

<item row="1" column="1">

<widget class="QLineEdit" name="Flight\_lineEdit"/>

</item>

<item row="9" column="0">

<widget class="QLabel" name="label\_9">

<property name="text">

<string>到达日期(ARRDATE)</string>

</property>

</widget>

</item>

<item row="0" column="0">

<widget class="QLabel" name="label">

<property name="text">

<string>航班号(FID)</string>

</property>

</widget>

</item>

<item row="8" column="1">

<widget class="QTimeEdit" name="timeEdit">

<property name="displayFormat">

<string>hh:mm</string>

</property>

</widget>

</item>

<item row="6" column="0">

<widget class="QLabel" name="label\_6">

<property name="text">

<string>飞往(FTO)</string>

</property>

</widget>

</item>

<item row="3" column="0">

<widget class="QLabel" name="label\_4">

<property name="text">

<string>飞机状态(FSTATE)</string>

</property>

</widget>

</item>

<item row="4" column="0">

<widget class="QLabel" name="label\_5">

<property name="text">

<string>起飞地(FFROM)</string>

</property>

</widget>

</item>

<item row="0" column="1">

<widget class="QLineEdit" name="FID\_lineEdit"/>

</item>

<item row="9" column="1">

<widget class="QDateEdit" name="dateEdit\_2">

<property name="displayFormat">

<string>yyyy/mm/dd</string>

</property>

</widget>

</item>

<item row="10" column="1">

<widget class="QTimeEdit" name="timeEdit\_2">

<property name="displayFormat">

<string>hh:mm</string>

</property>

</widget>

</item>

<item row="11" column="1">

<widget class="QPushButton" name="post\_Button">

<property name="text">

<string>OK</string>

</property>

</widget>

</item>

</layout>

</widget>

</widget>

<tabstops>

<tabstop>FID\_lineEdit</tabstop>

<tabstop>Flight\_lineEdit</tabstop>

<tabstop>FMODEL\_comboBox</tabstop>

<tabstop>FSTATE\_comboBox</tabstop>

<tabstop>FFROM\_lineEdit</tabstop>

<tabstop>FTO\_lineEdit</tabstop>

<tabstop>dateEdit</tabstop>

<tabstop>timeEdit</tabstop>

<tabstop>dateEdit\_2</tabstop>

<tabstop>timeEdit\_2</tabstop>

<tabstop>post\_Button</tabstop>

</tabstops>

<resources/>

<connections/>

</ui>

## Chooseseat\_dialog

### chooseseat\_dialog.h

/\* FileName:chooseseat\_dialog.h

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The definition of chooseseat module

\*/

#ifndef CHOOSESEAT\_DIALOG\_H

#define CHOOSESEAT\_DIALOG\_H

#include <QDialog>

#include <QLabel>

#include <QPushButton>

#include <QGridLayout>

#include <QDebug>

#include <QSqlDatabase>

#include <QSqlQuery>

#include <QSqlQueryModel>

#include <QList>

#include <QString>

#include "mysqlquerymodel.h"

#include <QButtonGroup>

#include <QMessageBox>

#include <QGraphicsView>

namespace Ui

{

class chooseSeat\_Dialog;

}

class chooseSeat\_Dialog : public QDialog

{

Q\_OBJECT

public:

int FID;

void queryFSTATUS(int FID);

class MainWindow\* mw;

explicit chooseSeat\_Dialog(class MainWindow \*parent = 0,int FID=-1);

~chooseSeat\_Dialog();

QString seatName;

private:

QButtonGroup \*buttonGroup;

QMap<QString, QPushButton\*> pushButtonMap;

Ui::chooseSeat\_Dialog \*ui;

void setButtonGroup(int FID);

void setImage();

void initButton();

void buttonJudge(int buttonId);

class MySqlQueryModel\* StatusModel=NULL;

private slots:

void on\_chooseSteat\_pushButton\_clicked();

};

#endif // CHOOSESEAT\_DIALOG\_H

### chooseseat\_dialog.cpp

/\* FileName:chooseseat\_dialog.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The implementation of chooseseat module

\*/

#include "chooseseat\_dialog.h"

#include "ui\_chooseseat\_dialog.h"

chooseSeat\_Dialog::chooseSeat\_Dialog(class MainWindow \*parent,int FID) :

QDialog(parent),

ui(new Ui::chooseSeat\_Dialog)

{

ui->setupUi(this);

this->FID=FID;

qDebug()<<this->FID;

setWindowTitle(tr("请选择座位！"));

setStyleSheet("background-color:white;"

"QPushButton{"

"background-color:white;"

"color:black;"

"text-align:center;"

"border-radius: 8px;"

"border: 2px groove gray;"

"border-style: outset;"

"}");

setButtonGroup(FID);

setImage();

queryFSTATUS(FID);

mw=parent;

// //set qss

// QFile qssfile(":/test.qss");

// qssfile.open(QFile::ReadOnly);

// QString qss;

// qss = qssfile.readAll();

// this->setStyleSheet(qss);

//setAttribute(Qt::WA\_DeleteOnClose);

// set focus

}

//RESIZE!

void chooseSeat\_Dialog::setImage()

{

QString str = "select \* from FMODELinfo where FMODEL= (select FMODEL FROM FLIGHTinfo where FID= "+QString::number(FID,10)+" )";

QSqlQuery query;

query.exec(str);

QPixmap photo;

if(query.next())

{

QLabel \*PicLabel = new QLabel();

photo.loadFromData(query.value(1).toByteArray(), "JPG"); //从数据库中读出图片为二进制数据，图片格式为JPG，然后显示到QLabel里

//photo.scaledToHeight(ui->graphicsView->maximumHeight());

//photo.scaledToWidth(ui->graphicsView->maximumWidth());

photo.scaled(ui->graphicsView->maximumSize());

PicLabel->setPixmap(photo);

PicLabel->setScaledContents(true);

}

QGraphicsScene \*scene = new QGraphicsScene;

scene->addPixmap(photo);

ui->graphicsView->setScene(scene);

ui->graphicsView->resize(photo.width()\*0.5 + 10, photo.height()\*0.5 + 10);

ui->graphicsView->show();

}

void chooseSeat\_Dialog::setButtonGroup(int FID)

{

// set button group

int totalNum=0;

int usableNum=0;

QGridLayout \*layout = ui->gridLayout\_0;

QSqlQuery query;

QString opName="FLIGHTinfo";

QString showItem="FLIGHT";

QString str="select \* from FSTATUSinfo where FID ="+QString::number(FID, 10);

query.prepare(str);

bool isOk = query.exec();

if(!isOk)

{

qDebug()<<"set seat button fail!";

return;

}

;

QPushButton\* pushbutton=NULL;

int rowBefore=1;

int row=1;

int col=-1;

int len=0;

int usable=-1;

while (query.next()) // when .next() then go to the next

{

totalNum+=1;

//qDebug()<<query.value(2).toString();

usable=query.value(2).toString().toInt();

len=query.value(1).toString().length();

//qDebug()<<query.value(1).toString();

row=query.value(1).toString().mid(0,len-1).toInt();

if(row!=rowBefore)

{

col=0;

rowBefore=row;

}

else

{

col+=1;

}

pushbutton = new QPushButton();

pushbutton->setText(query.value(1).toString());

pushButtonMap[query.value(1).toString()]=pushbutton;

layout->addWidget(pushbutton,row,col,1,1);

if(usable)

{

usableNum+=1;

pushbutton->setCheckable(true);

pushbutton->setAutoExclusive(true);

}

else

{

pushbutton->setCheckable(false);

pushbutton->setStyleSheet("background-color: rgb(170, 0, 255);"); //set the background color

}

}

qDebug()<<"totalNum"<<totalNum;

qDebug()<<"usableNum"<<usableNum;

ui->label\_totalSeatNum->setText(QString::number(totalNum,10));

ui->label\_usableSeatNum->setText(QString::number(usableNum,10));

float fnum=((float)totalNum-usableNum)/totalNum\*100;

ui->label\_fullRate->setText(QString("%1").arg(fnum)+"%");

}

chooseSeat\_Dialog::~chooseSeat\_Dialog()

{

delete ui;

}

//query the choosable seat

void chooseSeat\_Dialog::queryFSTATUS(int FID)

{

StatusModel=new MySqlQueryModel(this);

StatusModel->opTable=2;

StatusModel->set\_op();

QString str="select \* from "+StatusModel->opName+" where FID ="+QString::number(FID, 10)+" AND USABLE = 1";

//qDebug()<<str;

StatusModel->setQuery(str);

StatusModel->query().bindValue(":FID",FID);

StatusModel->query().exec();

if(StatusModel->query().next())

{

qDebug()<<StatusModel->query().value(0).toString();

}

else

{

qDebug()<<"No Search Result!";

}

for(int i=0;i<StatusModel->opTitle.size();i++)

{

StatusModel->setHeaderData(i, Qt::Horizontal, StatusModel->opTitle[i]);

}

ui->FSTATUS\_tableView->setModel(StatusModel);

ui->FSTATUS\_tableView->setSelectionBehavior(QAbstractItemView::SelectRows);

}

void chooseSeat\_Dialog::on\_chooseSteat\_pushButton\_clicked()

{

QMapIterator<QString,QPushButton\*> i(pushButtonMap);

seatName="";

while (i.hasNext())

{

// qDebug() <<i.next().key()<<i.next().value();

if(i.next().value()->isChecked()==true)

{

seatName=i.key();

break;

}

}

if(seatName=="")

{

QModelIndex selIndex=ui->FSTATUS\_tableView->currentIndex();

int selRow=selIndex.row();

//int selCol=selIndex.column();

qDebug()<<selRow;

QModelIndex index= StatusModel->index(selRow,1);

QVariant data = StatusModel->data(index);

qDebug()<<data.toString();

seatName=data.toString();

}

QMessageBox::StandardButton rb = QMessageBox::question(NULL, "请确认座位", "您选择的座位为:"+seatName, QMessageBox::Yes | QMessageBox::No, QMessageBox::Yes);

if(rb == QMessageBox::Yes)

{

mw->seatName=seatName;

this->close();

}

if(rb == QMessageBox::No)

{

return;

}

//rb = information(NULL, "Show Qt", "Do you want to show Qt dialog?", QMessageBox::Yes QMessageBox::No, QMessageBox::Yes);

}

### chooseseat\_dialog.ui

<?xml version="1.0" encoding="UTF-8"?>

<ui version="4.0">

<class>chooseSeat\_Dialog</class>

<widget class="QDialog" name="chooseSeat\_Dialog">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>1450</width>

<height>1000</height>

</rect>

</property>

<property name="minimumSize">

<size>

<width>50</width>

<height>1000</height>

</size>

</property>

<property name="windowTitle">

<string>Dialog</string>

</property>

<widget class="QWidget" name="layoutWidget">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>1351</width>

<height>1120</height>

</rect>

</property>

<layout class="QHBoxLayout" name="horizontalLayout">

<item>

<layout class="QVBoxLayout" name="verticalLayout">

<item>

<widget class="QTableView" name="FSTATUS\_tableView">

<property name="minimumSize">

<size>

<width>50</width>

<height>200</height>

</size>

</property>

</widget>

</item>

<item>

<layout class="QGridLayout" name="gridLayout\_1">

<item row="3" column="1">

<widget class="QLabel" name="label\_fullRate">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="3" column="0">

<widget class="QLabel" name="label\_3">

<property name="text">

<string>满座率</string>

</property>

</widget>

</item>

<item row="2" column="0">

<widget class="QLabel" name="label">

<property name="text">

<string>航班剩余座位</string>

</property>

</widget>

</item>

<item row="1" column="0">

<widget class="QLabel" name="label\_2">

<property name="text">

<string>航班总共座位</string>

</property>

</widget>

</item>

<item row="2" column="1">

<widget class="QLabel" name="label\_usableSeatNum">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="1" column="1">

<widget class="QLabel" name="label\_totalSeatNum">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

</layout>

</item>

<item>

<widget class="QPushButton" name="chooseSteat\_pushButton">

<property name="text">

<string>确认选座</string>

</property>

</widget>

</item>

<item>

<widget class="QGraphicsView" name="graphicsView">

<property name="sizePolicy">

<sizepolicy hsizetype="Preferred" vsizetype="Preferred">

<horstretch>0</horstretch>

<verstretch>0</verstretch>

</sizepolicy>

</property>

<property name="minimumSize">

<size>

<width>0</width>

<height>800</height>

</size>

</property>

<property name="maximumSize">

<size>

<width>800</width>

<height>600</height>

</size>

</property>

<property name="autoFillBackground">

<bool>true</bool>

</property>

</widget>

</item>

</layout>

</item>

<item>

<layout class="QGridLayout" name="gridLayout\_0"/>

</item>

</layout>

</widget>

</widget>

<resources/>

<connections/>

</ui>

## Login\_dialog

### login\_dialog.h

/\* FileName:login\_dialog.h

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The definition of login module

\*/

#ifndef LOGIN\_DIALOG\_H

#define LOGIN\_DIALOG\_H

#include <QDialog>

#include <QDebug>

#include <QString>

#include <QSqlQuery>

#include <QVector>

#include <QMessageBox>

#include "mainwindow.h"

#include "string"

namespace Ui

{

class login\_dialog;

}

class login\_dialog : public QDialog

{

Q\_OBJECT

public:

explicit login\_dialog(QWidget \*parent = 0);

QSqlDatabase\* db;

~login\_dialog();

private slots:

void on\_login\_pushButton\_clicked();

void on\_password\_lineEdit\_editingFinished();

private:

Ui::login\_dialog \*ui;

};

#endif // LOGIN\_DIALOG\_H

### login\_dialog.cpp

/\* FileName:login\_dialog.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The implementation of login module

\*/

#include "login\_dialog.h"

#include "ui\_login\_dialog.h"

login\_dialog::login\_dialog(QWidget \*parent) :

QDialog(parent),

ui(new Ui::login\_dialog)

{

ui->setupUi(this);

ui->usrname\_lineEdit->setText("hover");

ui->password\_lineEdit->setText("123456");

ui->password\_lineEdit->setEchoMode(QLineEdit::PasswordEchoOnEdit);

ui->login\_pushButton->setFocus();

// set qss

QFile qssfile(":/test.qss");

qssfile.open(QFile::ReadOnly);

QString qss;

qss = qssfile.readAll();

setStyleSheet(qss);

}

login\_dialog::~login\_dialog()

{

delete ui;

}

void login\_dialog::on\_login\_pushButton\_clicked()

{

QString username=ui->usrname\_lineEdit->text();

QString password=ui->password\_lineEdit->text();

QSqlQuery query;

query.exec("select DBCourseDesign;");

query.prepare("select \* from user where `username`=:username and password=:password;");

query.bindValue(0, username);

query.bindValue(1, password);

query.exec();

bool isRoot=false;

if (query.next())

{

qDebug() << query.value(3).toString();

if(query.value(3).toInt()==1)

{

isRoot=true;

}

}

else

{

QMessageBox::warning(NULL,"警告","用户名或者密码错误！");

return;

}

MainWindow\* w=new MainWindow(NULL,isRoot);

// set user information

w->UID=query.value(0).toInt();

w->userName=query.value(1).toString();

w->isRoot=isRoot;

w->db=this->db;

this->close();

w->show();

}

void login\_dialog::on\_password\_lineEdit\_editingFinished()

{

ui->login\_pushButton->setFocus();

}

### login\_dialog.ui

<?xml version="1.0" encoding="UTF-8"?>

<ui version="4.0">

<class>login\_dialog</class>

<widget class="QDialog" name="login\_dialog">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>776</width>

<height>435</height>

</rect>

</property>

<property name="windowTitle">

<string>Dialog</string>

</property>

<widget class="QLineEdit" name="usrname\_lineEdit">

<property name="geometry">

<rect>

<x>320</x>

<y>110</y>

<width>211</width>

<height>27</height>

</rect>

</property>

</widget>

<widget class="QLineEdit" name="password\_lineEdit">

<property name="geometry">

<rect>

<x>320</x>

<y>160</y>

<width>211</width>

<height>27</height>

</rect>

</property>

</widget>

<widget class="QLabel" name="label">

<property name="geometry">

<rect>

<x>210</x>

<y>110</y>

<width>68</width>

<height>19</height>

</rect>

</property>

<property name="text">

<string>userName</string>

</property>

</widget>

<widget class="QLabel" name="label\_2">

<property name="geometry">

<rect>

<x>210</x>

<y>160</y>

<width>68</width>

<height>19</height>

</rect>

</property>

<property name="text">

<string>password</string>

</property>

</widget>

<widget class="QLabel" name="label\_3">

<property name="geometry">

<rect>

<x>300</x>

<y>40</y>

<width>171</width>

<height>19</height>

</rect>

</property>

<property name="text">

<string>机票预订系统</string>

</property>

</widget>

<widget class="QPushButton" name="pushButton">

<property name="geometry">

<rect>

<x>420</x>

<y>290</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>注册</string>

</property>

</widget>

<widget class="QPushButton" name="login\_pushButton">

<property name="geometry">

<rect>

<x>540</x>

<y>290</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>登录</string>

</property>

</widget>

</widget>

<resources/>

<connections/>

</ui>

## Mainwindow

### mainwindow.h

/\* FileName:mainwindow.h

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The definition of mainwindow slot,function and the interface with other module

\*/

#ifndef MAINWINDOW\_H

#define MAINWINDOW\_H

#include <QMainWindow>

#include <QSqlDatabase>

#include <QSqlQueryModel>

#include <QMessageBox>

#include <QSqlQuery>

#include <QSqlError>

#include <QDebug>

#include <QDate>

#include <QTime>

#include <QUrl>

#include <QComboBox>

#include <QWebChannel>

#include <QPrinter>

#include <QPalette>

#include <QTableWidget>

#include "mysqlquerymodel.h"

#include "chooseseat\_dialog.h"

#include "addflight\_dialog.h"

#include "print\_dialog.h"

#include "report\_dialog.h"

namespace Ui

{

class MainWindow;

}

class MainWindow : public QMainWindow

{

Q\_OBJECT

public:

int UID;

QString userName;

bool isRoot=false;

QString seatName;

QSqlDatabase\* db;

explicit MainWindow(QWidget \*parent = 0,bool isRoot = false);

class MySqlQueryModel\* myModel=NULL;

QTableView \* pOpView=NULL;

~MainWindow();

private:

Ui::MainWindow \*ui;

int selRow;

int selCol;

bool isDataChanged=false;

bool isTimeChanged=false;

void setFlight\_Combox();

void setTab();

void setTab2();

void transQuery();

//debug funciton

void printSQLError();

public slots:

void on\_action\_F\_triggered();

private slots:

//void on\_deleteButton\_clicked();

//void on\_addButton\_clicked();

void on\_queryButton\_clicked();

void on\_tabWidget\_currentChanged(int index);

void on\_postButton\_clicked();

void on\_Unsubscribe\_pushButton\_clicked();

void dateChanged();

void timeChanged();

void on\_addFlightButton\_clicked();

void on\_deleteFlightButton\_clicked();

void on\_checkin\_pushButton\_clicked();

void on\_pushButton\_clicked();

};

#endif // MAINWINDOW\_H

### mainwindow.cpp

/\* FileName:login\_dialog.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The implementation of mainwindow slot,function and the interface with other module

\*/

#include "mainwindow.h"

#include "ui\_mainwindow.h"

MainWindow::MainWindow(QWidget \*parent,bool isRoot) :

QMainWindow(parent),

ui(new Ui::MainWindow)

{

ui->setupUi(this);

//set model pointer

MySqlQueryModel\* myModel = new MySqlQueryModel(this);

this->myModel=myModel;

myModel->mw=this;

// set table vie selection

ui->tableView\_1->setSelectionBehavior(QAbstractItemView::SelectRows);

ui->tableView\_2->setSelectionBehavior(QAbstractItemView::SelectRows);

// set

ui->tableView\_0->horizontalHeader()->setStretchLastSection(true); //最后一列补全所有空白位置

ui->tableView\_0->verticalHeader()->hide();

ui->tableView\_1->horizontalHeader()->setStretchLastSection(true); //最后一列补全所有空白位置

ui->tableView\_1->verticalHeader()->hide();

ui->tableView\_2->horizontalHeader()->setStretchLastSection(true); //最后一列补全所有空白位置

ui->tableView\_2->verticalHeader()->hide();

//ui->tableView\_2->horizontalHeader()->set //最后一列补全所有空白位置

// set default datetime

ui->dateEdit->setDisplayFormat("yyyy/MM/dd");

ui->dateEdit->setCalendarPopup(true);

ui->timeEdit->setDisplayFormat("HH:mm");

//this->setStyleSheet("background-color:black;");

// set qss

QFile qssfile(":/test.qss");

qssfile.open(QFile::ReadOnly);

QString qss;

qss = qssfile.readAll();

setStyleSheet(qss);

//set root

this->isRoot=isRoot;

if(!isRoot)

{

ui->addFlightButton->hide();

ui->deleteFlightButton->hide();

}

//set map

// QWebEnginePage \*page=new QWebEnginePage(this);

// QWebChannel \*channel=new QWebChannel(this);

// page->load(QUrl("FILE:./baidumap/demo/1\_0.html"));

// page->setWebChannel(channel);

// ui->webEngineView->load(page);

// ui->webEngineView->show();

// QWebEngineView \*view=new QWebEngineView(this);

// view->load(QUrl("FILE:./baidumap/demo/1\_0.html"));

// setCentralWidget(view);

// resize(1024,680);

// ui->map\_widget->setUrl(QUrl("https://map.baidu.com/"));

}

MainWindow::~MainWindow()

{

delete ui;

}

void MainWindow::on\_action\_F\_triggered() // print FLIGHTinfor 1 to view

{

// show flight info

myModel->opTable=0;

myModel->set\_op();

myModel->setQuery("select \* from "+myModel->opName);

for(int i=0;i<myModel->opTitle.size();i++)

{

myModel->setHeaderData(i, Qt::Horizontal, myModel->opTitle[i]);

}

pOpView->setModel(myModel);

return;

}

//void MainWindow::on\_deleteButton\_clicked()

//{

// qDebug()<<"delete!!!!";

// //myModel->set\_op();

// //myModel->set\_opIndex(index);

// QModelIndex selIndex=pOpView->currentIndex();

// selRow=selIndex.row();

// selCol=selIndex.column();

// myModel->deleteData(selIndex);

//}

//void MainWindow::on\_addButton\_clicked()

//{

// myModel->set\_op();

// QSqlQuery query;

// query.prepare("insert into "+myModel->opName+" values()");

// bool isOk = query.exec();

// if(!isOk)

// {

// return;

// }

// myModel->refresh();

//}

//Query by the condition

void MainWindow::on\_queryButton\_clicked()

{

if(ui->checkBox\_2->isChecked())

{

transQuery();

}

QString str;

str="select \* from "+myModel->opName+" as f where ";

if(ui->FFROM\_lineEdit->text().isEmpty())

{

QMessageBox::about(NULL, "Attention!", "请输入起始地！");

return;

}

else

{

// the fitst condition and don't need 'and'

qDebug()<<"起始地"<<ui->FFROM\_lineEdit->text();

str+="FFROM =";

str+=" '";

str+=ui->FFROM\_lineEdit->text();

str+="' ";

}

if(ui->FTO\_lineEdit->text().isEmpty())

{

QMessageBox::about(NULL, "Attention!", "请输入到达地！");

return;

}

else

{

qDebug()<<"到达地"<<ui->FTO\_lineEdit->text();

str+=" and ";

str+="FTO =";

str+=" '";

str+=ui->FTO\_lineEdit->text();

str+="' ";

}

if(isDataChanged)

{

QDate date = ui->dateEdit->date();

QString dateStr=date.toString("yyyy-MM-dd");

qDebug()<<dateStr;

str+=" and ";

str+="FDATE =";

str+=" '";

str+=dateStr;

str+="' ";

}

if(isTimeChanged) // the flight time should before the time

{

QTime time = ui->timeEdit->time();

QString timeStr=time.toString("HH:mm:ss");

qDebug()<<timeStr;

str+=" and ";

str+="FTIME <=";

str+=" '";

str+=timeStr;

str+="' ";

}

if(ui->FLIGHT\_comboBox->currentText()!="ALL")

{

QString Flight=ui->FLIGHT\_comboBox->currentText();

qDebug()<<"FLIGHT:"<<Flight;

str+=" and ";

str+="Flight =";

str+=" '";

str+=Flight;

str+="' ";

}

if(ui->order\_comboBox->currentText()=="最近")

{

//str+=" and ";

str+="order by ";

//str+=" '";

str+="FDATE";

//str+="' ";

}

//query.prepare("select \* from `FLIGHTinfo` as f where exists(select \* from `FSTATUSinfo` as s where s.`FID`=f.`FID` and s.`USABLE`='1') and f.`FID`=3;");

//str+=" and ";

//str+=" exists( select \* from `FSTATUSinfo` where `FSTATUSinfo`.`FID`=`FLIGHTinfo`.`FID`)";

//and FSTATUSinfo.USABLE=1

myModel->setQuery(str);

for(int i=0;i<myModel->opTitle.size();i++)

{

myModel->setHeaderData(i, Qt::Horizontal, myModel->opTitle[i]);

}

pOpView->setModel(myModel);

return;

}

void MainWindow::on\_tabWidget\_currentChanged(int index)

{

myModel->clear();

switch(index)

{

case 0:

{

myModel->opTable=0; //FLIGHTinfo

myModel->opView=0; //add and delete

pOpView=ui->tableView\_0;

setTab();

break;

}

case 1:

{

myModel->opTable=0;

myModel->opView=1;

myModel->set\_op();

pOpView=ui->tableView\_1;

setFlight\_Combox();

break;

}

case 2:

{

//order table

myModel->opTable=1;

myModel->opView=2;

myModel->set\_op();

pOpView=ui->tableView\_2;

setTab2();

break;

}

case 3:

{

//bill table

QSqlQuery query;

QString str="";

QString viewName=userName+"\_ORDER";

qDebug()<<viewName;

qDebug()<<UID;

str="create or replace VIEW "+ viewName +" AS select OID, FLIGHTinfo.FID , SID , FFROM, FTO, FDATE-DAY(1) as 'pick up time', FDATE, FTIME , OSTATE FROM FLIGHTinfo , ORDERinfo where FLIGHTinfo.FID=ORDERinfo.FID and OSTATE!='Unsubscribe' AND UID = "+QString::number(UID,10);

query.prepare(str);

bool isOK=query.exec();

if(!isOK)

{

qDebug()<<"create user-order fail!";

return;

}

myModel->opName=viewName;

myModel->set\_opTitle();

pOpView=ui->tableView\_3;

setTab();

break;

}

}

}

void MainWindow::transQuery()

{

QSqlQuery query;

}

void MainWindow::setTab()

{

//set title

// QPalette palette;

// palette.setBrush(pOpView->backgroundRole(), Qt::black);

// pOpView->setPalette(palette);

myModel->clear();

myModel->setQuery("select \* from "+myModel->opName);

for(int i=0;i<myModel->opTitle.size();i++)

{

myModel->setHeaderData(i, Qt::Horizontal, myModel->opTitle[i]);

}

pOpView->setModel(myModel);

}

void MainWindow::setTab2()

{

myModel->clear();

myModel->setQuery("select \* from "+myModel->opName+" where UID ="+QString::number(UID,10));

for(int i=0;i<myModel->opTitle.size();i++)

{

myModel->setHeaderData(i, Qt::Horizontal, myModel->opTitle[i]);

}

pOpView->setModel(myModel);

}

void MainWindow::dateChanged()

{

isDataChanged=true;

}

void MainWindow::timeChanged()

{

isTimeChanged=true;

}

void MainWindow::setFlight\_Combox()

{

// set time edit

ui->dateEdit->setDateTime(QDateTime::currentDateTime());

ui->timeEdit->setDateTime(QDateTime::currentDateTime());

isDataChanged=false;

isTimeChanged=false;

connect(ui->dateEdit,SIGNAL(dateChanged(QDate)),this,SLOT(dateChanged()));

connect(ui->timeEdit,SIGNAL(timeChanged(QTime)),this,SLOT(timeChanged()));

// set flight combox

QComboBox\* com=ui->FLIGHT\_comboBox;

com->clear();

QSqlQuery query;

QString opName="FLIGHTinfo";

QString showItem="FLIGHT";

query.prepare("select "+showItem+" FROM "+opName+" group by "+showItem);

bool isOk = query.exec();

if(!isOk)

{

return;

}

while (query.next())

{

com->addItem(query.value(0).toString());

}

com->addItem("ALL");

com->setCurrentIndex(-1);

}

//QString MainWindow::getFlight()

//{

// return ui->FFROM\_lineEdit->text();

//}

void MainWindow::on\_postButton\_clicked()

{

QString opName="ORDERinfo";

seatName="";

// if (res == QDialog::Accepted)

// {

// QMessageBox::information(this, "INFORMATION", "You clicked OK button!");

// }

// if (res == QDialog::Rejected)

// {

// QMessageBox::information(this, "INFORMATION", "You clicked CANCEL button!");

// }

qDebug()<<seatName;

qDebug()<<myModel->opView;

int row= pOpView->currentIndex().row();

if(row==-1)

{

QMessageBox::information(NULL, "订单错误", "请先查询", QMessageBox::Yes, QMessageBox::Yes);

return;

}

QAbstractItemModel \*model =pOpView->model();

QVector<QString> chsVecs;

//int row=0;

for(int i=0;i<myModel->opTitle.size();i++)

{

QModelIndex index= model->index(row,i);//选中行第一列的内容

QVariant data = model->data(index);

qDebug()<<data.toString();

chsVecs.append(data.toString());

}

int FID=chsVecs[0].toInt();

int UID=this->UID;

// process choose seat;

chooseSeat\_Dialog\* chooseSeatD=new chooseSeat\_Dialog(this,FID);

chooseSeatD->exec(); // to get the seat id

// close the window without choose the seat

if(seatName=="")

{

QMessageBox::information(NULL, "订单错误！", "未选择座位", QMessageBox::Yes, QMessageBox::Yes);

return;

}

QString OTIME =QDateTime::currentDateTime().toString("yyyy-MM-dd hh:mm:ss");

qDebug()<<OTIME;

QString OSTATE="unfinish";

QSqlQuery query;

query.prepare("insert into "+opName+" (FID, UID,SID, OTIME, OSTATE) VALUES(:FID,:UID,:SID,:OTIME,:OSTATE)");

query.bindValue(":FID", FID);

query.bindValue(":UID", UID);

query.bindValue(":SID", seatName);

query.bindValue(":OTIME", OTIME);

query.bindValue(":OSTATE", OSTATE);

bool isOK1 = query.exec();

// decrease seat

query.clear();

opName="FSTATUSinfo";

query.prepare("update "+opName+" set USABLE = 0 where SID = :SID ");

query.bindValue(":SID",seatName);

bool isOk2 = query.exec();

if(isOK1&&isOk2)

{

setTab();

qDebug()<<"预订成功";

}

else

{

// roll backs

printSQLError();

qDebug()<<"预订失败";

return;

}

}

// debug function

void MainWindow::printSQLError()

{

QSqlDatabase\* db=(this->db);

QSqlError error;

error=db->lastError();

qDebug()<<error;

if(error.isValid())//发生错误时isValid()返回true

{

switch (error.type())

{

case QSqlError::NoError:

qDebug()<<"无错误";

break;

case QSqlError::ConnectionError://连接错语

qDebug()<<error.text();

break;

case QSqlError::StatementError://语句错语

qDebug()<<error.text();

break;

case QSqlError::TransactionError://事务错误

qDebug()<<error.text();

break;

default://未知错误

qDebug()<<error.text();

break;

}

}

}

void MainWindow::on\_Unsubscribe\_pushButton\_clicked()

{

QString orderstr="";

int row= pOpView->currentIndex().row();

QAbstractItemModel \*model =pOpView->model ();

QVector<QString> chsVecs;

for(int i=0;i<myModel->opTitle.size();i++)

{

QModelIndex index= model->index(row,i);//选中行第一列的内容

QVariant data = model->data(index);

qDebug()<<data.toString();

chsVecs.append(data.toString());

}

int OID=chsVecs[0].toInt();

QString OSTATE=chsVecs.last();

if(OSTATE=="Unsubscribe")

{

//QMessageBox::StandardButton rb = QMessageBox::information(NULL, "退订错误！", "订单状态错误", QMessageBox::Yes, QMessageBox::Yes);

QMessageBox::information(NULL, "退订错误！", "订单状态错误", QMessageBox::Yes, QMessageBox::Yes);

}

//qDebug()<<chsVecs;

//QMessageBox::StandardButton rb = QMessageBox::question(NULL, "订单退订！", "你确定要退订订单:"+QString::number(OID,10)+"从"+FFROM+"飞往"+FTO+" 于 "+FTIME, QMessageBox::Yes | QMessageBox::No, QMessageBox::Yes);

QMessageBox::StandardButton rb = QMessageBox::question(NULL, "订单退订！", "你确定要退订订单:"+QString::number(OID,10), QMessageBox::Yes | QMessageBox::No, QMessageBox::Yes);

if(rb == QMessageBox::Yes)

{

//process ORDERinfo

QSqlQuery query;

//qDebug()<<"opName:"<<myModel->opName;

query.prepare("update "+myModel->opName+" set OSTATE = :OSTATE where OID = :OID ");

query.bindValue(":OSTATE","Unsubscribe");

query.bindValue(":OID",OID);

bool isOk1 = query.exec();

// process the FSTATUS

query.clear();

QString opName="FSTATUSinfo";

query.prepare("update "+opName+" set USABLE = 1 where SID = (select SID from ORDERinfo where OID= :OID) ");

query.bindValue(":OID",OID);

bool isOk2 = query.exec();

if(isOk1&&isOk2)

{

QMessageBox::about(NULL, "Attention", "退订成功");

setTab();

qDebug()<<"退订成功";

return;

}

else

{

// roll back

QMessageBox::about(NULL, "Attention", "退订失败");

qDebug()<<"删除失败";

return;

}

}

}

void MainWindow::on\_addFlightButton\_clicked()

{

addFlight\_Dialog\* addflightdialog=new addFlight\_Dialog(NULL);

addflightdialog->exec();

}

void MainWindow::on\_deleteFlightButton\_clicked()

{

int row= pOpView->currentIndex().row();

QAbstractItemModel \*model =pOpView->model();

QVector<QString> chsVecs;

//int row=0;

for(int i=0;i<myModel->opTitle.size();i++)

{

QModelIndex index= model->index(row,i);//选中行第一列的内容

QVariant data = model->data(index);

qDebug()<<data.toString();

chsVecs.append(data.toString());

}

int FID=chsVecs[0].toInt();

int UID=this->UID;

QMessageBox::StandardButton rb = QMessageBox::question(NULL, "航班删除！", "你确定要删除航班:"+QString::number(FID,10), QMessageBox::Yes | QMessageBox::No, QMessageBox::Yes);

if(rb == QMessageBox::Yes)

{

QSqlQuery query;

query.prepare("delete from FLIGHTinfo where FID=:FID");

query.bindValue(":FID",FID);

bool isOK=query.exec();

if(isOK)

{

QMessageBox::information(this, "INFORMATION", "删除成功!");

query.clear();

QString str="delete from FSTATUSinfo where FID = :FID";

query.prepare(str);

query.bindValue(":FID",FID);

isOK=query.exec();

qDebug()<<"删除座位"<<isOK;

setTab();

}

else

{

QMessageBox::information(this, "INFORMATION", "删除失败!存在顾客订单，无法删除");

}

}

else

{

return;

}

}

void MainWindow::on\_checkin\_pushButton\_clicked()

{

QString orderstr="";

int row= pOpView->currentIndex().row();

QAbstractItemModel \*model =pOpView->model ();

QVector<QString> chsVecs;

for(int i=0;i<myModel->opTitle.size();i++)

{

QModelIndex index= model->index(row,i);//选中行第一列的内容

QVariant data = model->data(index);

qDebug()<<data.toString();

chsVecs.append(data.toString());

}

int OID=chsVecs[0].toInt();

int FID=chsVecs[1].toInt();

QDateTime now= QDateTime::currentDateTime();

QDateTime before=now.addDays(-1);

//bill table

QSqlQuery query;

query.prepare("select FDATE, FTIME from FLIGHTinfo where FID =:FID");

query.bindValue(":FID",FID);

query.exec();

QDateTime FDT;

if(query.next())

{

QDate FDATE=query.value(0).toDate();

QTime FTIME=query.value(1).toTime();

//FDT=QDateTime(FDATE)+QDate(FTIME.QTime);

FDT=QDateTime(FDATE);

}

if(!(FDT>before&&FDT<now))

{

QMessageBox::information(NULL, "进站错误！", "时间错误无法进站！", QMessageBox::Yes, QMessageBox::Yes);

return;

}

QString OSTATE=chsVecs.last();

if(OSTATE=="Unsubscribe" or OSTATE=="check-in" )

{

//QMessageBox::StandardButton rb = QMessageBox::information(NULL, "退订错误！", "订单状态错误", QMessageBox::Yes, QMessageBox::Yes);

QMessageBox::information(NULL, "进站错误！", "进站状态错误", QMessageBox::Yes, QMessageBox::Yes);

return;

}

//qDebug()<<chsVecs;

//QMessageBox::StandardButton rb = QMessageBox::question(NULL, "订单退订！", "你确定要退订订单:"+QString::number(OID,10)+"从"+FFROM+"飞往"+FTO+" 于 "+FTIME, QMessageBox::Yes | QMessageBox::No, QMessageBox::Yes);

QMessageBox::StandardButton rb = QMessageBox::question(NULL, "进站！", "你进站:"+QString::number(OID,10), QMessageBox::Yes | QMessageBox::No, QMessageBox::Yes);

if(rb == QMessageBox::Yes)

{

//process ORDERinfo

QSqlQuery query;

//qDebug()<<"opName:"<<myModel->opName;

query.prepare("update "+myModel->opName+" set OSTATE = :OSTATE where OID = :OID ");

query.bindValue(":OSTATE","check-in");

query.bindValue(":OID",OID);

bool isOk1 = query.exec();

// process the FSTATUS

if(!isOk1)

{

// roll back

QMessageBox::about(NULL, "Attention", "进站失败");

qDebug()<<"进站失败";

return;

}

// print pdf

bool isOK;

QString SID;

QString SeatRank;

QVector<QString> pV;

pV.append(userName);

//SID

query.clear();

query.prepare("select \* from ORDERinfo where OID =:OID ");

query.bindValue(":OID",OID);

isOK=query.exec();

if(!isOK)

{

qDebug()<<"SID查询错误！";

}

if(query.next())

{

SID=query.value(3).toString();

pV.append(SID);

}

//seat rank

query.clear();

query.prepare("select SeatRank from FSTATUSinfo where SID = :SID and FID=:FID ");

query.bindValue(":SID",SID);

query.bindValue(":FID",FID);

isOK=query.exec();

if(!isOK)

{

qDebug()<<"seat rank查询错误！";

}

if(query.next())

{

SeatRank=query.value(0).toString();

pV.append(SeatRank);

}

//Flightinfo

query.clear();

query.prepare("select \* from FLIGHTinfo where FID =:FID ");

query.bindValue(":FID",FID);

query.exec();

if(query.next())

{

for(int i=0;i<10;i++)

{

pV.append(query.value(i).toString());

}

}

// TICKET time

pV.append(QDateTime::currentDateTime().toString("yyyy-MM-dd hh:mm:ss"));

print\_Dialog\* printdialog=new print\_Dialog(pV,this);

//set printdialog

printdialog->exec();

QMessageBox::about(NULL, "Attention", "进站成功");

setTab();

qDebug()<<"进站成功";

return;

}

}

void MainWindow::on\_pushButton\_clicked()

{

report\_Dialog\* reportdialog=new report\_Dialog(this);

reportdialog->exec();

}

### mainwindow.ui

<?xml version="1.0" encoding="UTF-8"?>

<ui version="4.0">

<class>MainWindow</class>

<widget class="QMainWindow" name="MainWindow">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>1458</width>

<height>679</height>

</rect>

</property>

<property name="windowTitle">

<string>MainWindow</string>

</property>

<widget class="QWidget" name="centralWidget">

<widget class="QTabWidget" name="tabWidget">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>1401</width>

<height>601</height>

</rect>

</property>

<property name="currentIndex">

<number>1</number>

</property>

<widget class="QWidget" name="tab\_0">

<attribute name="title">

<string>航班</string>

</attribute>

<widget class="QPushButton" name="addFlightButton">

<property name="geometry">

<rect>

<x>70</x>

<y>450</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>add</string>

</property>

</widget>

<widget class="QPushButton" name="deleteFlightButton">

<property name="geometry">

<rect>

<x>190</x>

<y>450</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>Delete</string>

</property>

</widget>

<widget class="QTableView" name="tableView\_0">

<property name="geometry">

<rect>

<x>40</x>

<y>30</y>

<width>1051</width>

<height>321</height>

</rect>

</property>

</widget>

<widget class="QPushButton" name="pushButton">

<property name="geometry">

<rect>

<x>360</x>

<y>450</y>

<width>151</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>show Report</string>

</property>

</widget>

</widget>

<widget class="QWidget" name="tab\_1">

<attribute name="title">

<string>航班查询</string>

</attribute>

<widget class="QTableView" name="tableView\_1">

<property name="geometry">

<rect>

<x>360</x>

<y>60</y>

<width>931</width>

<height>321</height>

</rect>

</property>

</widget>

<widget class="QPushButton" name="postButton">

<property name="geometry">

<rect>

<x>740</x>

<y>420</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>提交订单</string>

</property>

</widget>

<widget class="QWidget" name="gridLayoutWidget">

<property name="geometry">

<rect>

<x>50</x>

<y>70</y>

<width>291</width>

<height>311</height>

</rect>

</property>

<layout class="QGridLayout" name="gridLayout">

<item row="3" column="1">

<widget class="QTimeEdit" name="timeEdit"/>

</item>

<item row="0" column="1">

<widget class="QLineEdit" name="FFROM\_lineEdit"/>

</item>

<item row="2" column="0">

<widget class="QLabel" name="label\_3">

<property name="text">

<string>起飞日期</string>

</property>

</widget>

</item>

<item row="1" column="1">

<widget class="QLineEdit" name="FTO\_lineEdit">

<property name="text">

<string/>

</property>

</widget>

</item>

<item row="3" column="0">

<widget class="QLabel" name="label\_4">

<property name="text">

<string>起飞 时间</string>

</property>

</widget>

</item>

<item row="4" column="0">

<widget class="QLabel" name="label\_5">

<property name="text">

<string>航空公司</string>

</property>

</widget>

</item>

<item row="6" column="0" colspan="2">

<widget class="QPushButton" name="queryButton">

<property name="text">

<string>查询</string>

</property>

</widget>

</item>

<item row="4" column="1">

<widget class="QComboBox" name="FLIGHT\_comboBox">

<property name="editable">

<bool>true</bool>

</property>

</widget>

</item>

<item row="1" column="0">

<widget class="QLabel" name="label\_2">

<property name="text">

<string>到达地</string>

</property>

</widget>

</item>

<item row="0" column="0">

<widget class="QLabel" name="label">

<property name="text">

<string>出发地</string>

</property>

</widget>

</item>

<item row="5" column="0">

<widget class="QLabel" name="label\_6">

<property name="text">

<string>Order By</string>

</property>

</widget>

</item>

<item row="5" column="1">

<widget class="QComboBox" name="order\_comboBox">

<item>

<property name="text">

<string>最近</string>

</property>

</item>

<item>

<property name="text">

<string>价格</string>

</property>

</item>

</widget>

</item>

<item row="2" column="1">

<widget class="QDateEdit" name="dateEdit"/>

</item>

</layout>

</widget>

<widget class="QCheckBox" name="checkBox\_2">

<property name="geometry">

<rect>

<x>140</x>

<y>450</y>

<width>93</width>

<height>25</height>

</rect>

</property>

<property name="text">

<string>是否中转</string>

</property>

</widget>

<widget class="QWidget" name="layoutWidget">

<property name="geometry">

<rect>

<x>60</x>

<y>480</y>

<width>201</width>

<height>29</height>

</rect>

</property>

<layout class="QHBoxLayout" name="horizontalLayout">

<item>

<widget class="QLabel" name="label\_8">

<property name="text">

<string> 中转时间</string>

</property>

</widget>

</item>

<item>

<widget class="QLineEdit" name="transtime\_lineEdit"/>

</item>

</layout>

</widget>

</widget>

<widget class="QWidget" name="tab\_2">

<attribute name="title">

<string>订单管理</string>

</attribute>

<widget class="QTableView" name="tableView\_2">

<property name="geometry">

<rect>

<x>80</x>

<y>10</y>

<width>861</width>

<height>401</height>

</rect>

</property>

</widget>

<widget class="QPushButton" name="checkin\_pushButton">

<property name="geometry">

<rect>

<x>530</x>

<y>450</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>check-in</string>

</property>

</widget>

<widget class="QPushButton" name="Unsubscribe\_pushButton">

<property name="geometry">

<rect>

<x>180</x>

<y>450</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>Unsubscribe</string>

</property>

</widget>

</widget>

<widget class="QWidget" name="tab\_3">

<attribute name="title">

<string>账单查询</string>

</attribute>

<widget class="QTableView" name="tableView\_3">

<property name="geometry">

<rect>

<x>10</x>

<y>60</y>

<width>771</width>

<height>371</height>

</rect>

</property>

</widget>

<widget class="QLabel" name="label\_7">

<property name="geometry">

<rect>

<x>20</x>

<y>30</y>

<width>241</width>

<height>19</height>

</rect>

</property>

<property name="text">

<string>The Recent Flight</string>

</property>

</widget>

<widget class="QWebEngineView" name="webEngineView">

<property name="geometry">

<rect>

<x>810</x>

<y>160</y>

<width>300</width>

<height>200</height>

</rect>

</property>

<property name="url">

<url>

<string>about:blank</string>

</url>

</property>

</widget>

</widget>

<widget class="QWidget" name="tab">

<attribute name="title">

<string>报表</string>

</attribute>

<widget class="QComboBox" name="FLIGHT\_comboBox\_4">

<property name="geometry">

<rect>

<x>80</x>

<y>450</y>

<width>219</width>

<height>27</height>

</rect>

</property>

<property name="editable">

<bool>true</bool>

</property>

</widget>

<widget class="QGraphicsView" name="graphicsView">

<property name="geometry">

<rect>

<x>80</x>

<y>50</y>

<width>731</width>

<height>321</height>

</rect>

</property>

</widget>

</widget>

</widget>

</widget>

<widget class="QMenuBar" name="menuBar">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>1458</width>

<height>24</height>

</rect>

</property>

<widget class="QMenu" name="menu\_F">

<property name="title">

<string>航班信息(&amp;F)</string>

</property>

<addaction name="separator"/>

<addaction name="action\_F"/>

</widget>

<widget class="QMenu" name="menu\_O">

<property name="title">

<string>订单管理(&amp;O)</string>

</property>

<addaction name="action\_Q"/>

<addaction name="action\_L"/>

<addaction name="action\_G"/>

<addaction name="action\_B"/>

</widget>

<widget class="QMenu" name="menu\_T">

<property name="title">

<string>账单查询(&amp;T)</string>

</property>

</widget>

<addaction name="menu\_F"/>

<addaction name="menu\_O"/>

<addaction name="menu\_T"/>

</widget>

<widget class="QToolBar" name="mainToolBar">

<attribute name="toolBarArea">

<enum>TopToolBarArea</enum>

</attribute>

<attribute name="toolBarBreak">

<bool>false</bool>

</attribute>

</widget>

<widget class="QStatusBar" name="statusBar"/>

<action name="action\_F">

<property name="text">

<string>航班信息(&amp;F)</string>

</property>

</action>

<action name="action\_Q">

<property name="text">

<string>航班查询(&amp;Q)</string>

</property>

</action>

<action name="action\_G">

<property name="text">

<string>取票(&amp;G)</string>

</property>

</action>

<action name="action\_B">

<property name="text">

<string>退订机票(&amp;B)</string>

</property>

</action>

<action name="action\_L">

<property name="text">

<string>订单查询(&amp;L)</string>

</property>

</action>

</widget>

<layoutdefault spacing="6" margin="11"/>

<customwidgets>

<customwidget>

<class>QWebEngineView</class>

<extends>QWidget</extends>

<header location="global">QtWebEngineWidgets/QWebEngineView</header>

</customwidget>

</customwidgets>

<tabstops>

<tabstop>tabWidget</tabstop>

<tabstop>FFROM\_lineEdit</tabstop>

<tabstop>FTO\_lineEdit</tabstop>

<tabstop>dateEdit</tabstop>

<tabstop>timeEdit</tabstop>

<tabstop>FLIGHT\_comboBox</tabstop>

<tabstop>order\_comboBox</tabstop>

<tabstop>queryButton</tabstop>

<tabstop>postButton</tabstop>

<tabstop>tableView\_0</tabstop>

<tabstop>addFlightButton</tabstop>

<tabstop>deleteFlightButton</tabstop>

<tabstop>tableView\_2</tabstop>

<tabstop>tableView\_1</tabstop>

<tabstop>checkin\_pushButton</tabstop>

<tabstop>Unsubscribe\_pushButton</tabstop>

<tabstop>tableView\_3</tabstop>

</tabstops>

<resources/>

<connections/>

</ui>

## Print\_dialog

### print\_dialog.h

/\* FileName:print\_dialog.h

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The declaration of print module

\*/

#ifndef PRINT\_DIALOG\_H

#define PRINT\_DIALOG\_H

#include <QDialog>

#include <QString>

#include <QPrinter>

#include <QPixmap>

#include <QPainter>

namespace Ui {

class print\_Dialog;

}

class print\_Dialog : public QDialog

{

Q\_OBJECT

public:

explicit print\_Dialog(QVector<QString> pV,QWidget \*parent = 0);

QVector<QString> apV;

~print\_Dialog();

private slots:

void on\_pushButton\_clicked();

private:

Ui::print\_Dialog \*ui;

};

#endif // PRINT\_DIALOG\_H

### print\_dialog.cpp

/\* FileName:print\_dialog.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The implementation of print module and call the system API to print the Ticket to PDF file simulatedly

\*/

#include "print\_dialog.h"

#include "ui\_print\_dialog.h"

print\_Dialog::print\_Dialog(QVector<QString> pV,QWidget \*parent) :

QDialog(parent),

ui(new Ui::print\_Dialog)

{

ui->setupUi(this);

apV=pV;

ui->user\_label->setText(pV[0]);

ui->SID\_label->setText(pV[1]);

ui->SeatRank\_label->setText(pV[2]);

ui->FID\_label->setText(pV[3]);

ui->Flight\_label->setText(pV[4]);

ui->FMODEL\_label->setText(pV[5]);

ui->FSTATE\_label->setText(pV[6]);

ui->FFROM\_label->setText(pV[7]);

ui->FTO\_label->setText(pV[8]);

ui->FDATE\_label->setText(pV[9]);

ui->FTIME\_label->setText(pV[10]);

ui->ARRDATE\_label->setText(pV[11]);

ui->ARRTIME\_label->setText(pV[12]);

ui->TIAKCTIME\_label->setText(pV[13]);

}

print\_Dialog::~print\_Dialog()

{

delete ui;

}

void print\_Dialog::on\_pushButton\_clicked()

{

ui->pushButton->hide();

QPrinter printer\_pixmap(QPrinter::HighResolution);

printer\_pixmap.setPageSize(QPrinter::A4); //设置纸张大小为A4

printer\_pixmap.setOutputFormat(QPrinter::PdfFormat); //设置输出格式为pdf

printer\_pixmap.setOutputFileName("./tickets/"+apV[0]+"\_"+apV[3]+".pdf"); //设置输出路径

QPixmap pixmap = QPixmap::grabWidget(this, this->rect()); //获取界面的图片

QPainter painter\_pixmap;

painter\_pixmap.begin(&printer\_pixmap);

QRect rect = painter\_pixmap.viewport();

int multiple = rect.width()/pixmap.width();

painter\_pixmap.scale(multiple, multiple); //将图像(所有要画的东西)在pdf上放大multiple-1倍

painter\_pixmap.drawPixmap(0, 0, pixmap); //画图

painter\_pixmap.end();

this->close();

}

### print\_dialog.ui

<?xml version="1.0" encoding="UTF-8"?>

<ui version="4.0">

<class>print\_Dialog</class>

<widget class="QDialog" name="print\_Dialog">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>615</width>

<height>625</height>

</rect>

</property>

<property name="windowTitle">

<string>Dialog</string>

</property>

<widget class="QWidget" name="gridLayoutWidget">

<property name="geometry">

<rect>

<x>150</x>

<y>100</y>

<width>301</width>

<height>363</height>

</rect>

</property>

<layout class="QGridLayout" name="gridLayout">

<item row="14" column="0">

<widget class="QLabel" name="label\_13">

<property name="text">

<string>出票时间</string>

</property>

</widget>

</item>

<item row="6" column="1">

<widget class="QLabel" name="FSTATE\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="7" column="1">

<widget class="QLabel" name="FFROM\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="13" column="1">

<widget class="QLabel" name="ARRTIME\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="1" column="1">

<widget class="QLabel" name="SID\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="14" column="1">

<widget class="QLabel" name="TIAKCTIME\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="0" column="1">

<widget class="QLabel" name="user\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="0" column="0">

<widget class="QLabel" name="label\_11">

<property name="text">

<string>用户姓名(user)</string>

</property>

</widget>

</item>

<item row="3" column="1">

<widget class="QLabel" name="FID\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="4" column="0">

<widget class="QLabel" name="label\_2">

<property name="text">

<string>航空公司(Flight)</string>

</property>

</widget>

</item>

<item row="4" column="1">

<widget class="QLabel" name="Flight\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="12" column="1">

<widget class="QLabel" name="ARRDATE\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="9" column="1">

<widget class="QLabel" name="FTO\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="11" column="1">

<widget class="QLabel" name="FTIME\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="11" column="0">

<widget class="QLabel" name="label\_8">

<property name="text">

<string>起飞时间(FTIME)</string>

</property>

</widget>

</item>

<item row="5" column="0">

<widget class="QLabel" name="label\_3">

<property name="text">

<string>飞机型号(FMODEL)</string>

</property>

</widget>

</item>

<item row="10" column="0">

<widget class="QLabel" name="label\_7">

<property name="text">

<string>起飞日期(FDATE)</string>

</property>

</widget>

</item>

<item row="13" column="0">

<widget class="QLabel" name="label\_10">

<property name="text">

<string>到达时间(ARRTIME)</string>

</property>

</widget>

</item>

<item row="12" column="0">

<widget class="QLabel" name="label\_9">

<property name="text">

<string>到达日期(ARRDATE)</string>

</property>

</widget>

</item>

<item row="9" column="0">

<widget class="QLabel" name="label\_6">

<property name="text">

<string>飞往(FTO)</string>

</property>

</widget>

</item>

<item row="6" column="0">

<widget class="QLabel" name="label\_4">

<property name="text">

<string>飞机状态(FSTATE)</string>

</property>

</widget>

</item>

<item row="7" column="0">

<widget class="QLabel" name="label\_5">

<property name="text">

<string>起飞地(FFROM)</string>

</property>

</widget>

</item>

<item row="1" column="0">

<widget class="QLabel" name="label\_15">

<property name="text">

<string>座位号码(SID)</string>

</property>

</widget>

</item>

<item row="3" column="0">

<widget class="QLabel" name="label">

<property name="text">

<string>航班号(FID)</string>

</property>

</widget>

</item>

<item row="5" column="1">

<widget class="QLabel" name="FMODEL\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="10" column="1">

<widget class="QLabel" name="FDATE\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

<item row="2" column="0">

<widget class="QLabel" name="label\_16">

<property name="text">

<string>座位等级(SeatRank)</string>

</property>

</widget>

</item>

<item row="2" column="1">

<widget class="QLabel" name="SeatRank\_label">

<property name="text">

<string>TextLabel</string>

</property>

</widget>

</item>

</layout>

</widget>

<widget class="QPushButton" name="pushButton">

<property name="geometry">

<rect>

<x>250</x>

<y>520</y>

<width>88</width>

<height>27</height>

</rect>

</property>

<property name="text">

<string>机票打印</string>

</property>

</widget>

<widget class="QLabel" name="label\_12">

<property name="geometry">

<rect>

<x>250</x>

<y>50</y>

<width>111</width>

<height>41</height>

</rect>

</property>

<property name="text">

<string> 电子机票</string>

</property>

</widget>

</widget>

<resources/>

<connections/>

</ui>

## Report\_dialog

### report\_dialog.h

/\* FileName:report\_dialog.h

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The declaration of report module to draw the report of DB data

\*/

#ifndef REPORT\_DIALOG\_H

#define REPORT\_DIALOG\_H

#include <QDialog>

#include <QString>

#include <QSql>

#include <QSqlQuery>

#include <QComboBox>

#include <QDebug>

#include <QDate>

#include <QDateTime>

#include <QtWidgets>

#include <QtCharts>

#include <QWidget>

#include <QGraphicsView>

namespace Ui

{

class report\_Dialog;

}

class report\_Dialog : public QDialog

{

Q\_OBJECT

public:

explicit report\_Dialog(QWidget \*parent = 0);

~report\_Dialog();

private slots:

void on\_FLIGHT\_comboBox\_currentTextChanged(const QString &arg1);

void on\_show\_pushButton\_clicked();

private:

Ui::report\_Dialog \*ui;

int flightNum;

void setFlight\_Combox();

void fun();

};

#endif // REPORT\_DIALOG\_H

### report\_dialog.cpp

/\* FileName:report\_dialog.cpp

\* Author:Hover

\* E-Mail:hover@hust.edu.cn

\* GitHub:HoverWings

\* Description:The implementation of report module to draw the report of DB data

\*/

#include "report\_dialog.h"

#include "ui\_report\_dialog.h"

report\_Dialog::report\_Dialog(QWidget \*parent) :

QDialog(parent),

ui(new Ui::report\_Dialog)

{

ui->setupUi(this);

setFlight\_Combox();

}

report\_Dialog::~report\_Dialog()

{

delete ui;

}

void report\_Dialog::setFlight\_Combox()

{

// set flight combox

QComboBox\* com=ui->FLIGHT\_comboBox;

com->clear();

QSqlQuery query;

QString opName="FLIGHTinfo";

QString showItem="FLIGHT";

query.prepare("select "+showItem+" FROM "+opName+" group by "+showItem);

bool isOk = query.exec();

flightNum=0;

if(!isOk)

{

return;

}

while (query.next())

{

com->addItem(query.value(0).toString());

flightNum+=1;

}

com->addItem("ALL");

com->setCurrentIndex(-1);

}

void report\_Dialog::on\_FLIGHT\_comboBox\_currentTextChanged(const QString &arg1)

{

//this->resize(440, 300);

}

void report\_Dialog::fun()

{

QSqlQuery query;

QString opName="FLIGHTinfo";

QString showItem="FLIGHT";

query.prepare("select "+showItem+" FROM "+opName+" group by "+showItem);

bool isOk = query.exec();

flightNum=0;

if(!isOk)

{

return;

}

while (query.next())

{

flightNum+=1;

}

QComboBox \* com=ui->FLIGHT\_comboBox;

QString text=com->currentText();

if(text=="ALL") // show all report

{

qDebug()<<"ALL";

// return;

}

QDate now= QDate::currentDate();

QDate M1month=now.addMonths(-1);

QDate M2month=now.addMonths(-2);

QVector<QBarSet\*> BarSetV;

// QBarSet \*set0 = new QBarSet("TOTAL");

// BarSetV.append(set0);

//2

for(int i=0;i<flightNum;i++)

{

QString Flight=com->itemText(i);

QBarSet \*set = new QBarSet(Flight);

BarSetV.append(set);

QSqlQuery query;

query.prepare("select \* from FLIGHTinfo where Flight= '"+Flight+"' and date\_format(FDATE, '%Y %m') = date\_format(DATE\_SUB(curdate(), INTERVAL 2 MONTH),'%Y %m')");

query.bindValue(":FLIGHT",Flight);

bool isOK=query.exec();

if(!isOK)

{

qDebug()<<Flight<<"错误！";

}

int flightSell=0;

while (query.next())

{

int FID=query.value(0).toInt();

QSqlQuery query1;

query1.prepare("select \*,count(\*) from FSTATUSinfo where FID= :FID group by USABLE order by USABLE");

query1.bindValue(":FID",FID);

query1.exec();

query1.next();

int sellNum=query1.value(4).toInt();

if(sellNum>150)

{

query1.next();

sellNum=query1.value(4).toInt();

}

flightSell+=sellNum;

}

qDebug()<<Flight<<flightSell<<"上上个月";

set->append(flightSell);

}

//1

for(int i=0;i<flightNum;i++)

{

QString Flight=com->itemText(i);

QBarSet \*set =BarSetV[i];

BarSetV.append(set);

QSqlQuery query;

query.prepare("select \* from FLIGHTinfo where Flight= '"+Flight+"' and date\_format(FDATE, '%Y %m') = date\_format(DATE\_SUB(curdate(), INTERVAL 1 MONTH),'%Y %m')");

query.bindValue(":FLIGHT",Flight);

bool isOK=query.exec();

if(!isOK)

{

qDebug()<<Flight<<"错误！";

}

int flightSell=0;

while (query.next())

{

int FID=query.value(0).toInt();

QSqlQuery query1;

query1.prepare("select \*,count(\*) from FSTATUSinfo where FID= :FID group by USABLE order by USABLE");

query1.bindValue(":FID",FID);

query1.exec();

query1.next();

int sellNum=query1.value(4).toInt();

if(sellNum>150)

{

query1.next();

sellNum=query1.value(4).toInt();

}

flightSell+=sellNum;

}

qDebug()<<Flight<<flightSell<<"上个月";

set->append(flightSell);

}

//0

for(int i=0;i<flightNum;i++)

{

QString Flight=com->itemText(i);

QBarSet \*set =BarSetV[i];

BarSetV.append(set);

QSqlQuery query;

query.prepare("select \* from FLIGHTinfo where Flight= '"+Flight+"' and date\_format(FDATE, '%Y %m') = date\_format(DATE\_SUB(curdate(), INTERVAL 0 MONTH),'%Y %m')");

query.bindValue(":FLIGHT",Flight);

bool isOK=query.exec();

if(!isOK)

{

qDebug()<<Flight<<"错误！";

}

int flightSell=0;

while (query.next())

{

int FID=query.value(0).toInt();

QSqlQuery query1;

query1.prepare("select \*,count(\*) from FSTATUSinfo where FID= :FID group by USABLE order by USABLE");

query1.bindValue(":FID",FID);

query1.exec();

query1.next();

int sellNum=query1.value(4).toInt();

if(sellNum>150)

{

query1.next();

sellNum=query1.value(4).toInt();

}

flightSell+=sellNum;

}

qDebug()<<Flight<<flightSell<<"这个月";

set->append(flightSell);

}

QBarSeries \*barseries = new QBarSeries();

for(int i=0;i<flightNum;i++)

{

barseries->append(BarSetV[i]);

}

QChart \*chart = new QChart();

chart->addSeries(barseries);

//chart->addSeries(lineseries);

chart->setTitle("Report");

QStringList categories;

categories << QString::number(M2month.month(),10) << QString::number(M1month.month(),10) << QString::number(now.month(),10);

//categories << "Jan" << "Feb" << "Mar" << "Apr" << "May" << "Jun";

QBarCategoryAxis \*axisX = new QBarCategoryAxis();

axisX->append(categories);

//chart->setAxisX(axisX, lineseries);

chart->setAxisX(axisX, barseries);

//axisX->setRange(QString("Jan"), QString("Jun"));

QValueAxis \*axisY = new QValueAxis();

//chart->setAxisY(axisY, lineseries);

chart->setAxisY(axisY, barseries);

axisY->setRange(0, 20);

chart->legend()->setVisible(true);

chart->legend()->setAlignment(Qt::AlignBottom);

QChartView \*chartView = new QChartView(chart);

chartView->setRenderHint(QPainter::Antialiasing);

ui->graphicsView->setViewport(chartView);

}

void report\_Dialog::on\_show\_pushButton\_clicked()

{

fun();

}

### report\_dialog.ui

<?xml version="1.0" encoding="UTF-8"?>

<ui version="4.0">

<class>report\_Dialog</class>

<widget class="QDialog" name="report\_Dialog">

<property name="geometry">

<rect>

<x>0</x>

<y>0</y>

<width>672</width>

<height>640</height>

</rect>

</property>

<property name="windowTitle">

<string>Dialog</string>

</property>

<widget class="QGraphicsView" name="graphicsView">

<property name="geometry">

<rect>

<x>90</x>

<y>60</y>

<width>441</width>

<height>381</height>

</rect>

</property>

</widget>

<widget class="QWidget" name="layoutWidget">

<property name="geometry">

<rect>

<x>190</x>

<y>530</y>

<width>175</width>

<height>29</height>

</rect>

</property>

<layout class="QHBoxLayout" name="horizontalLayout">

<item>

<widget class="QComboBox" name="FLIGHT\_comboBox"/>

</item>

<item>

<widget class="QPushButton" name="show\_pushButton">

<property name="text">

<string>PushButton</string>

</property>

</widget>

</item>

</layout>

</widget>

</widget>

<resources/>

<connections/>

</ui>