



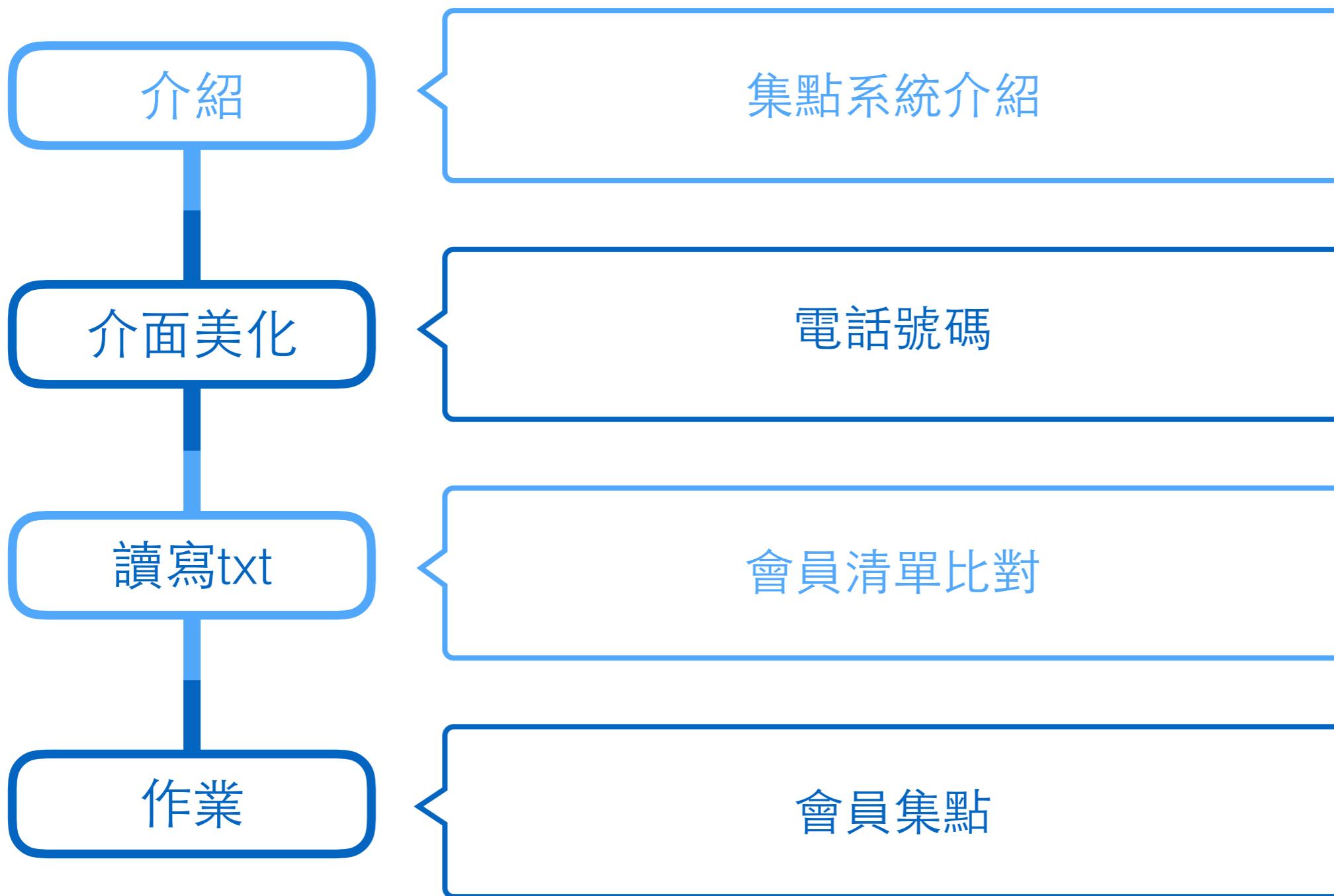
BIOPHOTONICS & BIOIMAGING LABORATORY

Qt Lesson 5

Lisa Tsai @ 2017 Summer

NTUBIME Lab405

Schedule



Qt Schedule

	日期	課程	作業
week 1	7/4	Qt 環境架設 & GUI 簡單介紹	點餐系統
week 2	7/25	Qt 基礎練習 / widget 介紹	會員集點
week 3	8/1	Github / SourceTree	上傳前兩次作業
week 4	8/8	Gitbook 專案管理 / 共同編輯 / 同步 / 版本控制	fork 及修改別人的專題
week 5	8/15	指標、初階物件導向應用	
week 6	8/22	進階物件導向程式設計	打磚塊
week 7	8/29	Qt IO system 功能介紹	CSV資料處理
week 8	9/5	Qt QImage & QTimer 介紹	計時器或小畫家
week 9	9/12	Qt 多執行緒程式撰寫	滑鼠控制事件
week 10	9/19	使用常見函式庫 qcustomplot / OpenCV 基礎介紹	資料處理及統計
week 11	9/26	專題輔導	
week 12	10/3	專題輔導	
week 13	10/11	專題輔導	
week 14	10/17	專題報告	專題

介紹

集點系統介紹，認識如何集點



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ShareLike (1/2)



ShareLike (2/2)



Sharelike

免下載 APP

免掃描 QR code

10秒輸入電話號碼

客人參與超簡單！

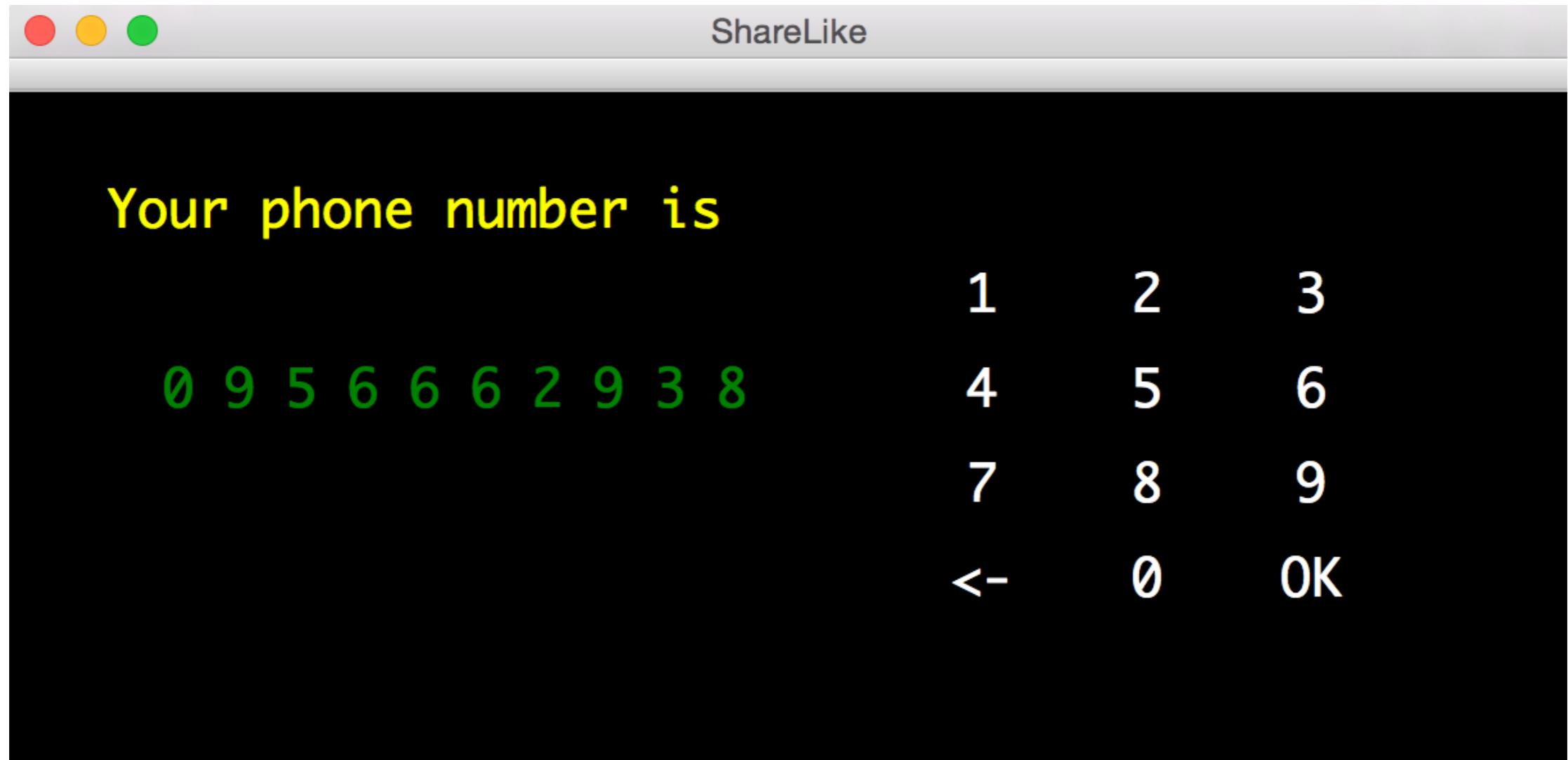
界面美化

電話號碼



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電話號碼 - 字型及顏色



```
QFont font("Monaco", 20, QFont::Bold);
ui->pushButton_0->setFont(font);
ui->pushButton_0->setStyleSheet("background-color: black; color : white; ");
```

電話號碼 - 顯示

```
void MainWindow::on_pushButton_1_clicked()
{
    if(phone.length()<20){
        phone += " 1";
        ui->label->setText(phone);
    }
}

void MainWindow::on_pushButton_Back_clicked()
{
    //if (!phone.isEmpty()){
    if(phone.length() > 2){
        phone = phone.remove(phone.length()-2, phone.length()-1);
        ui->label->setText(phone);
    }
    else{
        phone = "";
        ui->label->setText(" ");
    }
}
```

電話號碼 - 檢查 方法— Read text

```
QFile inputFile(TextPath);                                //or inputFile.setFileName(TextPath);

if(inputFile.exists()){
    if(inputFile.open(QIODevice::ReadOnly)){
        QTextStream in(&inputFile);          //or in.setDevice(&inputFile);
        while(!in.atEnd()){
            QString line = in.readLine();      //readLine(int) (max 75)
            ui->textEdit->append(line);
        }
    }
    inputFile.close();
}
else
    QMessageBox::warning(0, 0, "NO TEXT FILE FOUND!!");
```

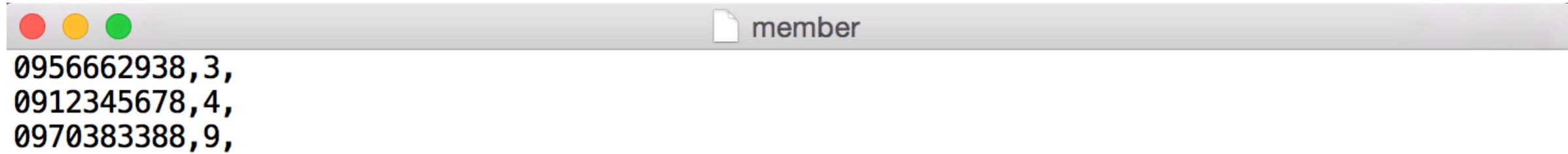
```
#ifndef MAINWINDOW_H
#define MAINWINDOW_H

#include <QMainWindow>
#include <QFileDialog>
#include <QImage>
#include <QString>
#include <QFile>
#include <QTextStream>
#include <QMessageBox>
```

電話號碼 - 檢查 方法— Write Text

```
QFile outputFile(TextPath);
if(outputFile.exists())
    outputFile.remove();
if(outputFile.open(QIODevice::Append | QIODevice::Text)){
    QTextStream out(&outputFile);
    out << ui->textEdit->toPlainText()<<endl;
    outputFile.flush();
    outputFile.close();
}
else
    QMessageBox::warning(0, "WARNING", "Cannot open file for writing");
```

電話號碼 - 檢查 方法二 Read CSV



```
qDebug() << phoneList;  
qDebug() << countList;
```

```
Starting /Users/tsaitsai/build-ShareLike-Desktop  
ShareLike...  
("0956662938", "0912345678", "0970383388")  
("3", "4", "9")
```

電話號碼 - 檢查 方法二 Read CSV

```
void MainWindow::on_pushButton_0K_clicked()
{
    QFile inputFile("/Users/tsaitsai/Desktop/member.csv");                                //or inputFile.setFileName(Te
    QStringList phoneList;
    QStringList countList;
    if(inputFile.exists()){
        if(inputFile.open(QIODevice::ReadOnly)){
            QTextStream in(&inputFile);      //or in.setDevice(&inputFile);
            while(!in.atEnd()){
                QString line = in.readLine();          //readLine(int) (max 75)
                phoneList.append(line.split(',')[0]);//phoneList.append(line.split(',')[0]);
                countList.append(line.split(',')[1]);
            }
        }
        inputFile.close();
    }
    else
        QMessageBox::warning(0, 0, "NO TEXT FILE FOUND!!");
}
```

Review

在 Qt 中使用圖片
背景
icon



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Qt 的四個圖像Class

- **QImage** - I/O，顯示或修改圖片使用
- **QPixmap** - 繪圖用
- **QBitmap** - 繼承QPixmap，提供單色圖片（圖片深度為1）
- **QPicture** - 可以重演QPainter的命令，專為繪圖功能設計的Class
- 也可以藉由QPainter來修改像素(pixel)

Find icon or image

The background of the page is a dark grey overlay featuring a repeating pattern of various icons such as robots, tools, food, and drink items.

FLATICON

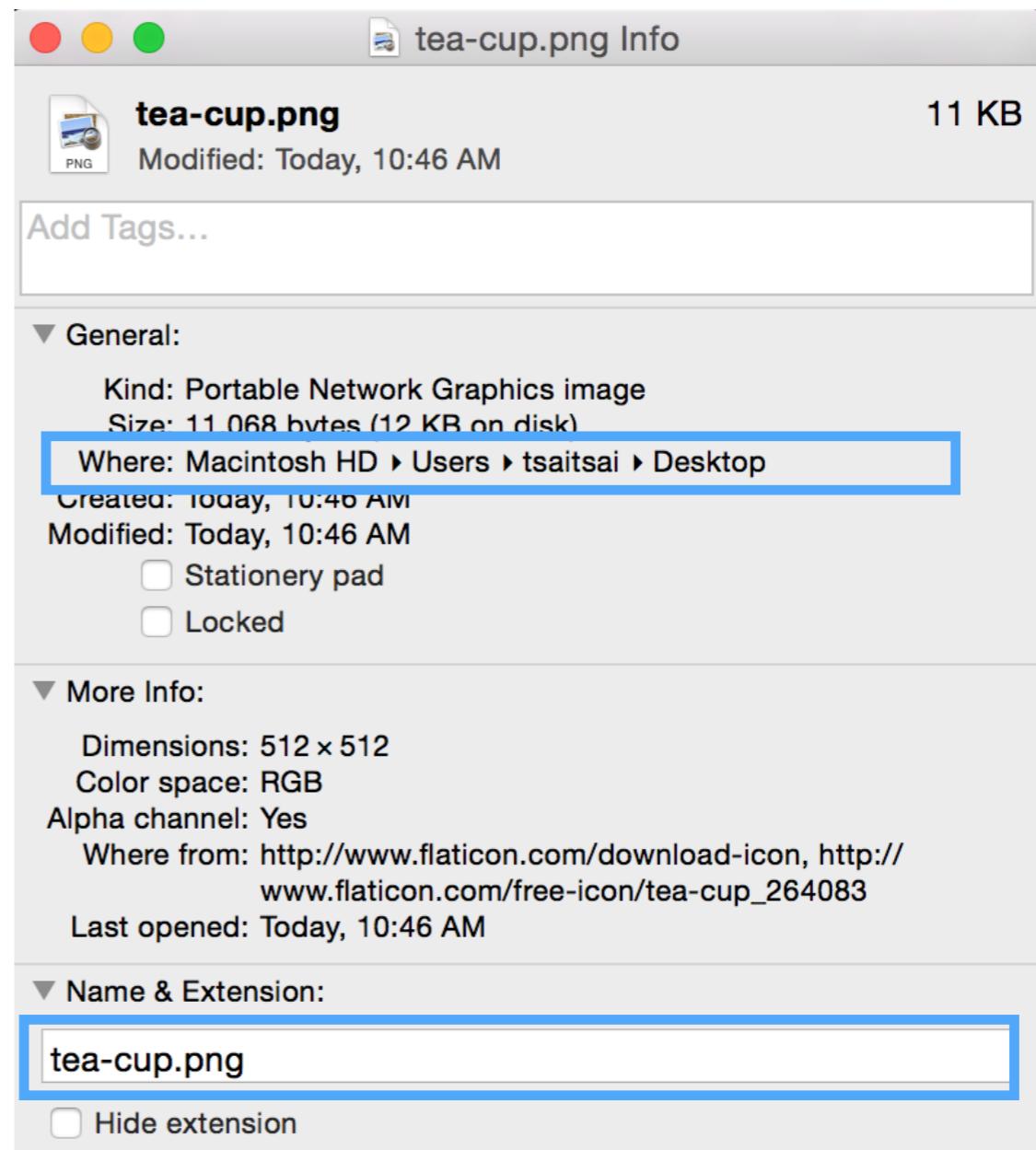
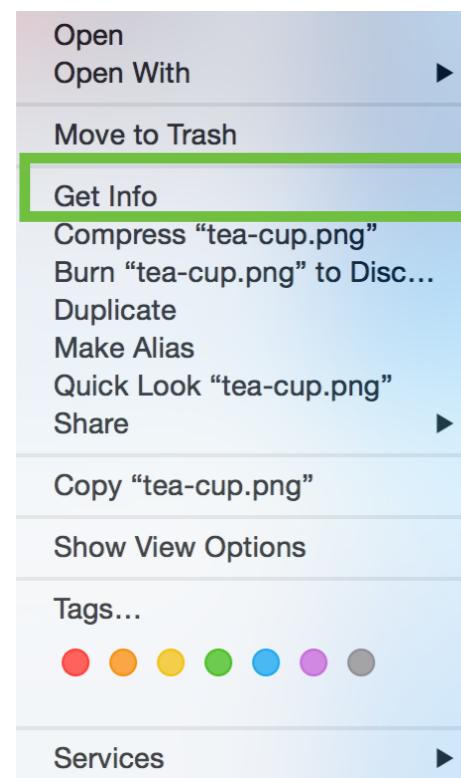
459,638 vector icons grouped in 8,539 packs

The largest database of free icons available in PNG, SVG, EPS, PSD and BASE 64 formats.

Search icons

Are you an icon designer? [Discover how to earn money with us](#)

Find the path of your image



```
QPixmap icon("/Users/tsaitsai/Desktop/tea-cup.png");
ui->label->setPixmap(icon);
```

Fix the size problem

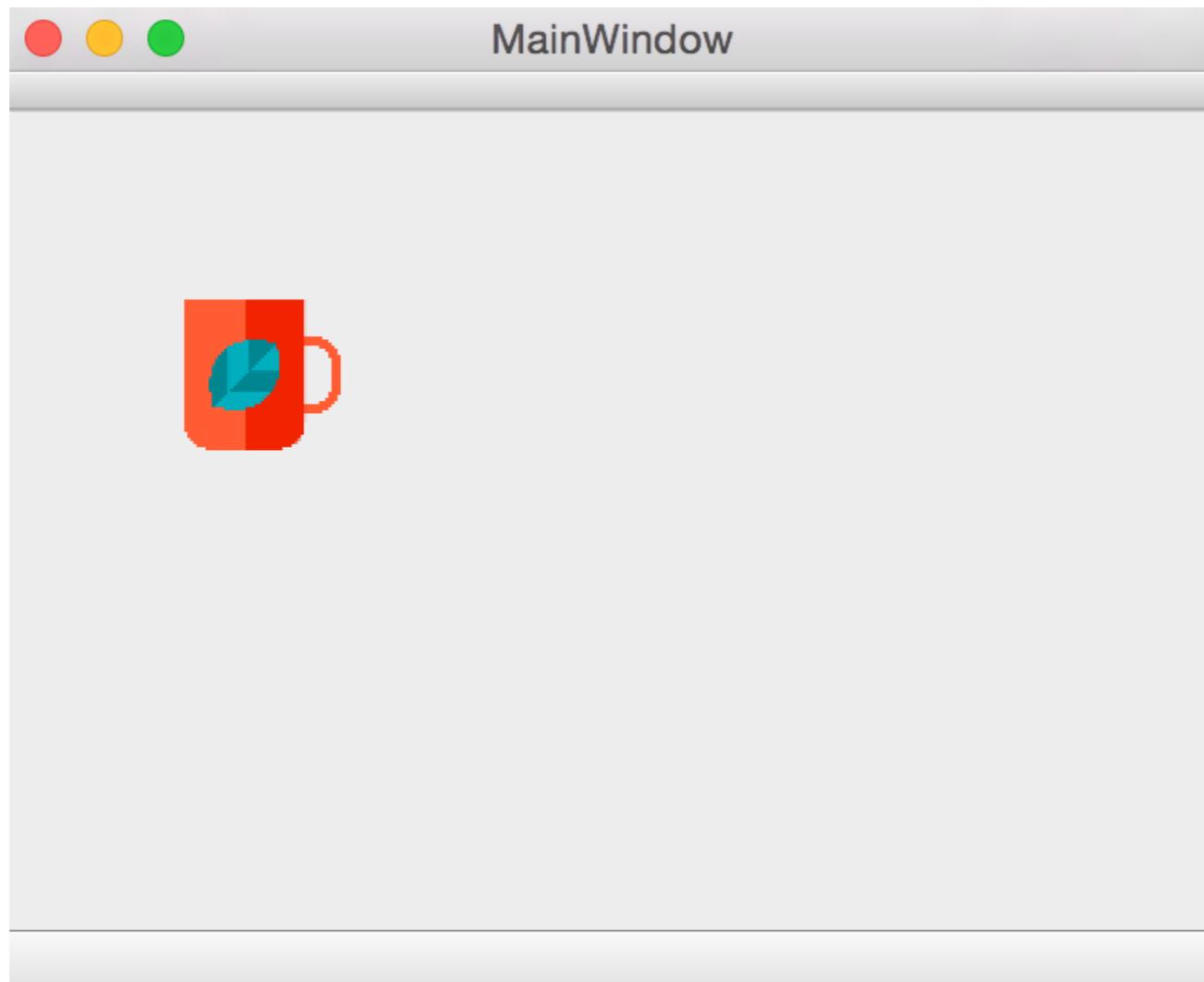
Let label fit image :

```
ui -> label -> setFixedSize(icon.size());  
ui -> label -> setPixmap(icon);
```

Let image fit label :

```
ui -> label-> setPixmap(icon.scaled  
(ui->label->width(),ui->label-  
>height(),Qt::KeepAspectRatio))
```

Result



Change icon of Mainwindow (.ico)

IconArchive

drink

Search

Browse ▾

Newest

Popular

Largest

Random

Categories ▾

Artists

My Favs

Display

Icons per Page:



Background color:



Sort by Size

Color:



Search Filters

Size: All



Category: All



Style: All



License: All



Results 1-24 of 232 for search term "drink".

< Previous

1

2

3

4

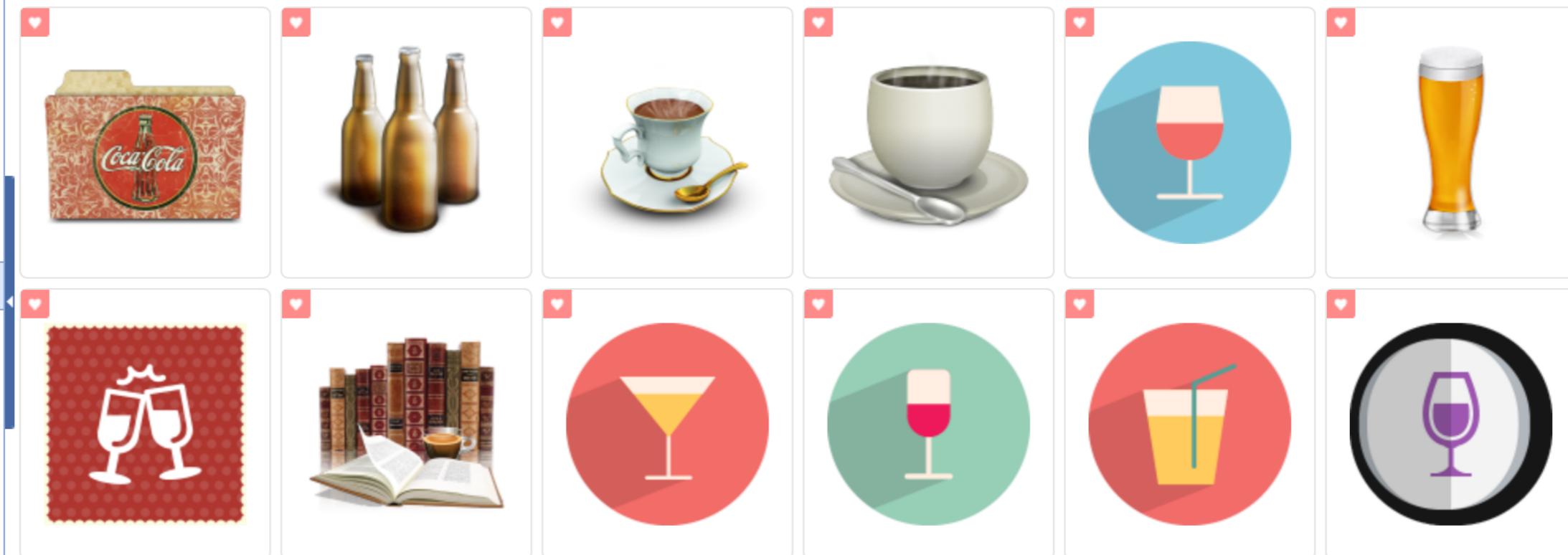
5

6

...

10

Next >



MainWindow : QMainWindow

Property Value

cursor Arrow

mouseTracking



focusPolicy NoFocus

contextMenuPolicy DefaultContextMenu

acceptDrops



▶ windowTitle MainWindow

▶ windowIcon [Theme]

Choose Resource...

Choose File...

Set Icon From Theme...

Background (Image or Color)

Method 1. mainwindow.cpp

```
this->setStyleSheet("background-  
image:url(\"ImagePath\"); background-position:  
center;");
```

Method 2. main.cpp

```
QApplication a(argc, argv);  
MainWindow w;  
w.setStyleSheet("background-color: black");  
w.show();
```

作業

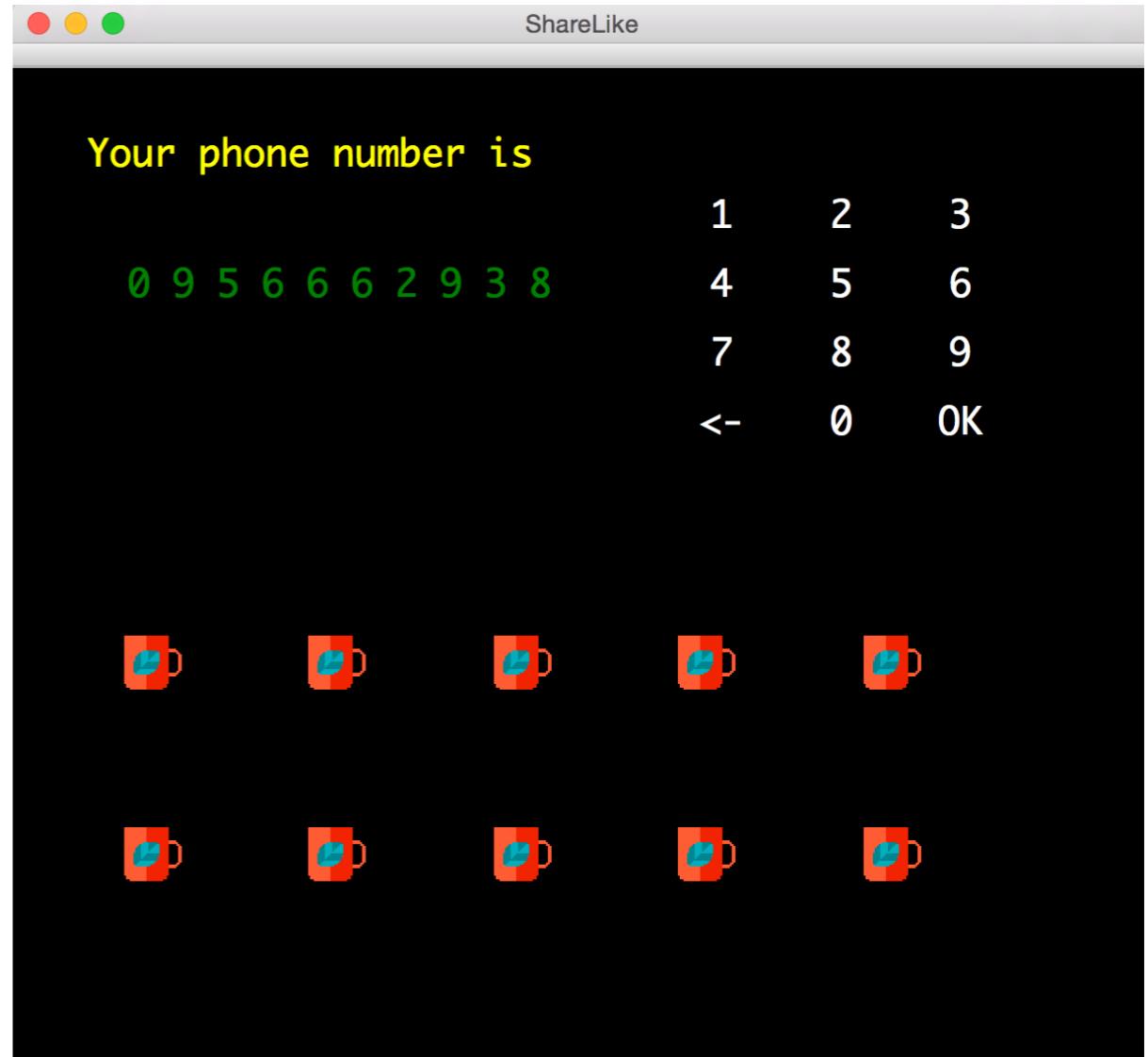
集點系統



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Homework

- 紀錄電話號碼
- 紀錄對應集點點數
- 可新增電話號碼
- 介面設計



參考網站

Qt 官方網站

[http://doc.qt.io/qt-5/
qtexamplesandtutorials.html](http://doc.qt.io/qt-5/qtexamplesandtutorials.html)

阿洲（中文）

http://monkeycoding.com/?page_id=5

影片教學（英文）

[https://www.youtube.com/watch?
v=6KtOzh0StTc&list=PL2D1942A4688E9D
63](https://www.youtube.com/watch?v=6KtOzh0StTc&list=PL2D1942A4688E9D63)

Thank you ~



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