CourseWork

Report

Student Name	Nguyen Van Huong
ID Number	GC60144
Class	GC0762
Course	ADMD

1.1	Student name	**Nguyen Van Huong**
1.2	Who did you work with? Note that for logbook exercises you are allowed to work with one other person as long as you give their name and both contribute to the work.	
1.3	Exercise id	**LOG_1_2_3_4**
1.4	How well did you complete the exercise? Tick as appropriate.	• I did everything that was asked
1.5	Briefly explain your answer to question 1.4	**I did Logbook without any problem**

WinPhone

Windows Phone (abbreviated as WP) is a series of proprietary smartphone operating systems developed by Microsoft. It is the successor to Windows Mobile, but it is incompatible with the earlier platform. It was first launched in October 2010, with a release in Asia following in early 2011. (Wikipedia)

The latest version is Windows Phone 8

After the success of the PC platform: Windows, Microsoft continues into platform for mobile devices. Windows Phone is rekindled started in early 2004 as an upgrade to Windows Mobile, codenamed "Photon", but work is very slow and the project should be canceled. In 2008, the project was started up again, but this time it is not an upgrade,it's a completely new operating system.

In this stage Windows Phone is developing rapidly, the subsequent failure to be compatible with older versions because they do not have time to prepare for it.

Project code name of Windows Phone is the "Photon". Originally intended to be called Windows Phone. However, on April 22, 2010, Microsoft announced the official name is the first version of Windows Phone 7 - commensurate with Windows 7 operating system for PC.

In June 20, 2012, Microsoft introduced Windows Phone 8, a new generation of operating system, and 4 months later, October 29, 2012, Microsoft began selling this version. Windows Phone 8 replace the Windows CE core architecture on Windows Phone 7 into Windows NT kernel which is designed for Windows 8, so this has to be easy to port applications between the two operating systems. Besides, Windows Phone 8 also supports multi-core CPU, more resolution, customizable Start Screen, the mobile version of Internet Explorer 10, Bing Maps Nokia Maps instead. According to Microsoft, Windows Phone 8 will be support to the July 8, 2014.

Blackberry OS

BlackBerry OS is the software platform of privatization developed by Research In Motion for the BlackBerry's handheld products. BlackBerry OS provides multitasking capabilities, and is designed for devices using special input methods, often trackball or touch screen. The operating system supports MIDP 1.0 and WAP 1.2. The previous versions allowed wireless synchronization with e-mail and calendar Microsoft Exchange Server, Lotus Domino and with both. Current OS Version 4 supports MIDP 2.0, capable of complete wireless activation and sync email, calendar, tasks, notes and contacts with Exchange, and Novell GroupWise support, Lotus Notes when combined with the BlackBerry Enterprise Server.

The BlackBerry devices can receive the OS updates if the carriers that support the Blackberry through BlackBerry OTASL services.

While RIM develops and provides the operating system for each series, the carriers just released the new version when they want.

BlackBerry OS have many version: 4, 5, 6, 7, 8, 9 and newest is BlackBerry 10

BlackBerry OS was discontinued after the release of BlackBerry 10, but BlackBerry will continue support for the BlackBerry OS. (Wikipedia)

Devices running Blackberry 10 are the Q5, Q10, Z10, and Z30 smartphones

On November 12, 2012, CEO Thor (Thorsten) Heins announced a January 30, 2013 launch of the BlackBerry 10 operating system version 10.0 and the first smartphones running it. (Wikipedia)

Apple iOS

iOS is the operating system on Apple's mobile devices. Originally this operating system was developed to run only on the iPhone (known as iPhone OS), but later it was extended to run on Apple devices such as iPod touch, iPad and Apple TV. May 31, 2011, Apple's App Store contains about 500 000 iOS applications, and the total downloaded is about 15 billion times. In the fourth quarter of 2010, approximately 26% of smartphones running iOS, rank behind Google's Android operating system and Nokia's Symbian.

Unlike Microsoft's Windows Phone and Google's Android, Apple does not license iOS for installation on non-Apple hardware. If you want to use iOS, the only choice is buy a Apple's device.

The user interface of iOS is based on manipulation. Users can interact with the operating system through a lot of hand gestures such as swipe, tap, pinch, and reverse pinch on the touch screen of the Apple device. Interface control elements consist of sliders, switches, and buttons.

Internal accelerometers are used by some applications to respond to shaking the device (one common result is the undo command) or rotating it in three dimensions (one common result is switching from portrait to landscape mode. (Wikipedia)

iOS is derived from Mac OS X with interactive and interface are the same. iOS is the operating system is the minimalist version of Mac OS X to run on a mobile device instead of Mac OS X running on the Apple Computer.

The latest version of iOS 7.0 is out September 18, 2013, for all devices from iPhone 4, iPod 5, iPad 2 or higher, dedicates 1–1.5 GB of the device's flash memory for the system partition, using roughly 800 MB of that partition (varying by model) for iOS itself.

The operating system was unveiled with the iPhone at the Macworld

Conference & Expo, January 9, 2007, and released in June of that year. At first, Apple marketing literature did not specify a separate name for the operating system, stating simply that the "iPhone runs OS X". Initially, third-party applications were not supported. Steve Jobs' reasoning was that developers could build web applications that "would behave like native apps on the iPhone". On October 17, 2007, Apple announced that a native Software Development Kit (SDK) was under development and that they planned to put it "in developers' hands in February". On March 6, 2008, Apple released the first beta, along with a new name for the operating system: "iPhone OS". (Wikipedia)

In June 2010, Apple rebranded iPhone OS as "iOS". The trademark "IOS" had been used by Cisco for over a decade for its operating system, IOS, used on its routers. To avoid any potential lawsuit, Apple licensed the "iOS" trademark from Cisco, with not capitalized the “i” letter.

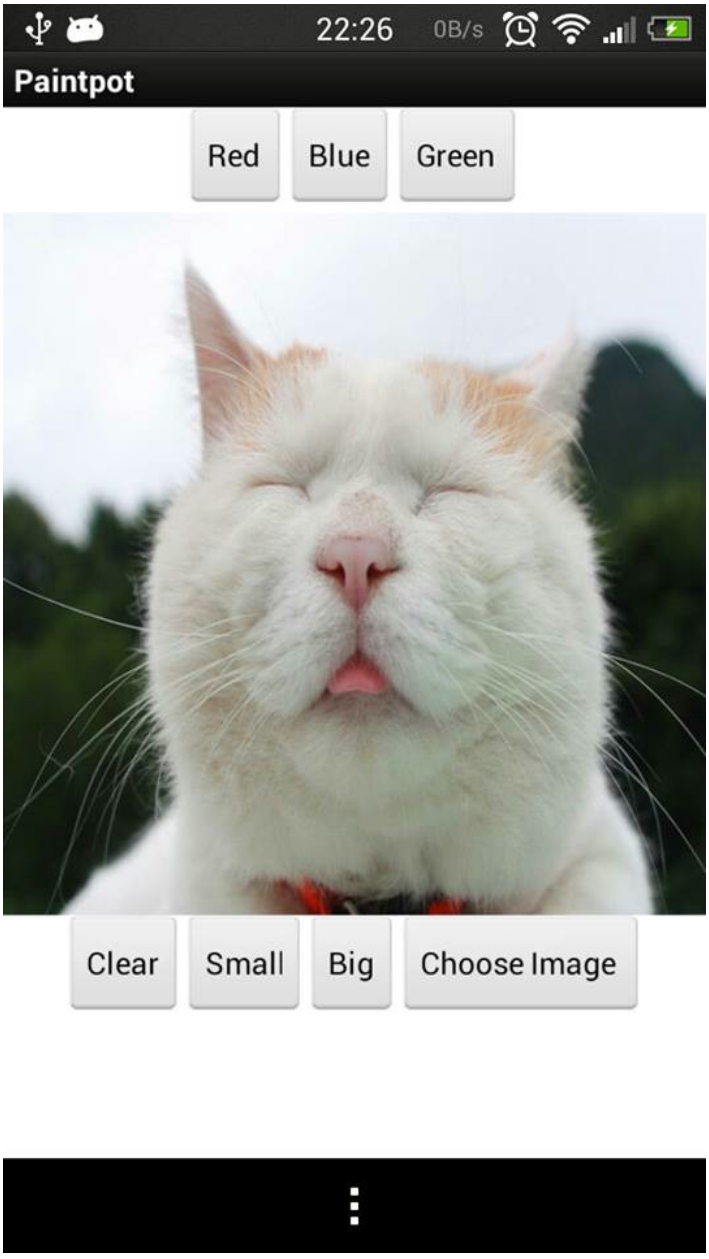
Google Android

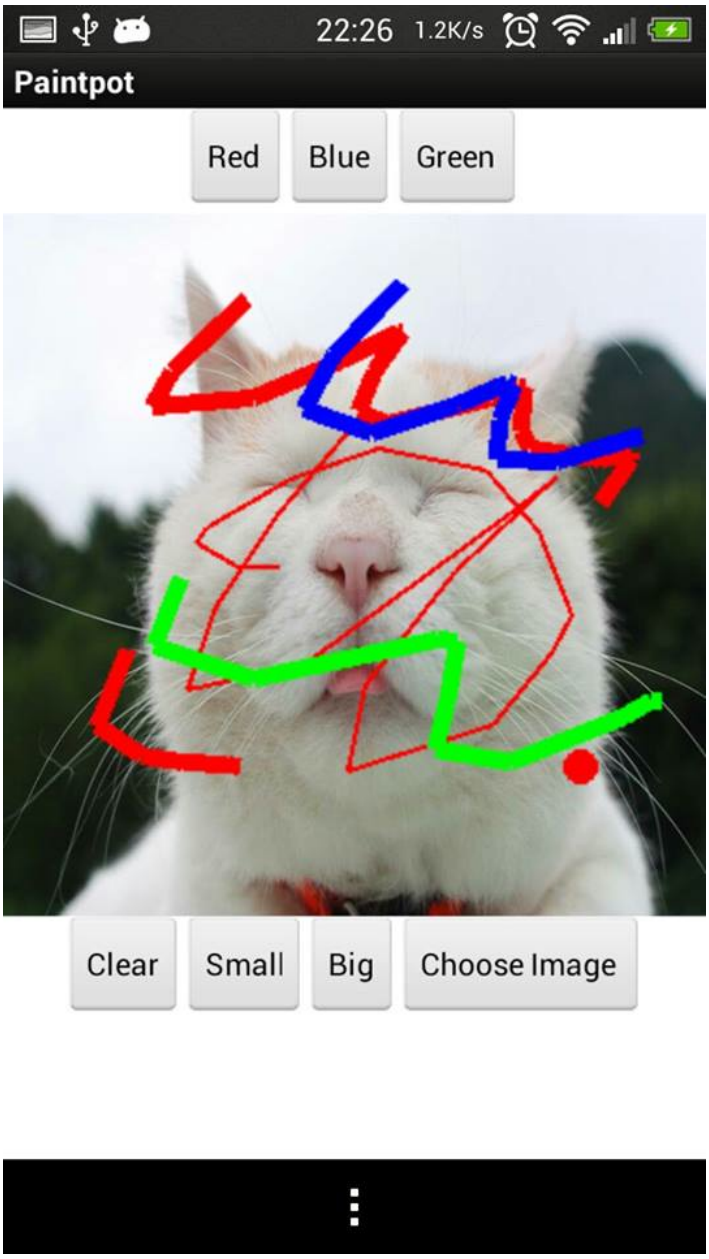
Android has become one of the popular operating system leading the world in recent times. The manufacturers have launched many models using the Android operating system, from segment low to high levels.

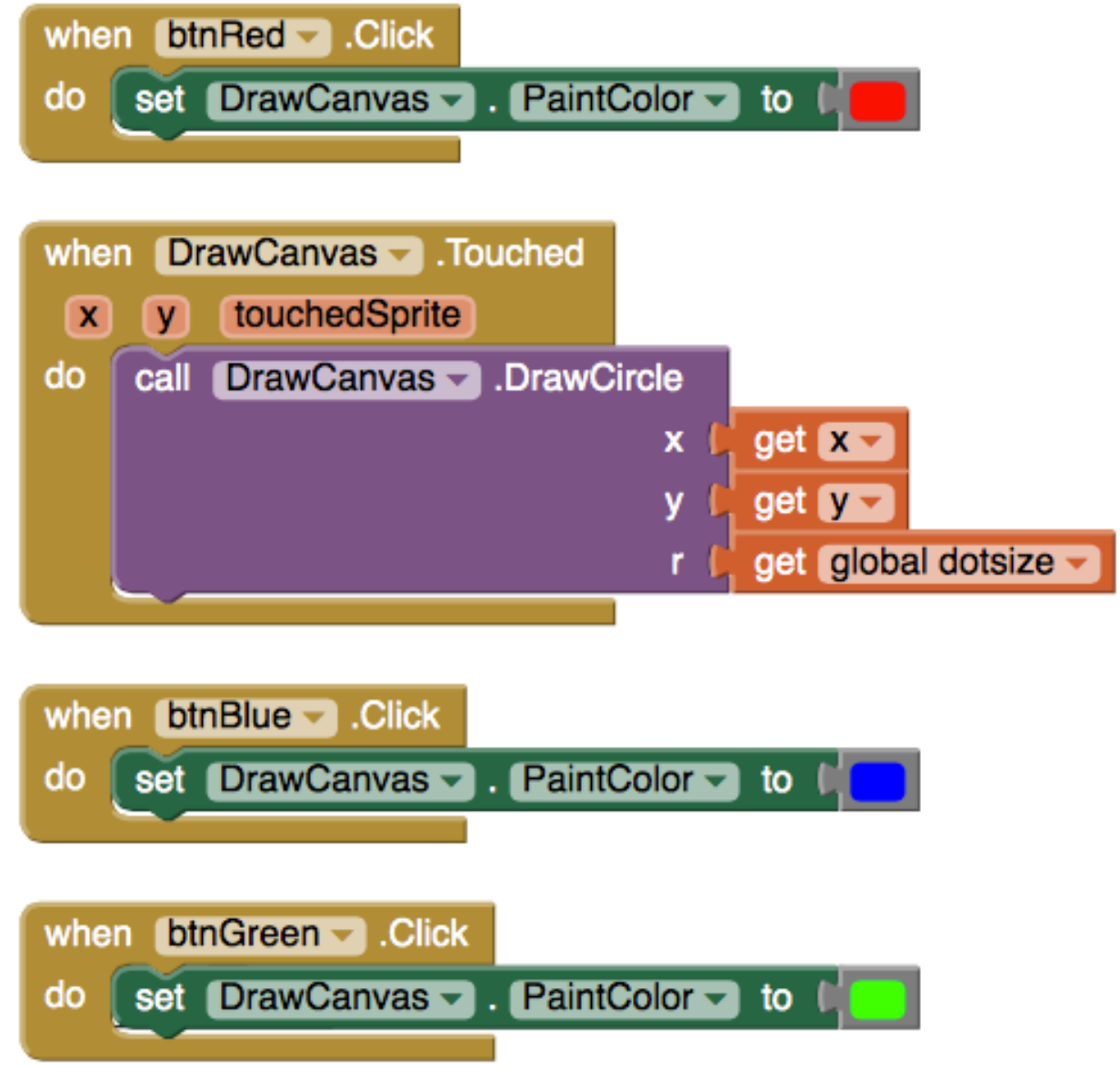
The name Android means exactly is "a machine with human shape”. Android is an operating system for mobile devices developed by Android Inc. The company was acquired by Google in 2005. Since then, Google has decided to invest in the operating system. In 2007, open source mobile devices Alliance (Open Handset Alliance) was established, including Texas Instruments, Broadcom Corporation, Google, HTC, Intel, LG, Marvell Technology Group, Motorola, Nvidia, Qualcomm, Samsung Electronics, Sprint Nextel and T - Mobile to develop a standard for open source handheld. In 2008 , this alliance has added 14 new members , such as ASUS, Sony, Toshiba, ... Starting from version Android 1.5 codenamed Cupcake , today (1/11/2013) Android has been updated to version 4.4 codenamed KitKat . December 2010, Android has officially upgraded to version 2.3 with the introduction of the second generation phone of Google : Nexus S. Android 3.0 also has the first pictures on the Motorola tablet .

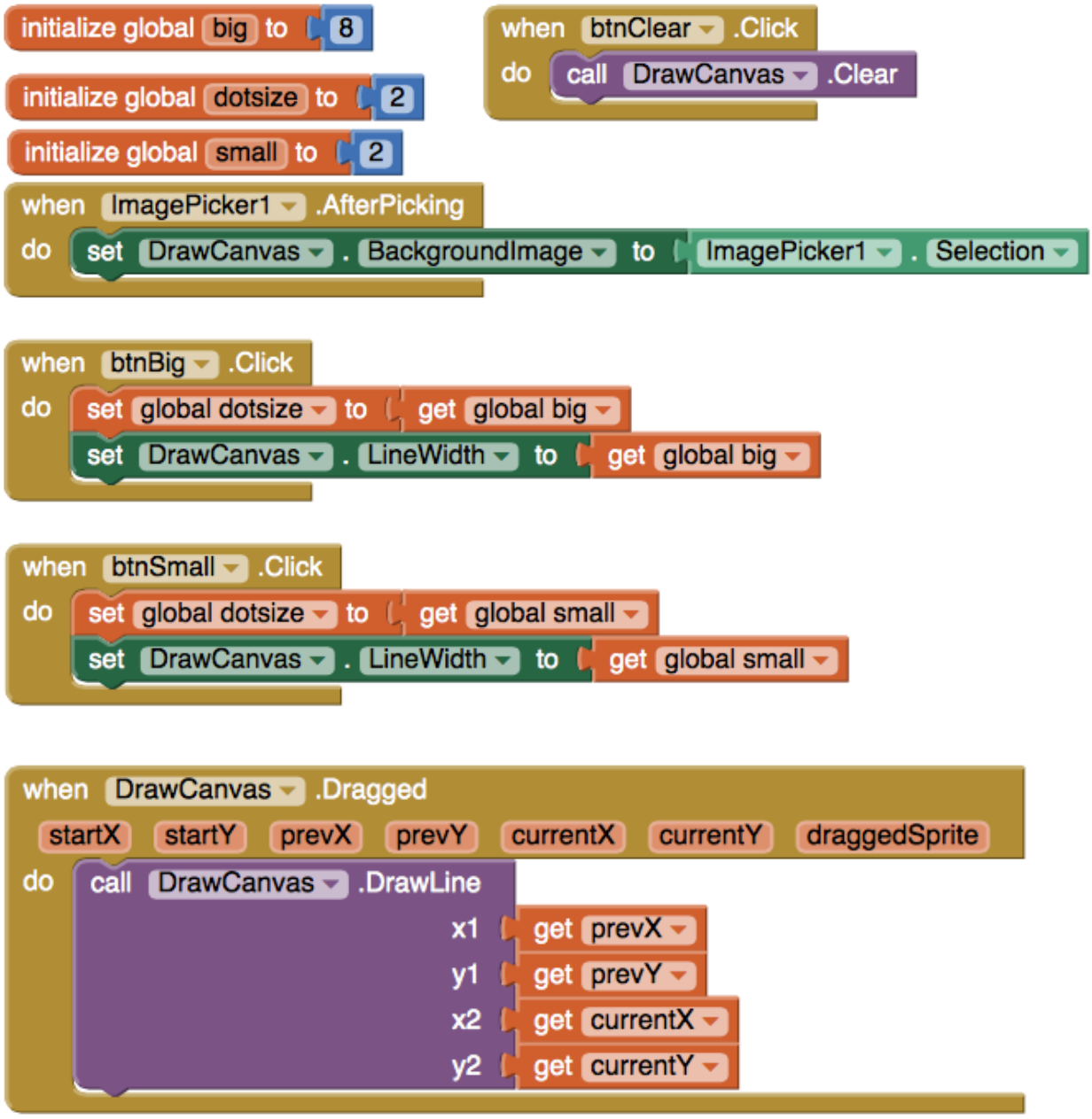
Since 2008, Android has seen numerous updates which have incrementally improved the operating system, adding new features and fixing bugs in previous releases. Each major release is named in alphabetical order after a dessert or sugary treat; for example, version 1.5 Cupcake was followed by 1.6 Donut. The latest released version is 4.4 KitKat that was released on October 31, 2013 (Wikipedia)

I think iOS is a good platform for developing an app that will reach the majority of users. Because it have consistent interface across all devices, support multiple gesture from user, XCode IDE help Developer too much.


22:26
0B/s
Paintpot
Red
Blue
Green
Clear
Small
Big
Choose Image


22:26
1.2K/s
Paintpot
Red
Blue
Green
Clear
Small
Big
Choose Image


when btnRed .Click
do set DrawCanvas . PaintColor to
when DrawCanvas .Touched
x y touchedSprite
do call DrawCanvas .DrawCircle
x get x
y get y
r get global dotsize
when btnBlue .Click
do set DrawCanvas . PaintColor to
when btnGreen .Click
do set DrawCanvas . PaintColor to


initialize global big to 8
initialize global dotsize to 2
initialize global small to 2
when ImagePicker1 .AfterPicking
do set DrawCanvas . BackgroundImage to ImagePicker1 . Selection
when btnClear .Click
do call DrawCanvas .Clear
when btnBig .Click
do set global dotsize to get global big
set DrawCanvas . LineWidth to get global big
when btnSmall .Click
do set global dotsize to get global small
set DrawCanvas . LineWidth to get global small
when DrawCanvas .Dragged
startX startY prevX prevY currentX currentY draggedSprite
do call DrawCanvas .DrawLine
x1 get prevX
y1 get prevY
x2 get currentX
y2 get currentY

Investigation of “Minimum Required SDK”

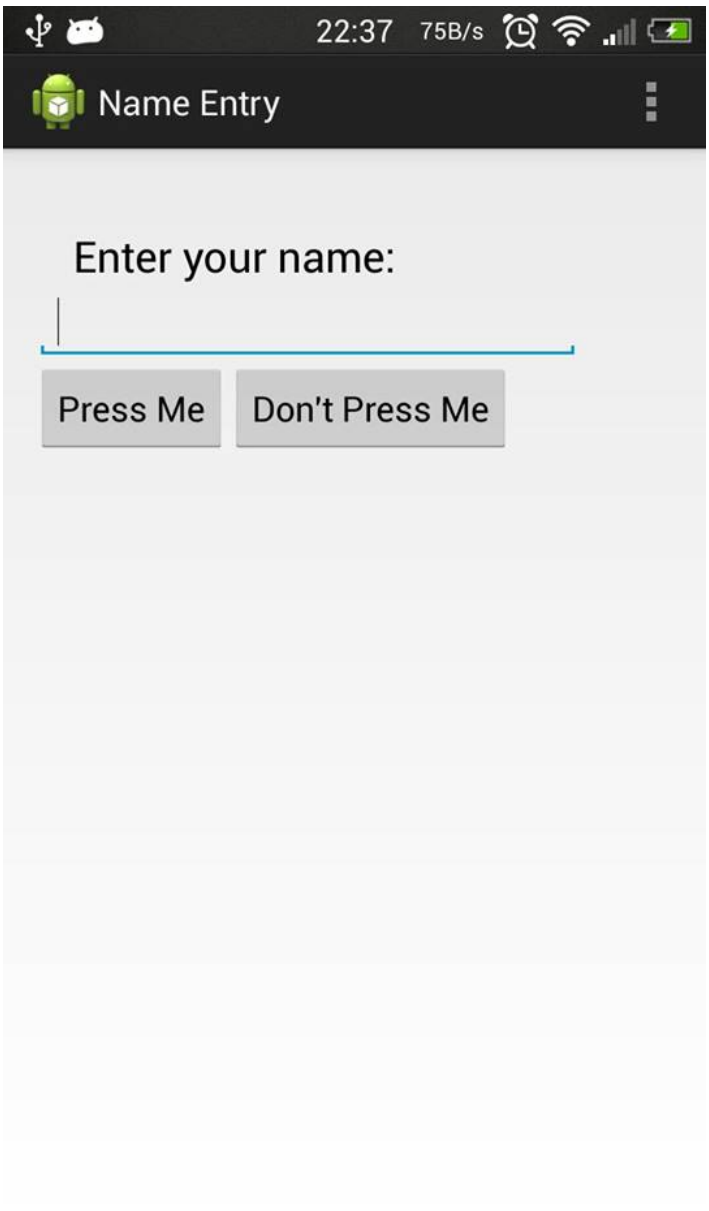
Today, all the application is written has a separate minimum requirement. One of the most important requirement is "Minium Required SDK".

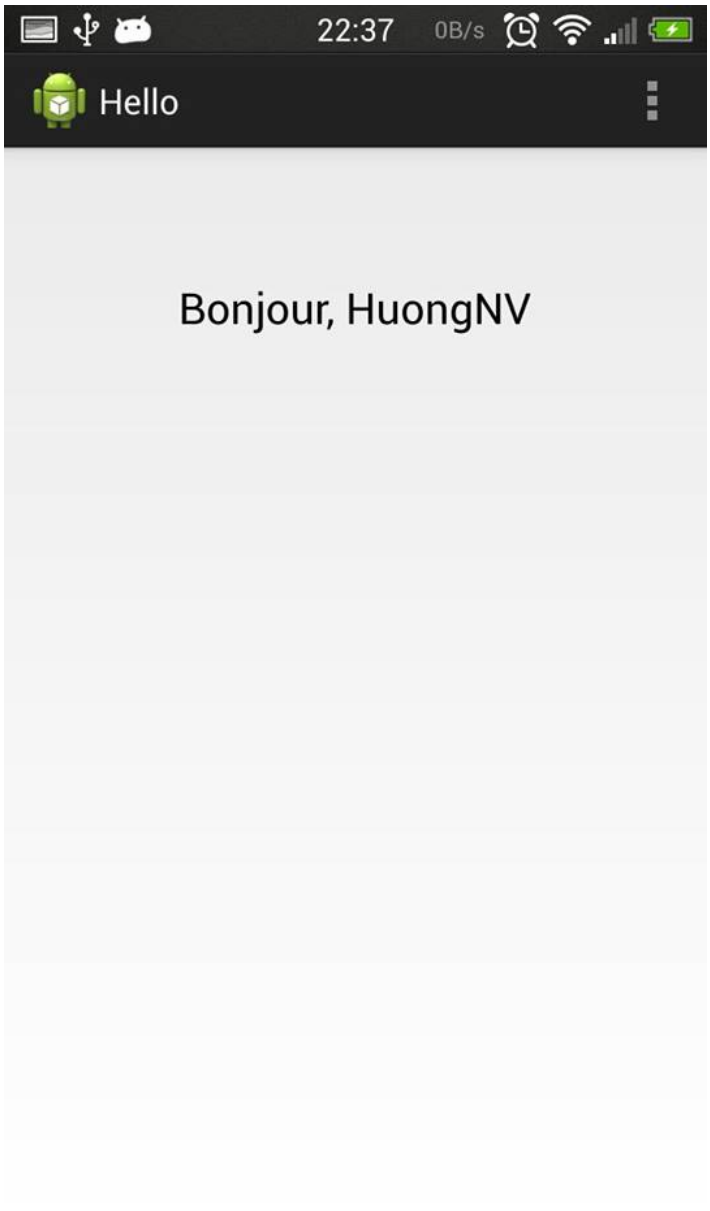
When you create an Android application you select the "Minimum Required SDK". It is the lowest version of Android that your app supports. To support as many devices as possible, you should set this to the lowest version available that allows your app to provide its core feature set. If any feature of your app is possible only on newer versions of Android and it's not critical to the app's core feature set, you can enable the feature only when running on the versions that support it. This mean that is the lowest version of Android can run this Application, if lower, you cannot run it. So the value of that Attribute is store on AndroidManifest.xml. You can edit the minimum SDK with "android:minSdkVersion". The number in "android:minSdkVersion" is the API of Android. Example: the newest API is 18 corresponding to the Android 4.3 version, the oldest API is 3 corresponding to the Android 1.5 which is no longer support from Google. I think the most popular of Minimum Required SDK is API 8 (Android 2.2) and API 10 (Android 2.3.3) because the proportion of Android version, Android 2.2 and 2.3.3 get high proportion.

When you try to change the "Minimum Required SDK", there will be three cases occurred. In the first case, if the android:targetSdkVersion higher than the android:minSdkVersion but you have not installed the API you changed, you will get an error message prompts you to install that API. After that, your application will be run successfully. In the second case, if the android:targetSdkVersion higher than the android:minSdkVersion and you have installed the API you changed, your application will run normally without any error. In the third case, if the android:targetSdkVersion lower than the android:minSdkVersion, no way to run it.

Finally, the effect of the "Minimum Required SDK" is large and important. You must choose the suitable android:targetSdkVersion and android:minSdkVersion in order to your application can run on old devices but still fully latest functional

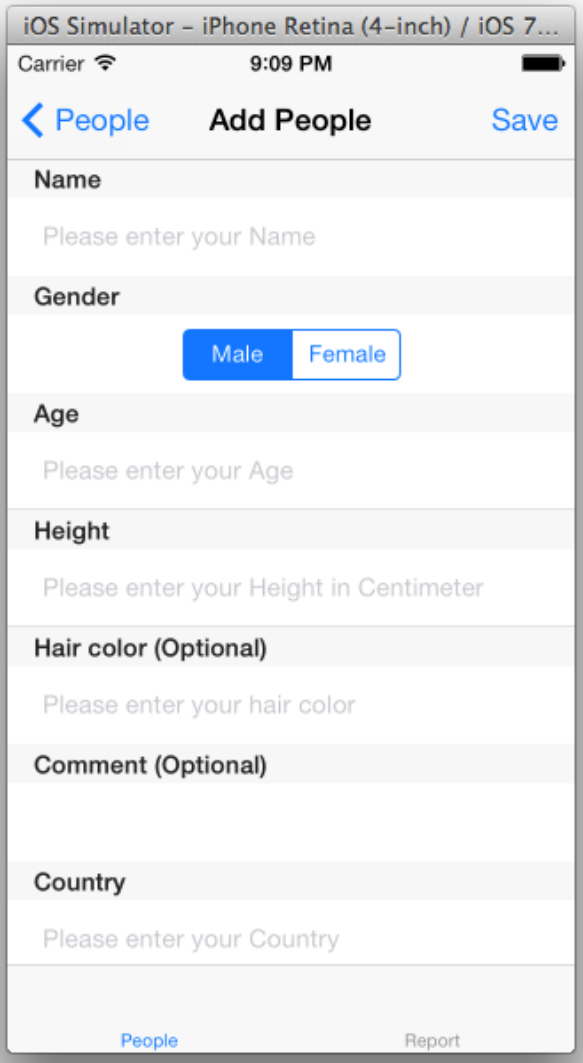
Name Entry application

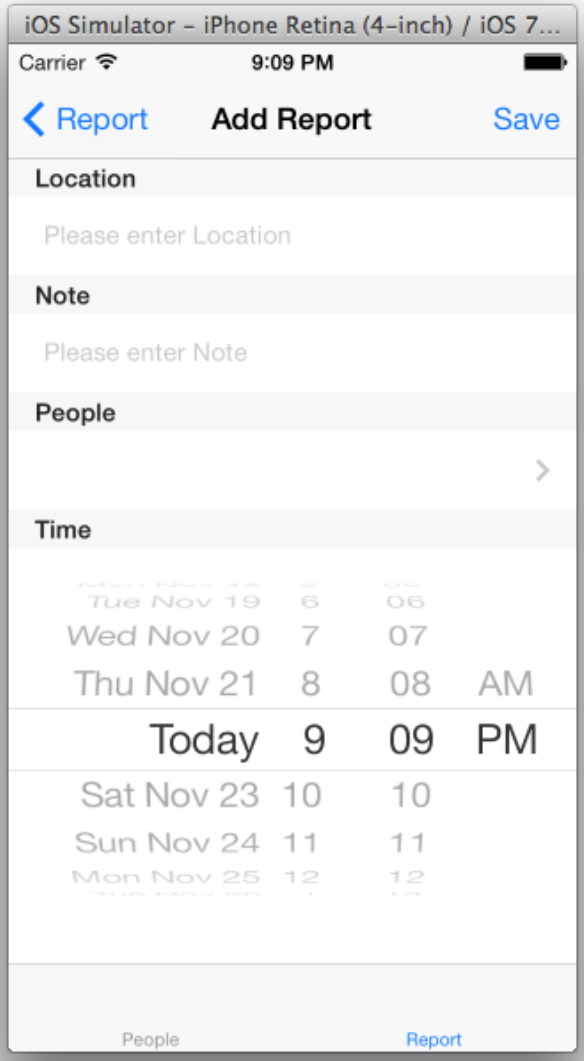





22:37
0B/s
Warning
I told you not to press me

Screenshot


iOS Simulator - iPhone Retina (4-inch) / iOS 7...
Carrier
9:09 PM
People
Add People
Save
Name
Please enter your Name
Gender
Male
Female
Age
Please enter your Age
Height
Please enter your Height in Centimeter
Hair color (Optional)
Please enter your hair color
Comment (Optional)
Country
Please enter your Country
People
Report


iOS Simulator - iPhone Retina (4-inch) / iOS 7...
Carrier
9:09 PM
Report
Add Report
Save
Location
Please enter Location
Note
Please enter Note
People
Time
Wed Nov 20 7 07
Thu Nov 21 8 08 AM
Today 9 09 PM
Sat Nov 23 10 10
Sun Nov 24 11 11
People
Report

Code

- Add People form:

```
//
//  AddPersonTVC.h
//  Sherlock
//
//  Created by Nguyen Van Huong on 10/21/13.
//  Copyright (c) 2013 Nguyen Van Huong. All rights reserved.
//

#import <UIKit/UIKit.h>
#import "Person.h"

@class AddPersonTVC;
@protocol AddPersonTVCDelegate
- (void)theSaveButtonOnTheAddPersonTVCWasTapped:(AddPersonTVC *)controller;
@end

@interface AddPersonTVC : UITableViewController
@property (nonatomic, weak) id <AddPersonTVCDelegate> delegate;
@property (strong, nonatomic) IBOutlet UITextField *txtName;
@property (strong, nonatomic) IBOutlet UISegmentedControl *txtGender;
@property (strong, nonatomic) IBOutlet UITextField *txtAge;
@property (strong, nonatomic) IBOutlet UITextField *txtHeight;
@property (strong, nonatomic) IBOutlet UITextField *txtColor;
@property (strong, nonatomic) IBOutlet UITextField *txtComment;
@property (strong, nonatomic) IBOutlet UITextField *txtCountry;
@property (strong, nonatomic) NSManagedObjectContext *managedObjectContext;

- (IBAction)save:(id)sender;
- (IBAction)check:(id)sender;
@end
```

- Add Report form:

```
//
//  AddReportTVC.h
//  Sherlock
//
//  Created by Nguyen Van Huong on 10/21/13.
//  Copyright (c) 2013 Nguyen Van Huong. All rights reserved.
//

#import <UIKit/UIKit.h>
#import "Person.h"
#import <CoreLocation/CoreLocation.h>

@class AddReportTVC;
@protocol AddReportTVCDelegate
- (void)theSaveButtonOnTheAddReportTVCWasTapped:(AddReportTVC *)controller;
@end
```

```
@interface AddReportTVC : UITableViewController <CLLocationManagerDelegate>
@property (nonatomic, weak) id <AddReportTVCDelegate> delegate;
@property (strong, nonatomic) IBOutlet UITextField *txtTime;
@property (strong, nonatomic) IBOutlet UITextField *txtLocation;
@property (strong, nonatomic) IBOutlet UITextField *txtNote;
@property (weak, nonatomic) IBOutlet UITableViewCell *txtPeople;
@property (strong, nonatomic) Person *selectedPerson;
@property (strong, nonatomic) NSManagedObjectContext *managedObjectContext;
@property (nonatomic, retain) IBOutlet UIDatePicker *datePicker;
- (IBAction)save:(id)sender;
- (IBAction)check:(id)sender;
@end
```

Database Structure

I'm using Core Data technology in my Coursework, so it has some different from Sqlite

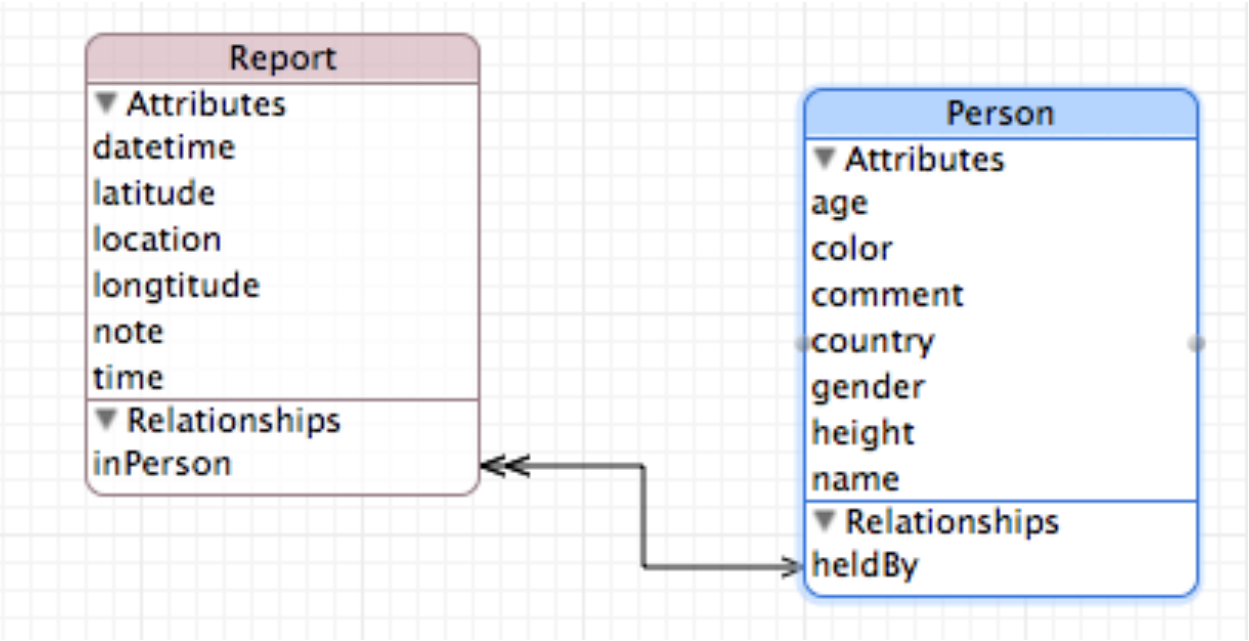
Person

Name	Type	Description
name	String	Store Person name
gender	String	Store Person gender
age	Integer 32	Store Person age
height	Integer 32	Store Person height
color	String	Store Person color
comment	String	Store Person comment
country	String	Store Person country

Report

Name	Type	Description
datetime	Date	Store Report time
latitude	String	Store Location Latitude
location	String	Store Location name
longtitude	String	Store Location Longtitude
note	String	Store Report note
time	String	Store Time

Relationship



It's one-many relationship. 1 Person has many Report

Code

- Save Person

```
- (IBAction)save:(id)sender
{
    Person *person = [NSEntityDescription insertNewObjectForEntityForName:@"Person"
                                        inManagedObjectContext:self.managedObjectContext];

    person.name = _txtName.text;
    person.gender = [_txtGender titleForSegmentAtIndex:_txtGender.selectedSegmentIndex];
    person.height = @([_txtHeight.text intValue]);
    person.age = @([_txtAge.text intValue]);
    person.color = _txtColor.text;
    person.comment = _txtComment.text;
    person.country = _txtCountry.text;

    [self.managedObjectContext save:nil];  // write to database

    [self.delegate theSaveButtonOnTheAddPersonTVCWasTapped:self];
}
```

- Save Report

```
- (IBAction)save:(id)sender
{
    Report *report = [NSEntityDescription insertNewObjectForEntityForName:@"Report"
                                          inManagedObjectContext:self.managedObjectContext];
    NSLocale *usLocale = [[NSLocale alloc] initWithLocaleIdentifier:@"en_US"];
    NSDate *pickerDate = [datePicker date];
```

```
    NSString *selectionString = [[NSString alloc] initWithFormat:@"%@",
                                 [pickerDate descriptionWithLocale:usLocale]];
    report.longtitude = longtitude;
    report.latitude = latitude;
    //report.time = selectionString;
    report.datetime = pickerDate;
    report.location = _txtLocation.text;
    report.note = _txtNote.text;
    report.inPerson = selectedPerson;

    [self.managedObjectContext save:nil];  // write to database

    [self.delegate theSaveButtonOnTheAddReportTVCWasTapped:self];
}
```

References

Wikipedia - http://en.wikipedia.org/wiki/Main_Page

Apple - http://www.apple.com