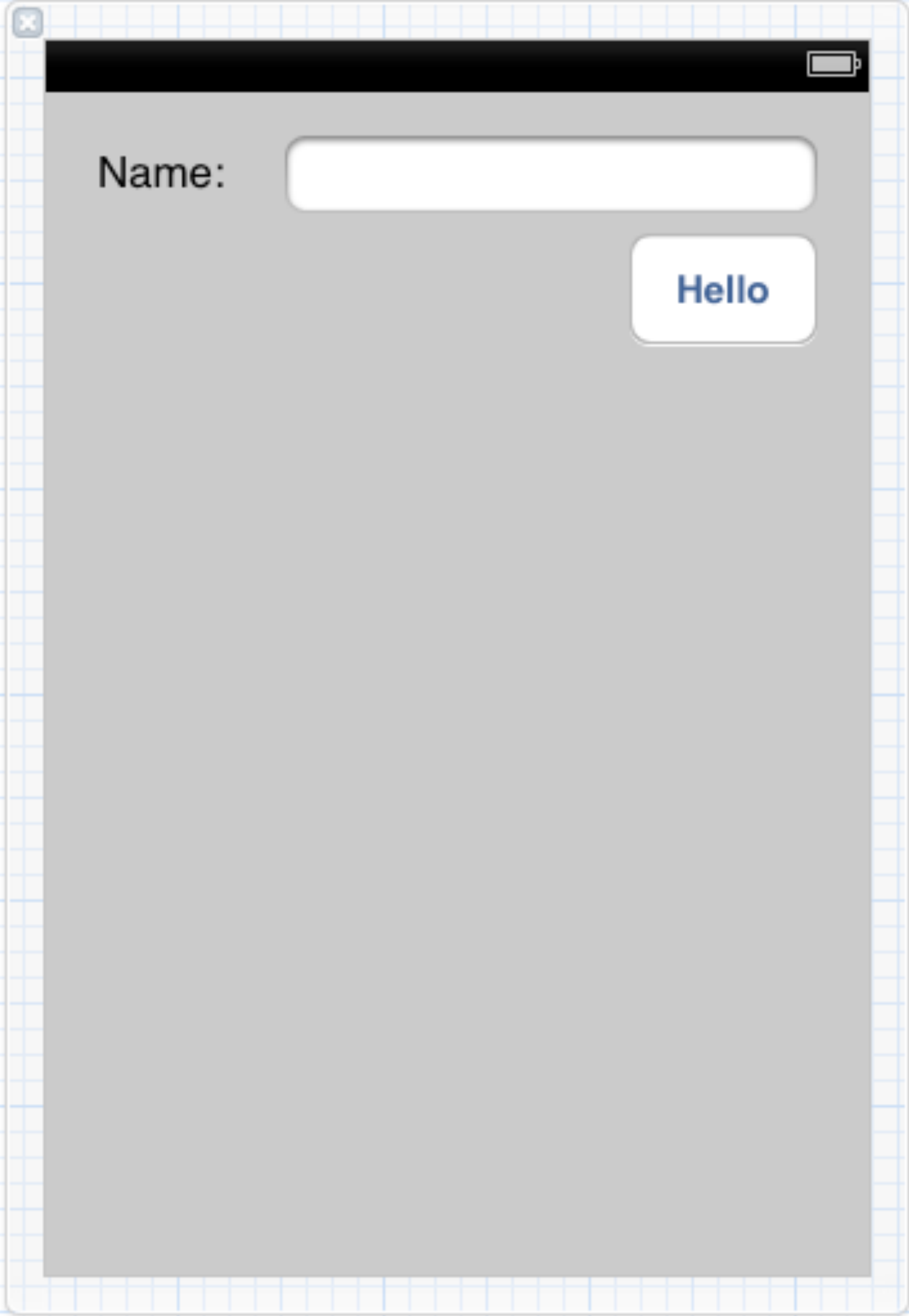
關閉虛擬鍵盤 (Deactivate Virtual Keyboard)

目的
針對UITextField和UITextView把虛擬鍵盤收起來的方法的整理。

環境
- iOS 6.1
- Xcode 4.6.2

UITextField
寫一個single view application來做實驗，xib的版面如下圖



接著在ViewController.h加入一個IBOutlet和一個IBAction分別和UITextField和UIButton設定link

```
#import <UIKit/UIKit.h>
```

```
@interface ViewController : UIViewController {
    IBOutlet UITextField* nameField;
}
-(IBAction) sayHello;

@end
```

- 按button的事件時將虛擬鍵盤關閉

```
// 方法一
-(void)sayHello {
    NSLog( @"Hello, %@", [nameField text] );
    [nameField resignFirstResponder];
}
```

- 點app背景時關閉

```
// 方法二: view上的event
-(void)touchesEnded:(NSSet *)touches withEvent:(UIEvent *)event {
    [nameField resignFirstResponder];
}
```

- 實作UITextFieldDelegate並註冊到view上的UITextField

ViewController.h

```
#import <UIKit/UIKit.h>

@interface ViewController : UIViewController <UITextFieldDelegate> {
    IBOutlet UITextField* nameField;
}
-(IBAction) sayHello;

@end
```

Partial of ViewController.m

```
- (void)viewDidLoad
{
    [super viewDidLoad];
    // Do any additional setup after loading the view, typically from a nib.
    [self initView];
}

// 方法三: 實作UITextFieldDelegate，將虛擬鍵盤右下角改為「完成」，實作delegate method，註冊處理的delegate
-(void)initView {
    // 把虛擬鍵盤右下角改為完成
    // nameField.returnKeyType = UIReturnKeyDone;
    [nameField setReturnKeyType:UIReturnKeyDone];

    // 註冊nameField的event delegate
    // nameField.delegate = srlf;
    [nameField setDelegate:self];
}

-(BOOL)textFieldShouldReturn:(UITextField *)textField {
    NSLog( @"textFieldShouldReturn called" );
    [nameField resignFirstResponder];
    return YES;
}
```

UITextView

因為這個control是多行輸入，因此虛擬鍵盤上returnKeyType不會是完成。所以能繼續用的是按到view那招，或者另一招是加上UINavigationControler。

- 點到View Controller容器

```
-(void)touchesEnded:(NSSet *)touches withEvent:(UIEvent *)event {
    [memoTextView resignFirstResponder];
}
```

- 使用UINavigationController

這邊比較複雜，UINavigationController必須在UIWindow初始化app第一個view controller的時候就加進去。也就是說按照Single View Application來說，雖然我們在ViewController裡面可以看到一個navigationControl的property，但是這個property是readonly的，在UIWindow初始化view controller之後就無法設定了。就是我們要對Single View Application的AppDelegate下列這段程式動手腳。

AppDelegate.m修改前

```
- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
{
    self.window = [[[UIWindow alloc] initWithFrame:[[UIScreen
mainScreen] bounds]] autorelease];
    // Override point for customization after application launch.
    self.viewController = [[[ViewController alloc]
initWithNibName:@"ViewController" bundle:nil] autorelease];
    self.window.rootViewController = self.viewController;
    [self.window makeKeyAndVisible];
    return YES;
}
```

解釋之前先看一下Supporting Files這個group裡的main.m這裡面有所有程式entry point的main程式。

main.m

```
int main(int argc, char *argv[])
{
    @autoreleasepool {
        return UIApplicationMain(argc, argv, nil,
NSStringFromClass([AppDelegate class]));
    }
}
```

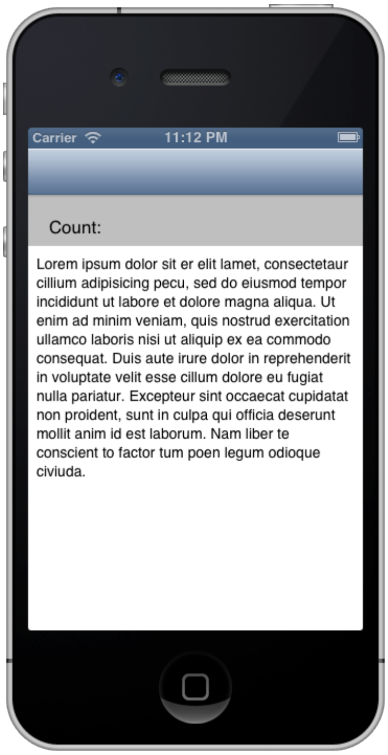
在iOS應用程式就是使用UIApplicationMain載入AppDelegate。回到AppDelegate class看到application載入第一個事件這裡會初始化UIWindow並設定UIWindow物件的rootViewController。修改的策略**就是把rootViewController換成UINavigationController，然後由UINavigationController帶起來我們app第一頁的ViewController。**

AppDelegate.m修改後

```
-(void)initApp {
    UINavigationController* nav = [[UINavigationController
alloc]initWithRootViewController:self.viewController];

    self.window.rootViewController = nav;

    // 記得要release我們自己用alloc/initxxx建立的物件
    [nav release];
}
```

```
- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
{
    self.window = [[[UIWindow alloc] initWithFrame:[[UIScreen
mainScreen] bounds]] autorelease];
    // Override point for customization after application launch.
    self.viewController = [[[ViewController alloc]
initWithNibName:@"ViewController" bundle:nil] autorelease];

    // 如果要用navigation control 一開始rootViewController不能用這個
viewController
    //self.window.rootViewController = self.viewController;
    // for navigation control
    [self initApp];

    [self.window makeKeyAndVisible];
    return YES;
}
```

然後就可以在模擬器執行看看application，可以看到原本的元件上方多出一塊Navigation Controller，這樣就設定成功。接下來就可以開始使用navigation controller



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接下來就可以處理Navigation Controller，我們希望使用者剛看到第一頁的時候不出現Navigation Controller，而在點選UITextView的時候出現Navigation Controller，而右邊出現「完成」的按鈕，使用者按下去的時候就把虛擬鍵盤關掉。

因為要處理UITextView的事件，所以就讓ViewController實作UITextViewDelegate protocol。

ViewController.h

```
@interface ViewController : UIViewController <UITextViewDelegate> {
    IBOutlet UILabel* countLabel;
    IBOutlet UITextView* memoTextView;
}

@end
```

ViewController.m 程式碼片段

```
-(void)textViewDidBeginEditing:(UITextView *)textView {
    // 顯示navigation bar
    //self.navigationController.navigationBarHidden = NO;
    //設定是否動畫處理
    [self.navigationController setNavigationBarHidden:NO animated:YES];
    // self.navigationControl is readonly 要比view control早建立 => 在
AppDelegate那邊就要設定
    NSLog( @"%@", self.navigationController ); // 沒有先initial的話 這個會
是 <--- null
    // 在Navigation control加上UIBarButtonItem <- 「完成」
    UIBarButtonItem *doneButton = [[UIBarButtonItem alloc]
initWithBarButtonSystemItem:UIBarButtonSystemItemDone target:self
action:@selector(doneHandler)];

    self.navigationItem.rightBarButtonItem = doneButton;

    [doneButton release];
}

-(void)doneHandler {
    NSLog( @"done..." );
    // 關閉鍵盤
    [memoTextView resignFirstResponder];
    // 關閉navigation bar button，有做沒做都可以，因為下一行程式就把navigation
control隱藏起來了
    self.navigationItem.rightBarButtonItem = nil;
    //self.navigationController.navigationBarHidden = YES;
    [self.navigationController setNavigationBarHidden:YES animated:YES];
}

-(void)initView {
    //隱藏navigation bar
    // 這樣的效果是直接隱藏
    //self.navigationController.navigationBarHidden = YES;
    // 這樣的效果是隱藏時有動態效果
    [self.navigationController setNavigationBarHidden:YES animated:NO];

    //[memoTextView setDelegate:self];
    memoTextView.delegate = self;
}

- (void)viewDidLoad
{
    [super viewDidLoad];
    // Do any additional setup after loading the view, typically from a
nib.
    [self initView];
}
```