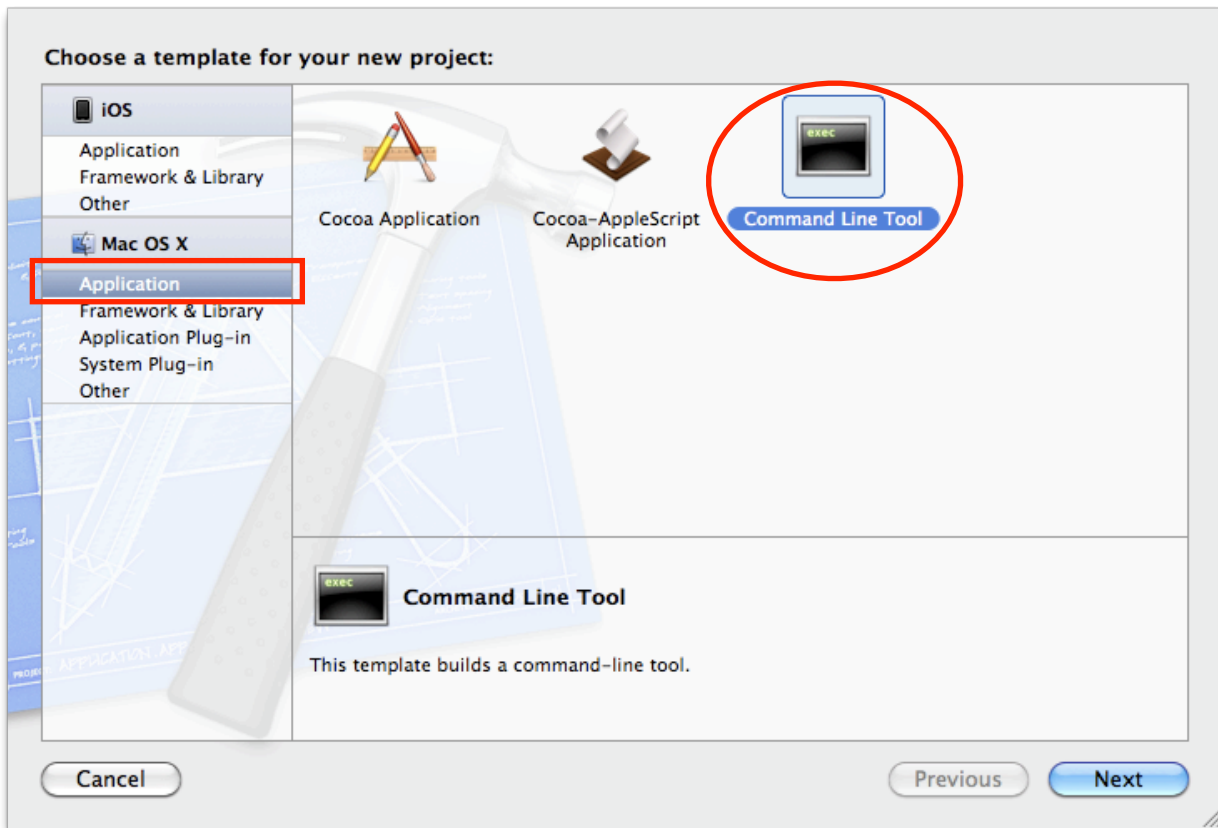
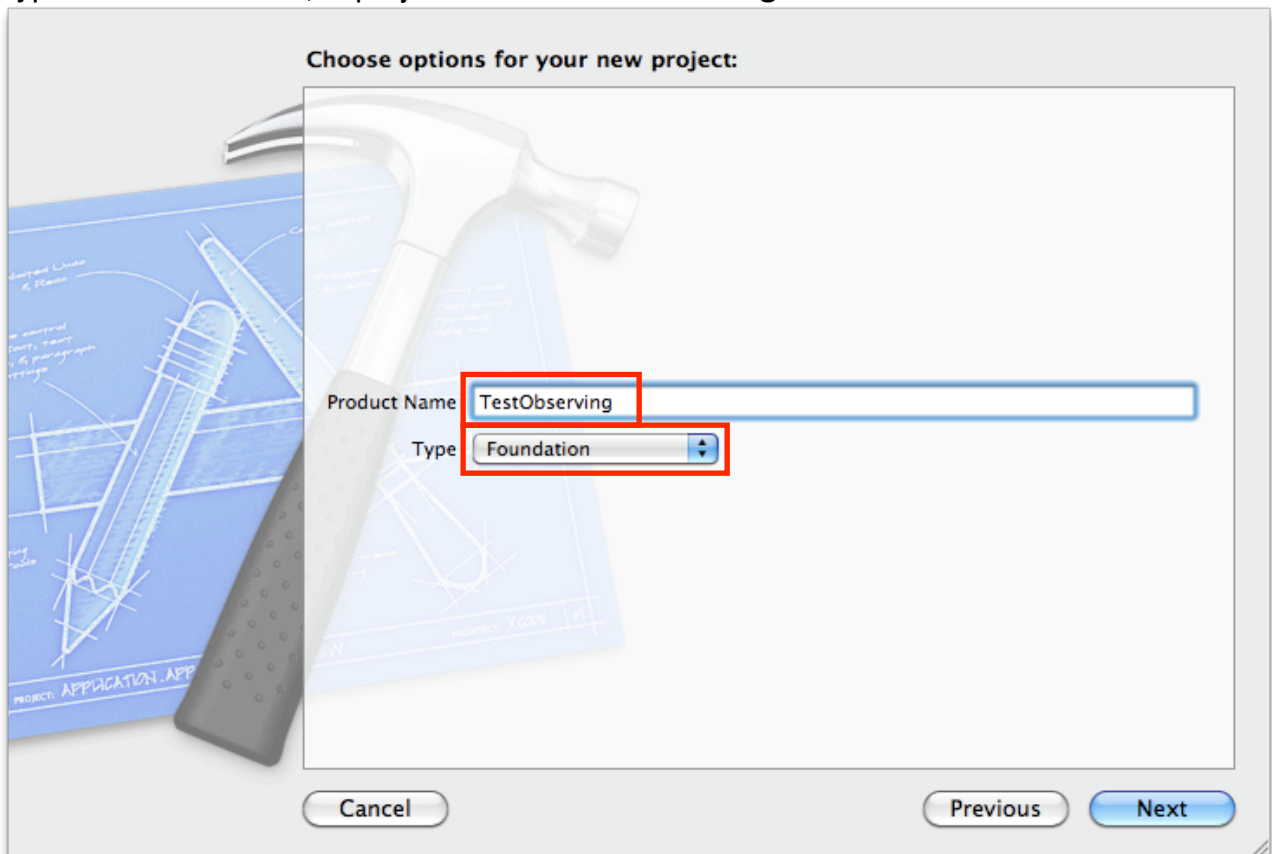


Lab TestObserving

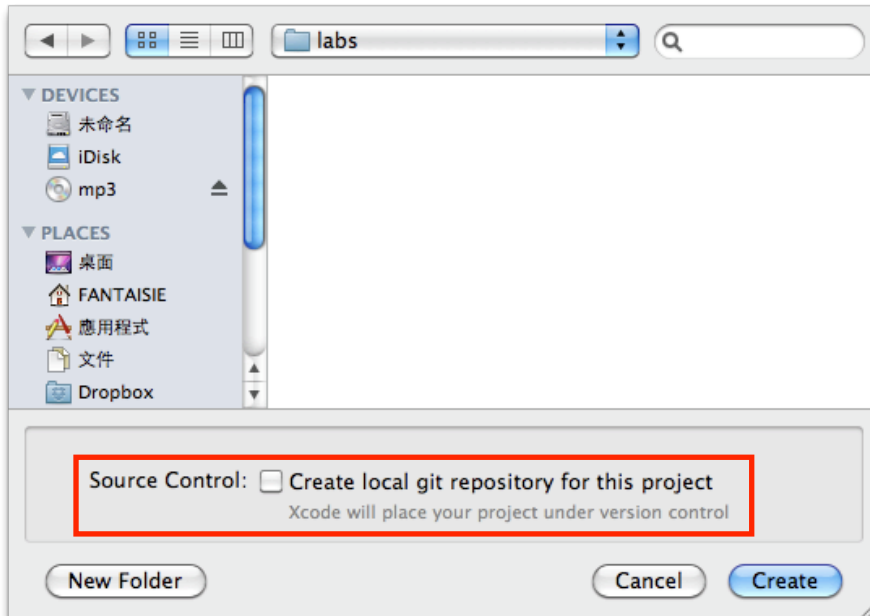
Step 1. 在File > New > New Project開啓一個新的project, 選擇MAC OS X的Application目錄裡的 **Command Line Tool**



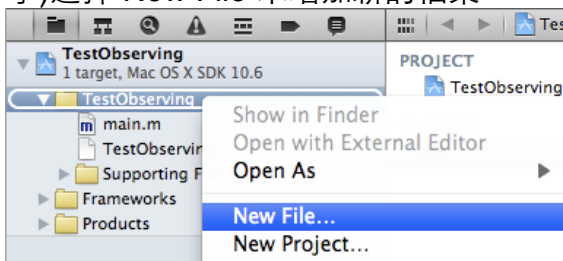
Type選擇**Foundation**, 將project命名為 **TestObserving**



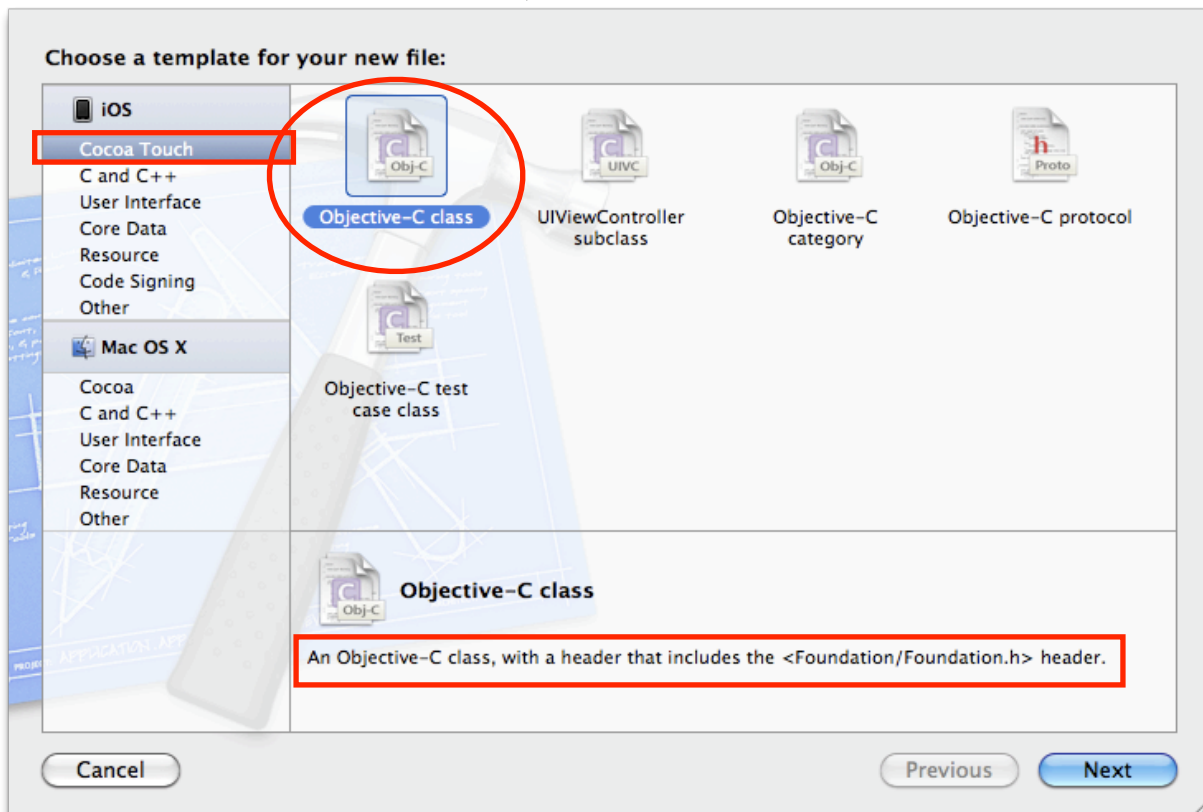
在此我們不做version control的動作,所以不勾選Create local git repository for this project



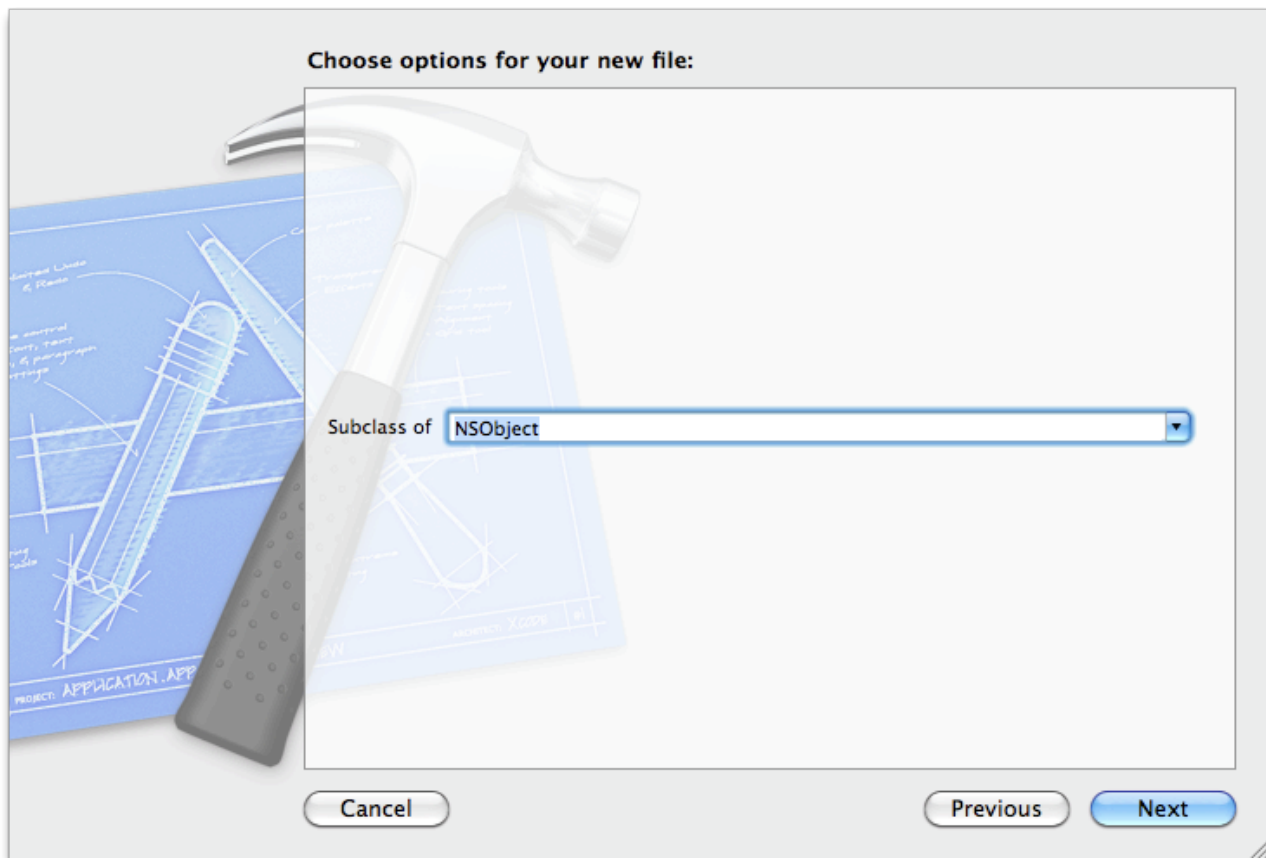
Step 2. 在Xcode左邊Project Navigator 視窗中, 在TestObserving上點右鍵(若無滑鼠ctrl+點擊)選擇 New File 來增加新的檔案



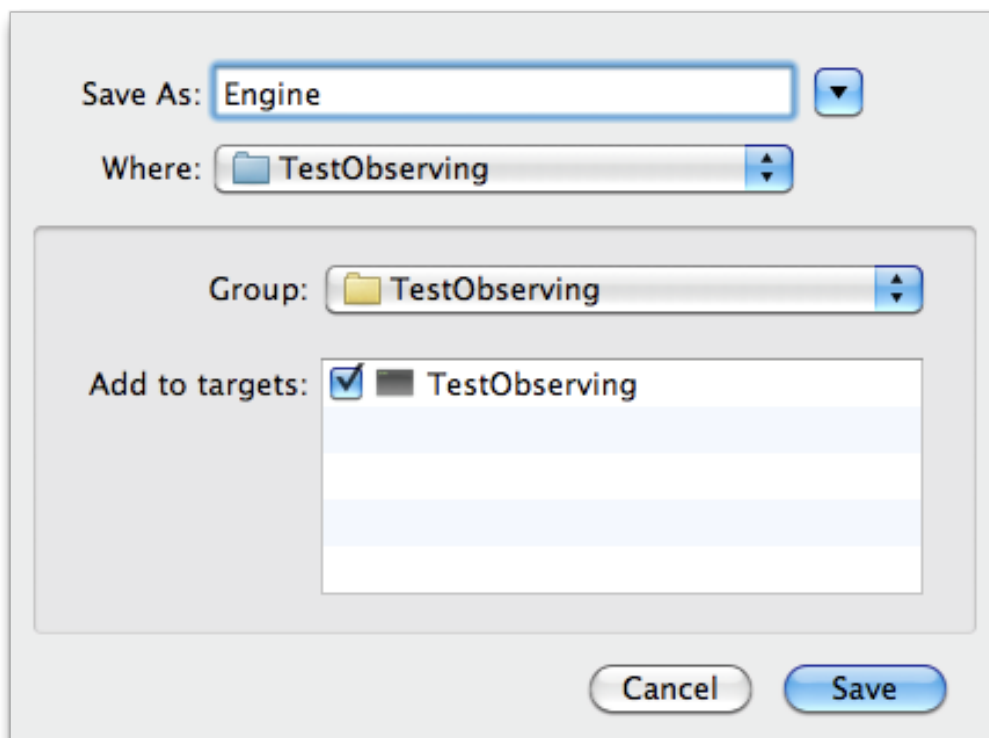
Step 3. 選擇iOS裡的Cocoa Touch 裡的Objective-C class, 下方有敘述這個class有includes <Foundation/Foundation.h> 這個標頭檔



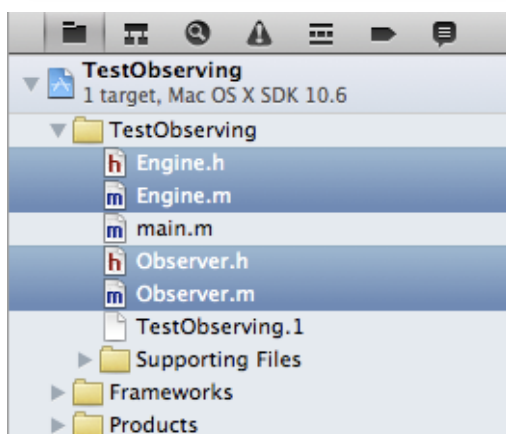
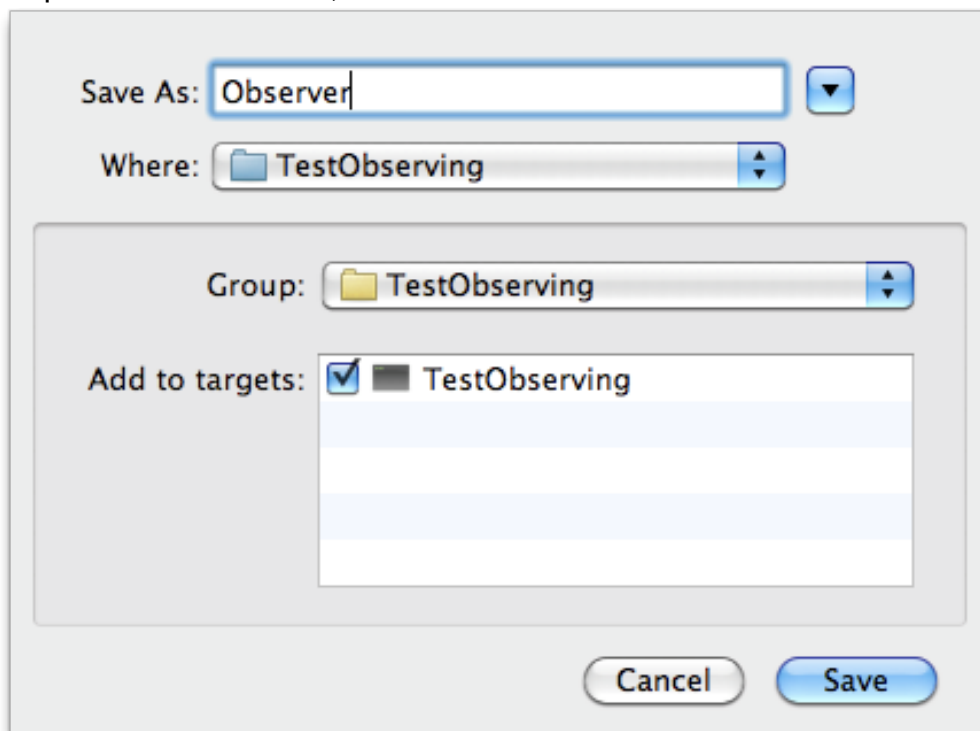
選擇Subclass of NSObject



Step 4. 將新增的Subclass命名為 **Engine** 來產生 Engine.m和 Engine.h



Step 5. 依照上面的方式,再新增一個class叫做 **Observer**



Step 6. 在Xcode左邊 Project Navigator 視窗中,開啓 Engine.h
新增一個變數叫做name,並設定他的property

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

@interface Engine : NSObject {
    NSString *name;
}
@property (retain) NSString * name;

@end
```

Step 7. 開啓Engine.m, 對name的property做相對應的synthesize

```
#import "Engine.h"

@implementation Engine

@synthesize name;

@end
```

Step 8. 開啓Observer.m, 實作有觀察並判斷到keyPath叫做name時的值有改變時,就印出新的值

```
#import "Observer.h"

@implementation Observer

- (void)observeValueForKeyPath:(NSString *)keyPath ofObject:(id)object
  change:(NSDictionary *)change context:(void *)context{
    if([keyPath isEqual:@"name"]) {
        NSLog(@"the new name is %@",
              [change objectForKey:NSKeyValueChangeNewKey]);
    }
}

@end
```

Step 9. 開啓main.m, 先 #import "Engine.h" 和 #import "Observer.h" , 並將印出 Hello, World!這行Mark掉, 並加入以下的程式, 主要是新增一個Engine叫做targetEngine, 並持續更改name這個NSString, 但只有第二次更改時才add Observer.

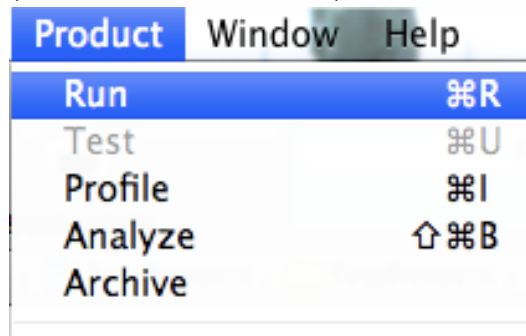
```
#import <Foundation/Foundation.h>
#import "Engine.h"
#import "Observer.h"

int main (int argc, const char * argv[]) {
    NSAutoreleasePool * pool = [[NSAutoreleasePool alloc] init];

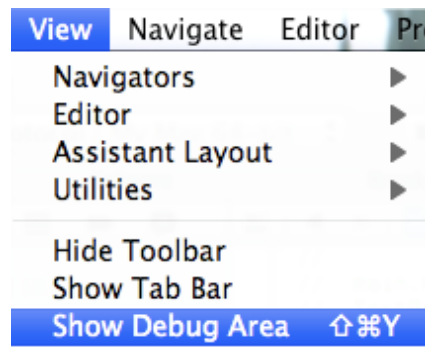
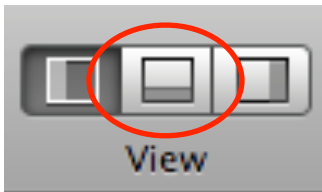
    // insert code here...
    //NSLog(@"Hello, World!");
    Engine * targetEngine = [Engine new];
    Observer * myObserver = [Observer new];
    targetEngine.name = @"initializing";
    [targetEngine addObserver:myObserver forKeyPath:@"name" options:
    (NSKeyValueObservingOptionNew | NSKeyValueObservingOptionOld)
    context:NULL];
    targetEngine.name = @"observing";
    [targetEngine removeObserver:myObserver forKeyPath:@"name"];
    targetEngine.name = @"ending";
    [pool drain];
    return 0;
}
```

Step 10. Run (⌘+R)

在Xcode主頁左上角按下Run, 或是在Product > Run, 即開始Build code並執行



之後會自動開啓console, 沒開啓的話在右上角View點擊中間的Button, 或是選擇View > Show Debug Area 來開啓



在Console中顯示當name更新為observing時才有被觀察判斷並列印出來

