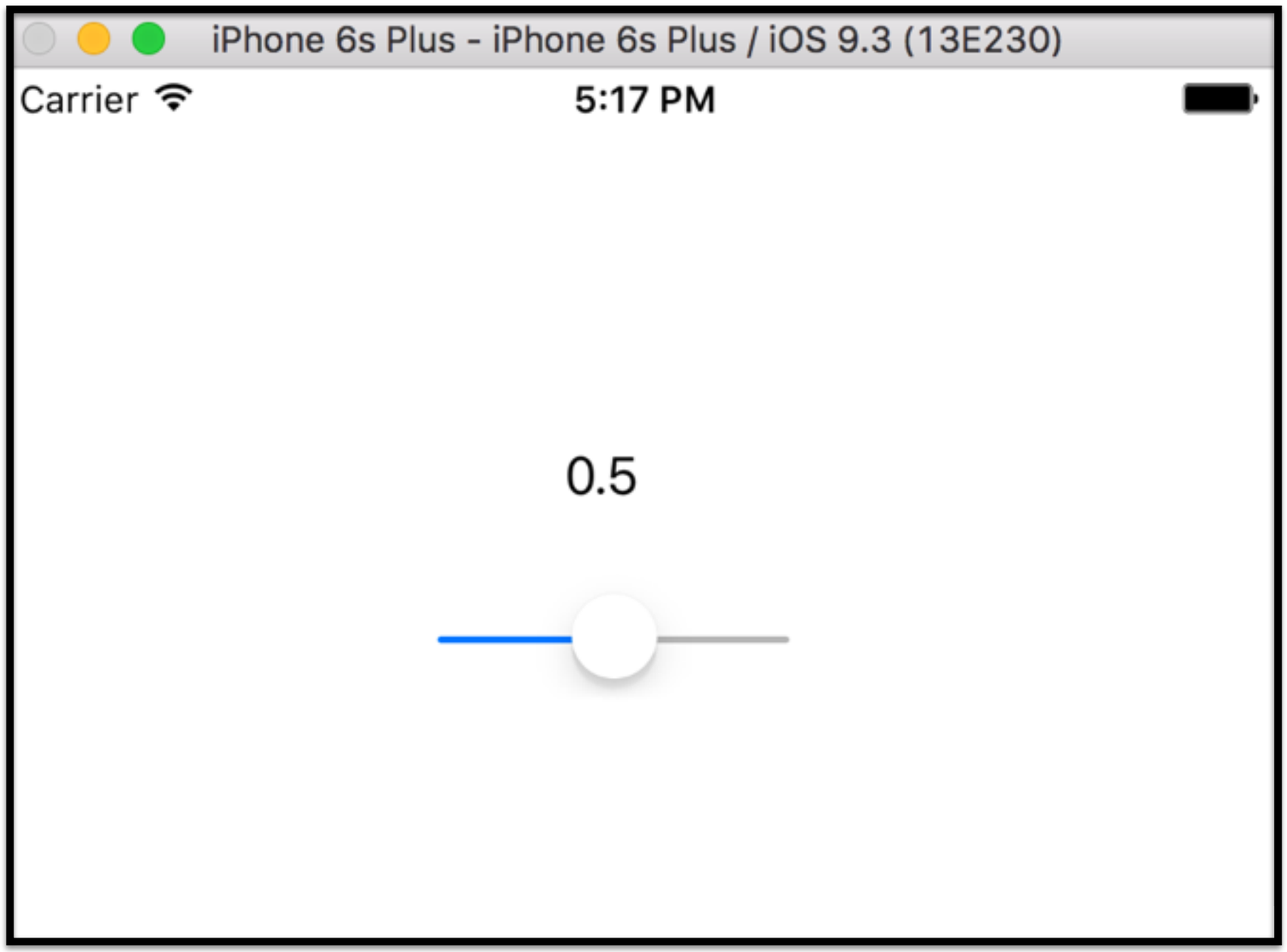
# Ways to store data

- NSUserDefaults: KeyValue, Small data
- Core Data: Stores objects.

# Use NSUserDefaults

First example is to save user setting.


iPhone 6s Plus - iPhone 6s Plus / iOS 9.3 (13E230)
Carrier
5:17 PM
0.5

```
@IBOutlet weak var label: UILabel!
    @IBOutlet weak var slider: UISlider!
    override func viewDidLoad() {
        super.viewDidLoad()
        // Do any additional setup after loading the view, typically from a nib.
        if let sliderValue = NSUserDefaults.standardUserDefaults().valueForKey("sliderValue") {
            slider.setValue(sliderValue as! Float, animated: true)
        } else {
            print("This is first app launch.")
        }
        updateValue(self)
    }

    override func didReceiveMemoryWarning() {
        super.didReceiveMemoryWarning()
        // Dispose of any resources that can be recreated.
    }

    @IBAction func updateValue(sender: AnyObject) {
        label.text = slider.value.description
        NSUserDefaults.standardUserDefaults().setValue(slider.value, forKey: "sliderValue")
    }
```

# Use Core Data

Choose a template for your new file:

- iOS
  - Source
  - User Interface
  - Core Data
  - Apple Watch
  - Resource
  - Other
- watchOS
  - Source
  - User Interface
  - Core Data
  - Resource
  - Other
- tvOS
  - Source
  - User Interface
  - Core Data
  - Resource

Data Model

Mapping Model

NSManagedObject subclass

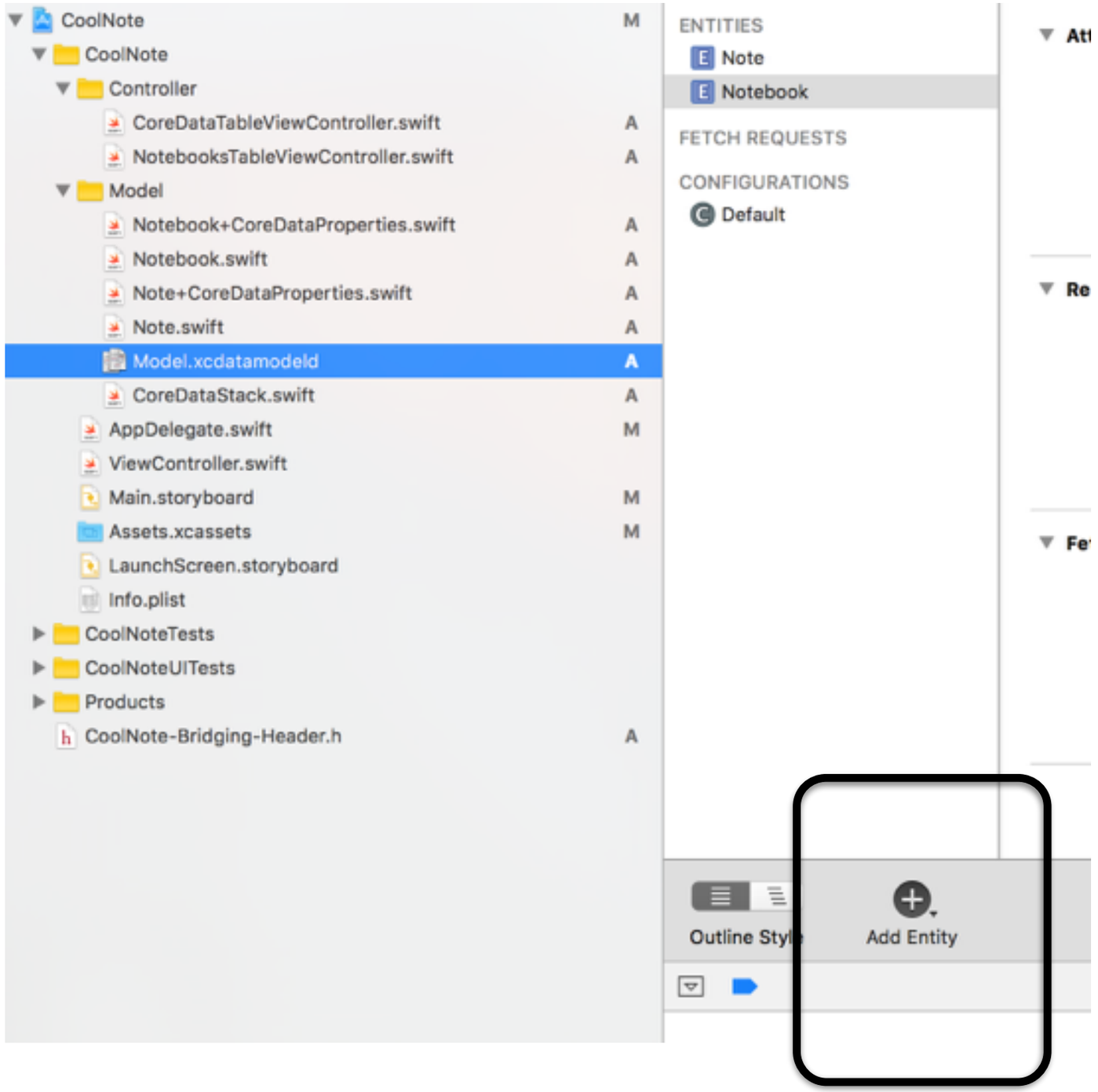
**Data Model**

A Core Data model file that allows you to use the design component of Xcode.

Cancel

Previous

Next




Create entity

CoolNote 〉 CoolNote 〉 Model 〉 Model....odeld 〉 Model.xcdatamodel 〉 Notebook

ENTITIES
- Note
- Notebook

FETCH REQUESTS

CONFIGURATIONS
- Default

**Attributes**

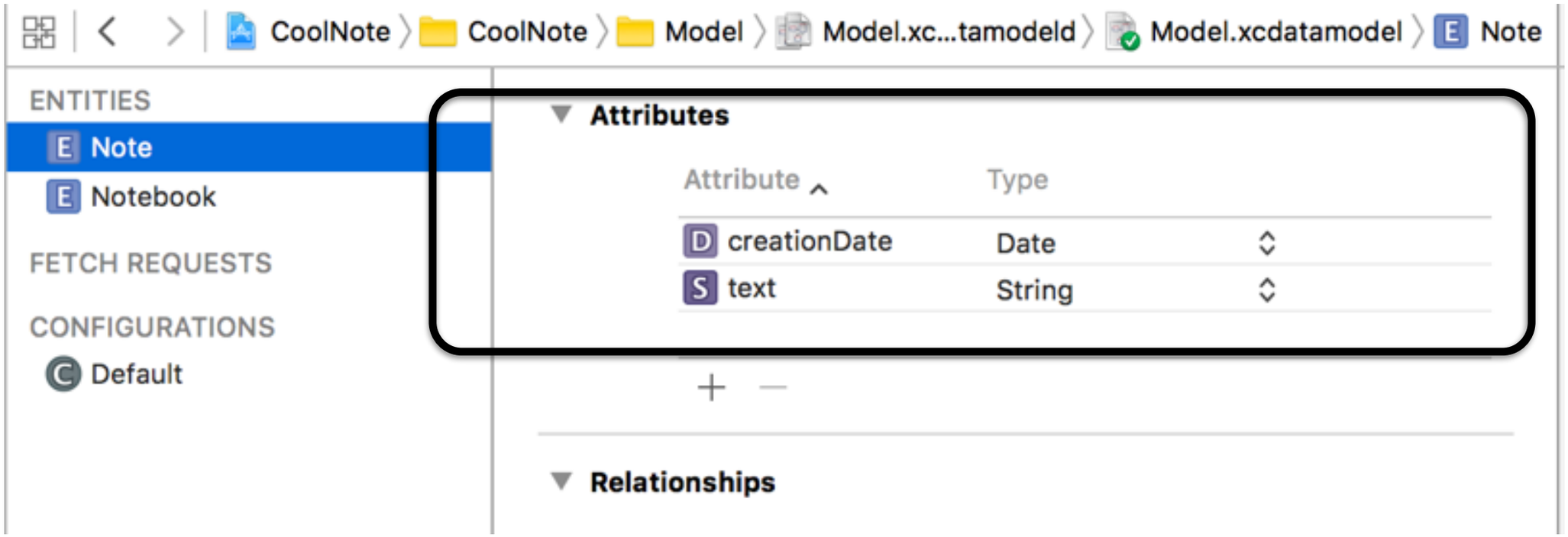
| Attribute | Type |
|---|---|
| creationDate | Date |
| name | String |

**Relationships**

| Relationship | Destination | Inverse |
|---|---|---|
| notes | Note | notebook |

**Fetched Properties**

| Fetched Property | Predicate |
|---|---|


CoolNote
CoolNote
Model
Model.xc...tamodeld
Model.xcdatamodel
Note
ENTITIES
Note
Notebook
FETCH REQUESTS
CONFIGURATIONS
Default
Attributes
Attribute
Type
creationDate
Date
text
String
Relationships

## Attributes

| Attribute | Type |
| --- | --- |
| creationDate | Date |
| name | String |

## Relationships

| Relationship | Destination | Inverse |
| --- | --- | --- |
| notes | Note | notebook |

## Fetched Properties

| Fetched Property | Predicate |
| --- | --- |

### Relationship

Name: notes

Properties: Transient, Optional

Destination: Note

Inverse: notebook

Delete Rule: Cascade

Type: To Many

Arrangement: Ordered

Count: Unbounded, Minimum

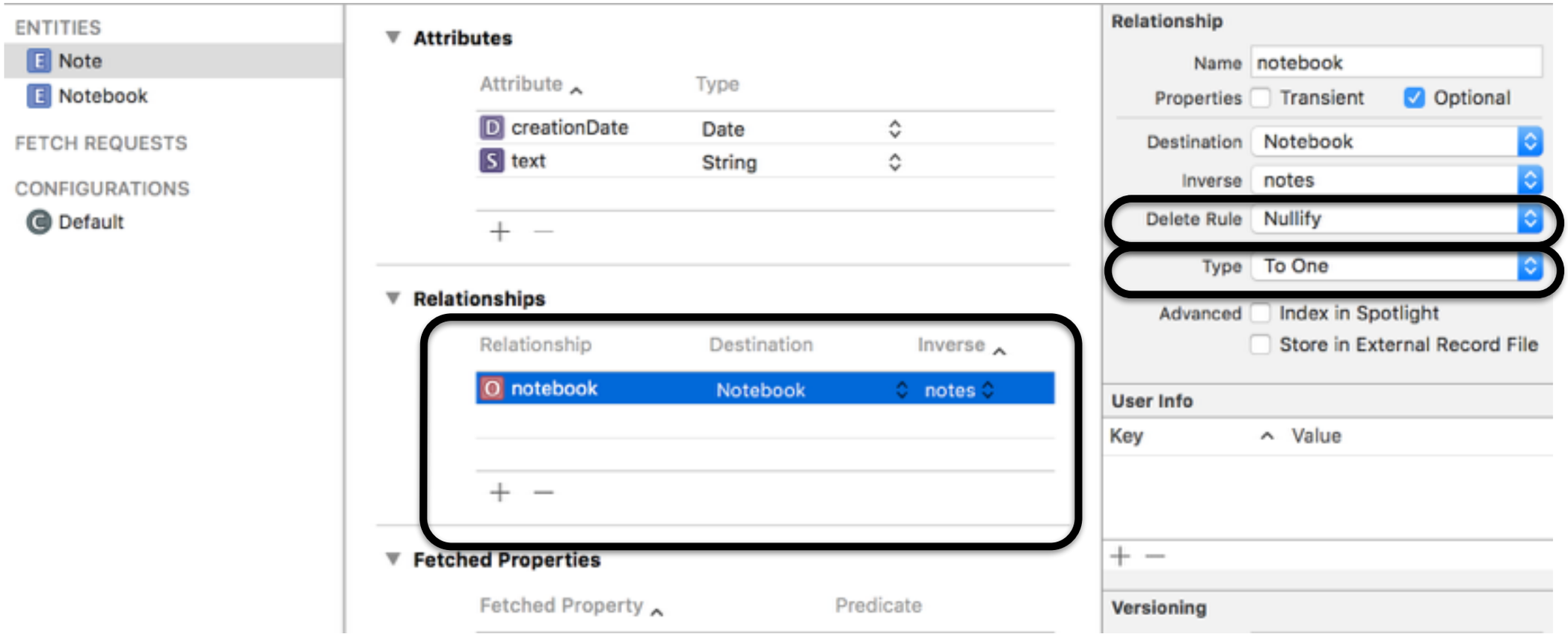
Unbounded, Maximum

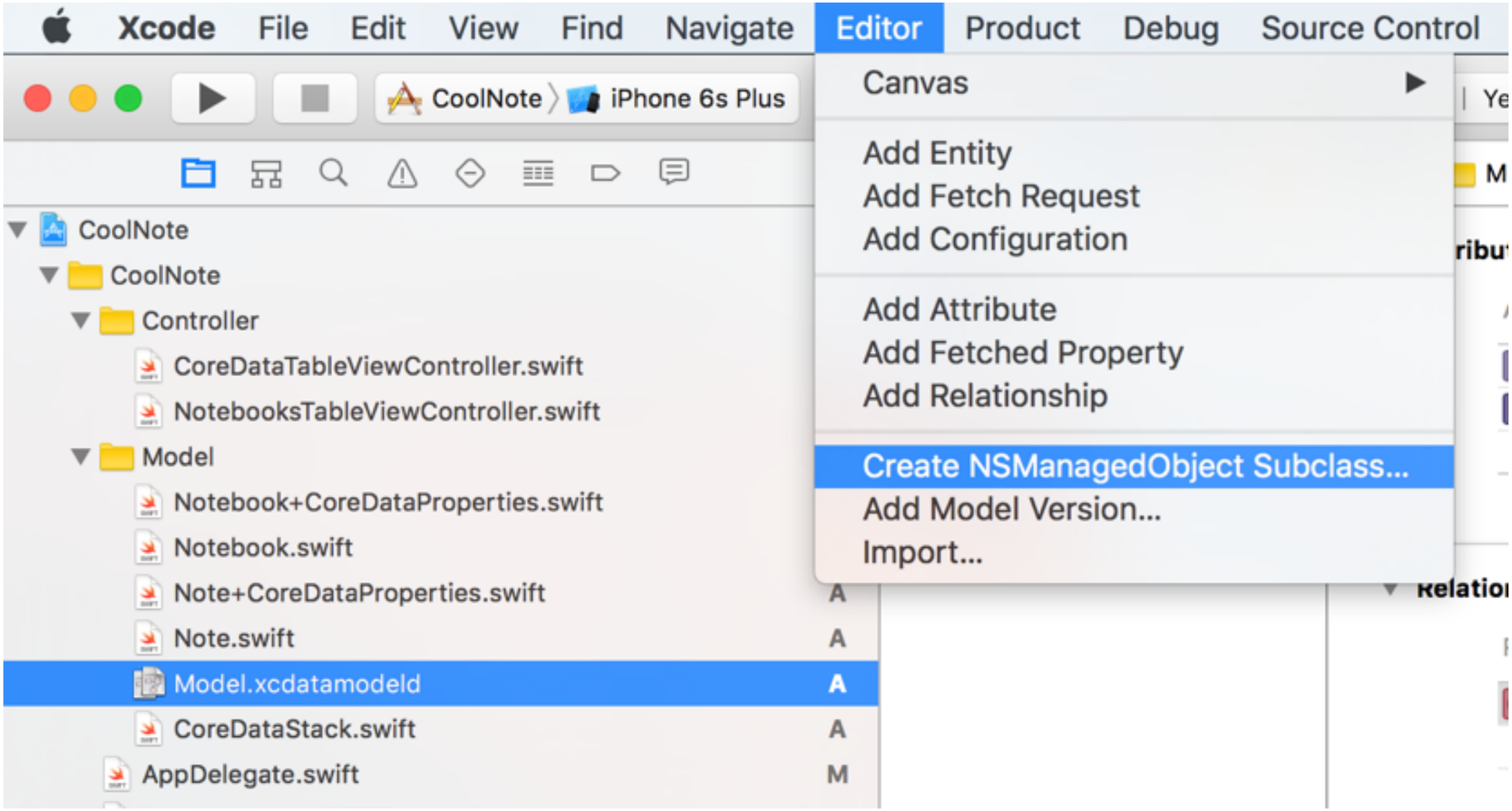
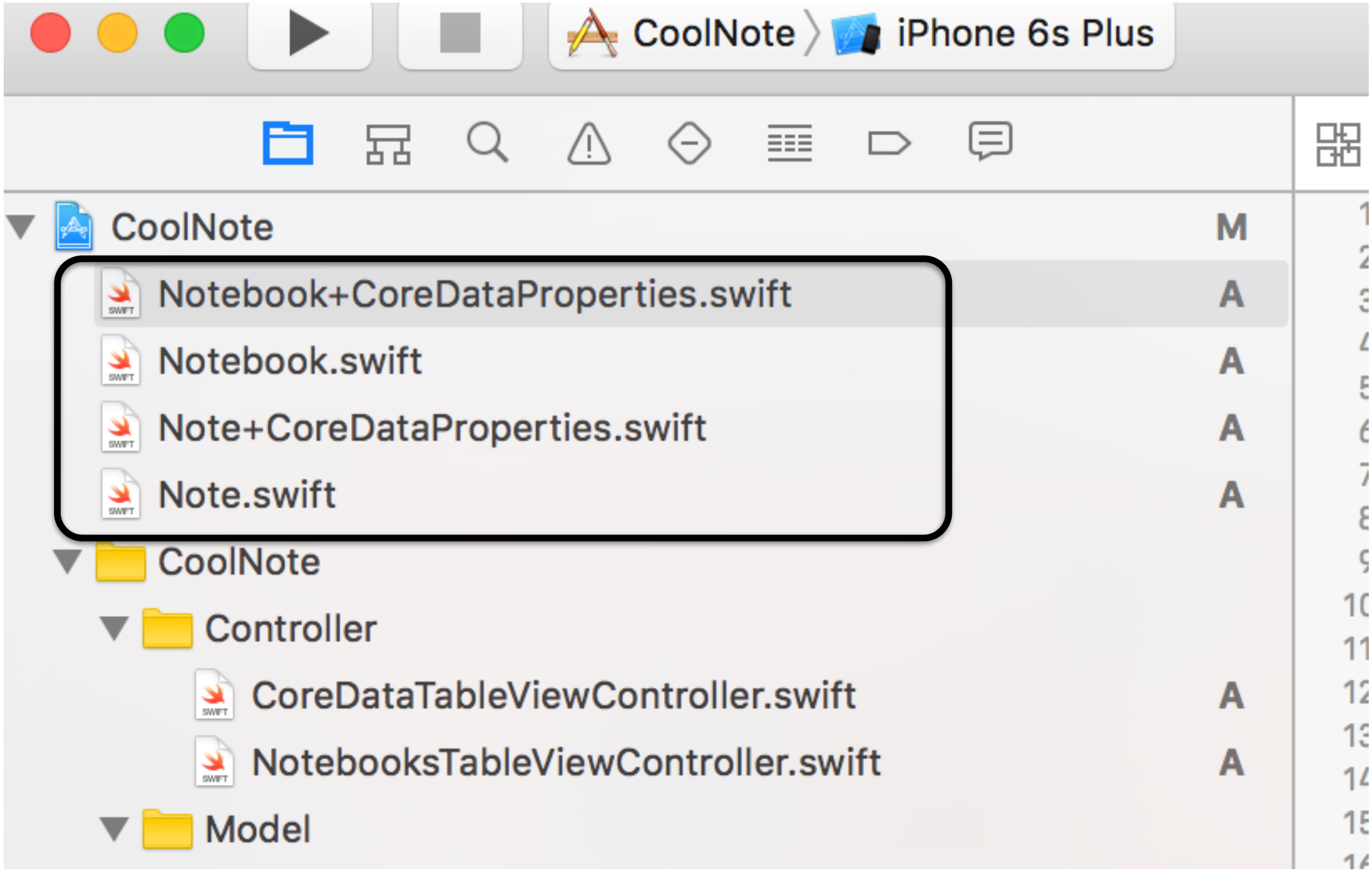
Advanced: Index in Spotlight

Store in External Record File

### User Info

| Key | Value |
| --- | --- |


ENTITIES
Note
Notebook
FETCH REQUESTS
CONFIGURATIONS
Default
Attributes
Attribute
Type
creationDate
Date
text
String
Relationships
Relationship
Destination
Inverse
notebook
Notebook
notes
Fetched Properties
Fetched Property
Predicate
Relationship
Name
notebook
Properties
Transient
Optional
Destination
Notebook
Inverse
notes
Delete Rule
Nullify
Type
To One
Advanced
Index in Spotlight
Store in External Record File
User Info
Key
Value
Versioning


Xcode
File
Edit
View
Find
Navigate
Editor
Product
Debug
Source Control
CoolNote
iPhone 6s Plus
CoolNote
CoolNote
Controller
CoreDataTableViewController.swift
NotebooksTableViewController.swift
Model
Notebook+CoreDataProperties.swift
Notebook.swift
Note+CoreDataProperties.swift A
Note.swift A
Model.xcdatamodeld A
CoreDataStack.swift A
AppDelegate.swift M
Canvas
Add Entity
Add Fetch Request
Add Configuration
Add Attribute
Add Fetched Property
Add Relationship
Create NSManagedObject Subclass...
Add Model Version...
Import...

Files are generated.