

**As usual**, log in with

username: program

password: code1234

Then go to: <http://github.com/zweinz/Karel-iOS>

Download the code.

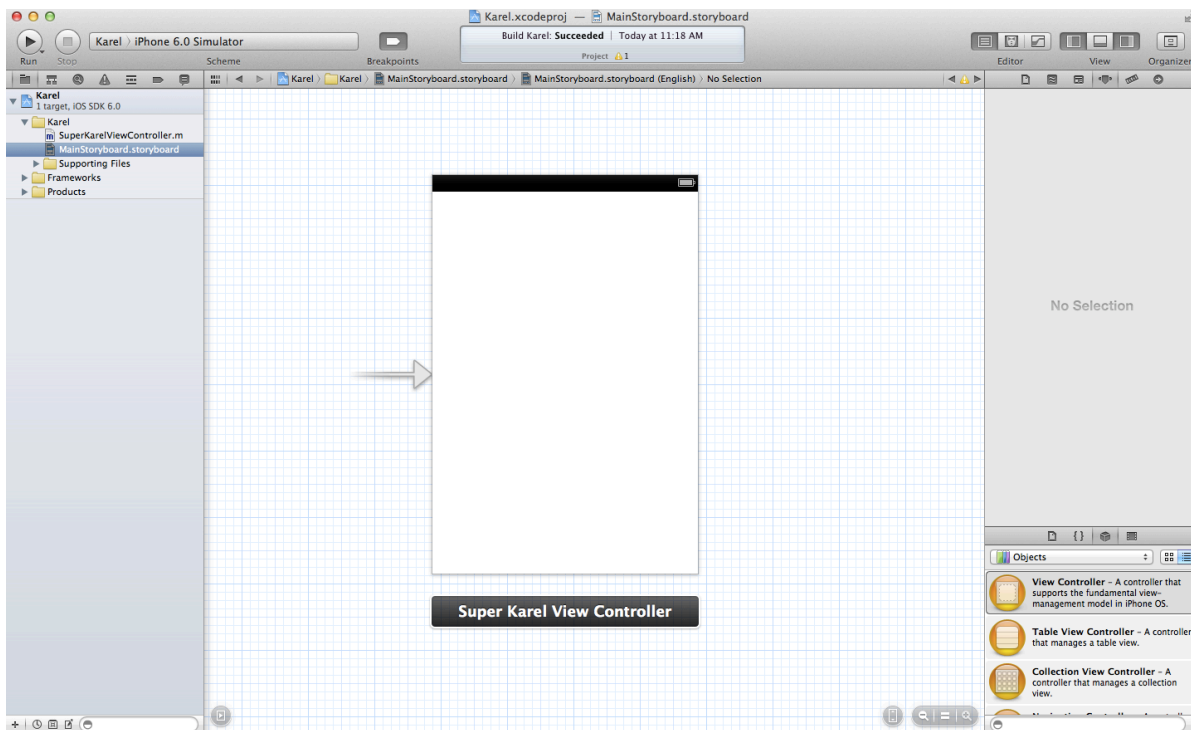
Rename the folder to KarelWeek3.

Open the folder, and double-click on Karel.xcodeproj

\*\*\*\*\* FOLLOW THE INSTRUCTIONS PERFECTLY TODAY! \*\*\*\*\*

Today, we're going to learn how to create buttons.

This time, single click **MainStoryboard.storyboard** in the file panel at the left to open it in the main window. Your XCode should look like this:

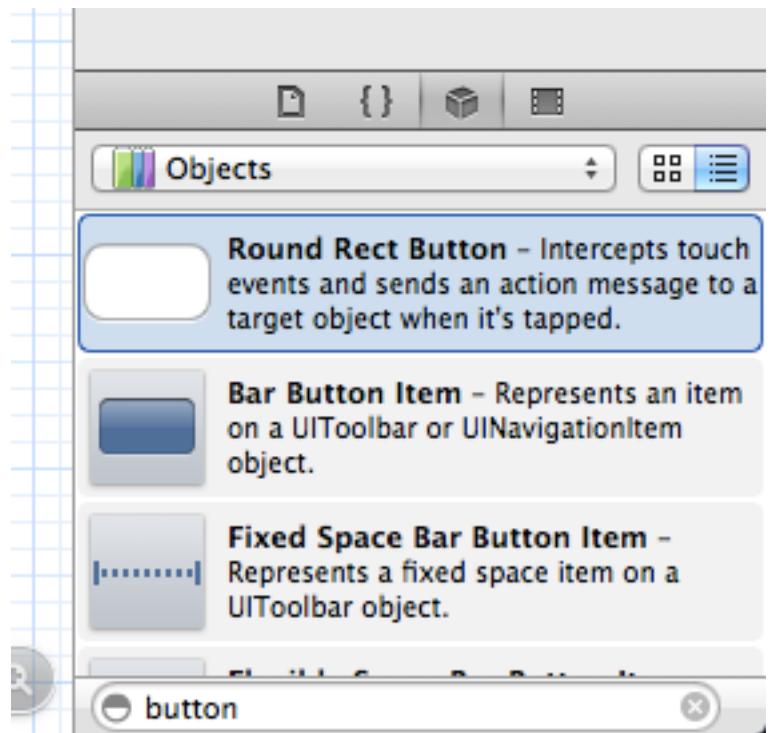


It is important that you see the gray panel on the right. If you do not, make sure the buttons in the top right hand corner look like this:

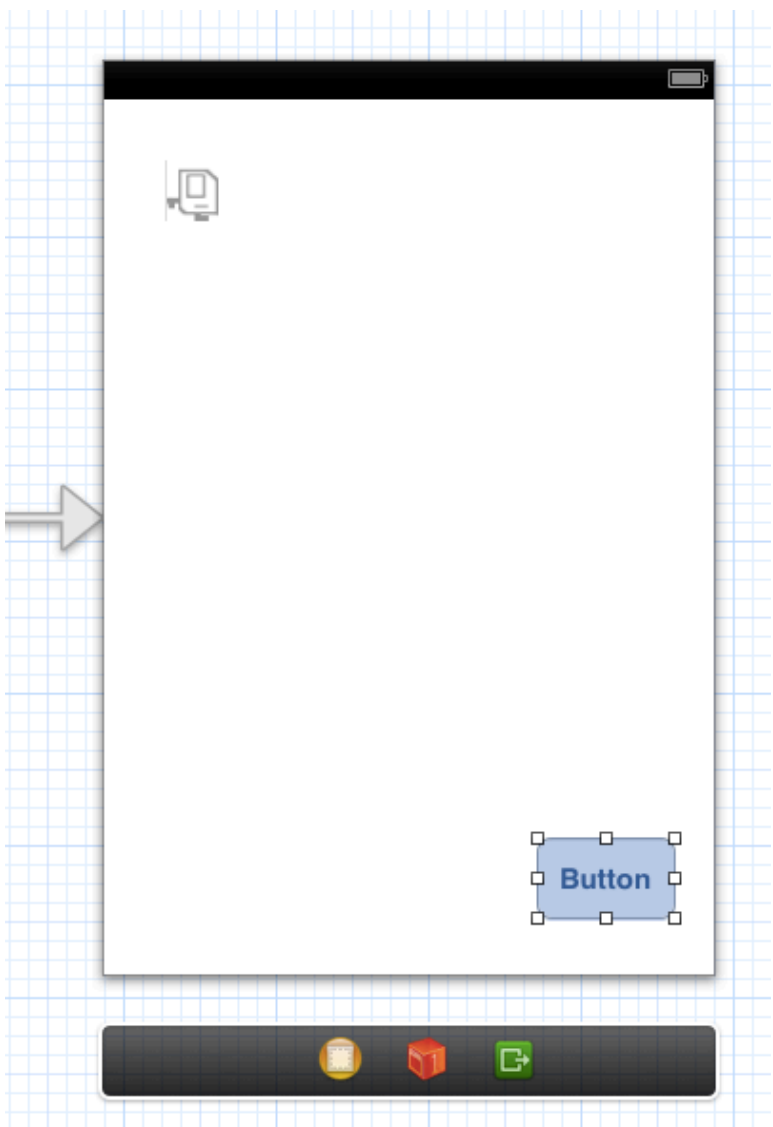


Make sure this button, for the right panel, is pressed down!

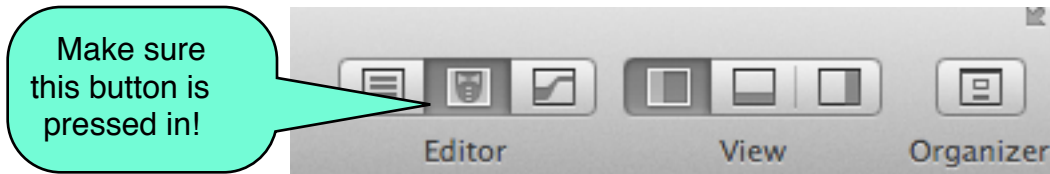
In the bottom right of the window, search for “button” and find the Round Rect Button:



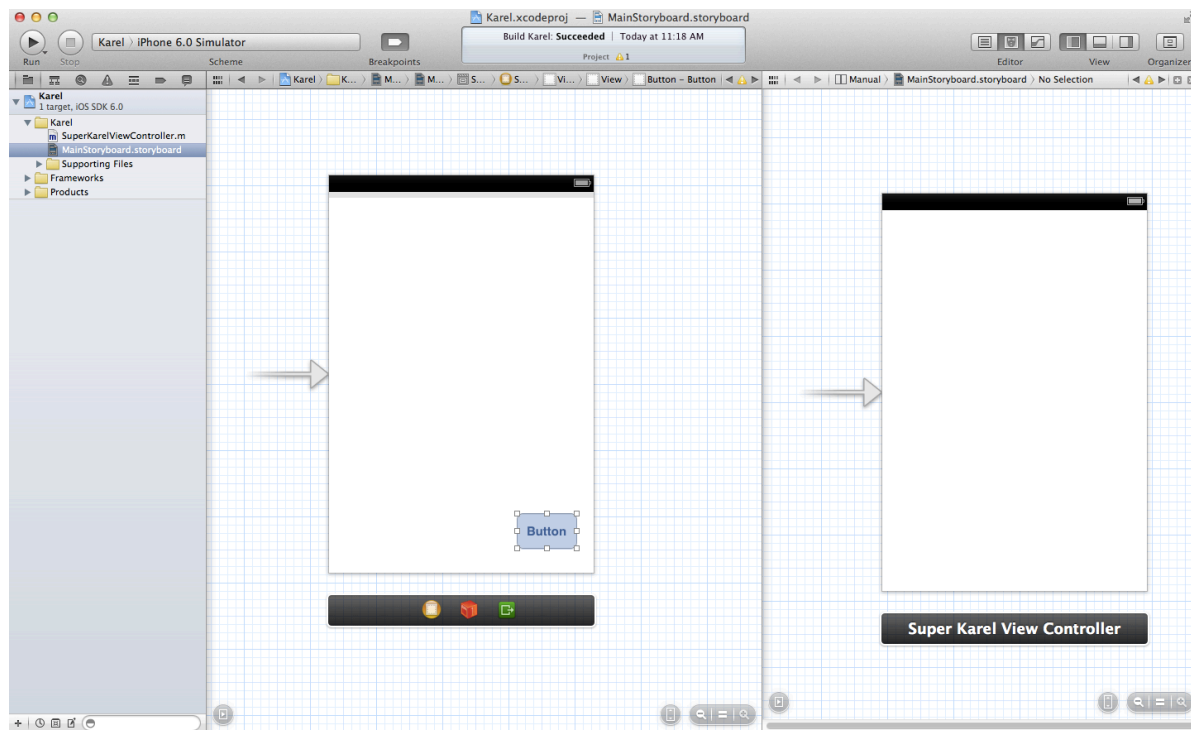
**Drag the Round Rect Button** onto the Storyboard, so it looks like this:



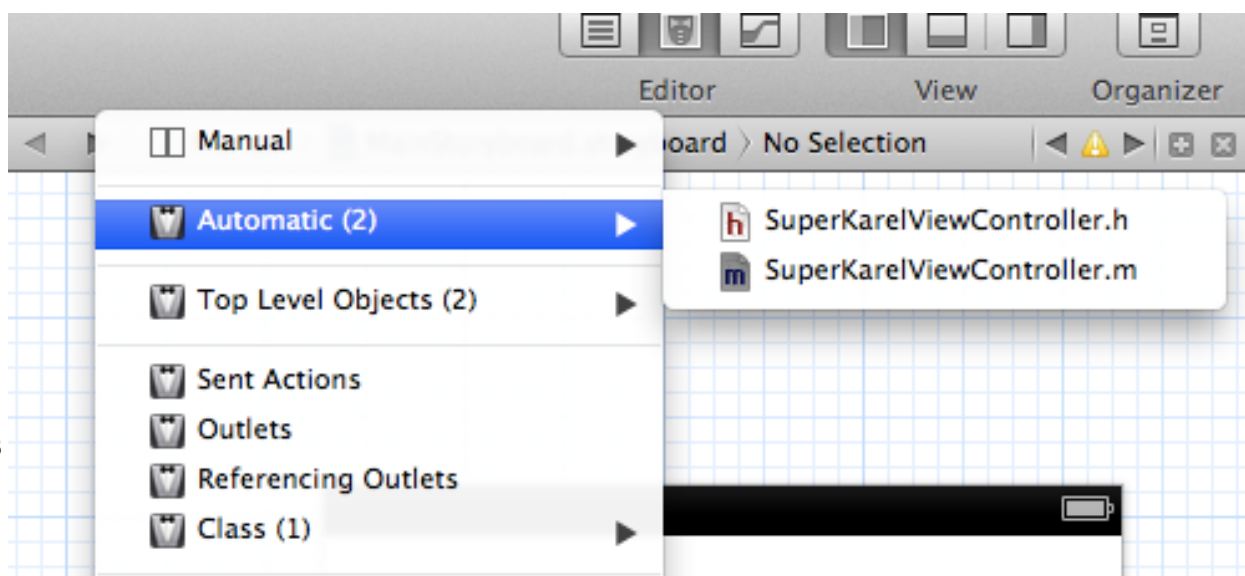
Now comes the fun part. Click the “Butler” button in the editor in the **top right** of the screen, and turn off the right view panel. The buttons should now look like this:



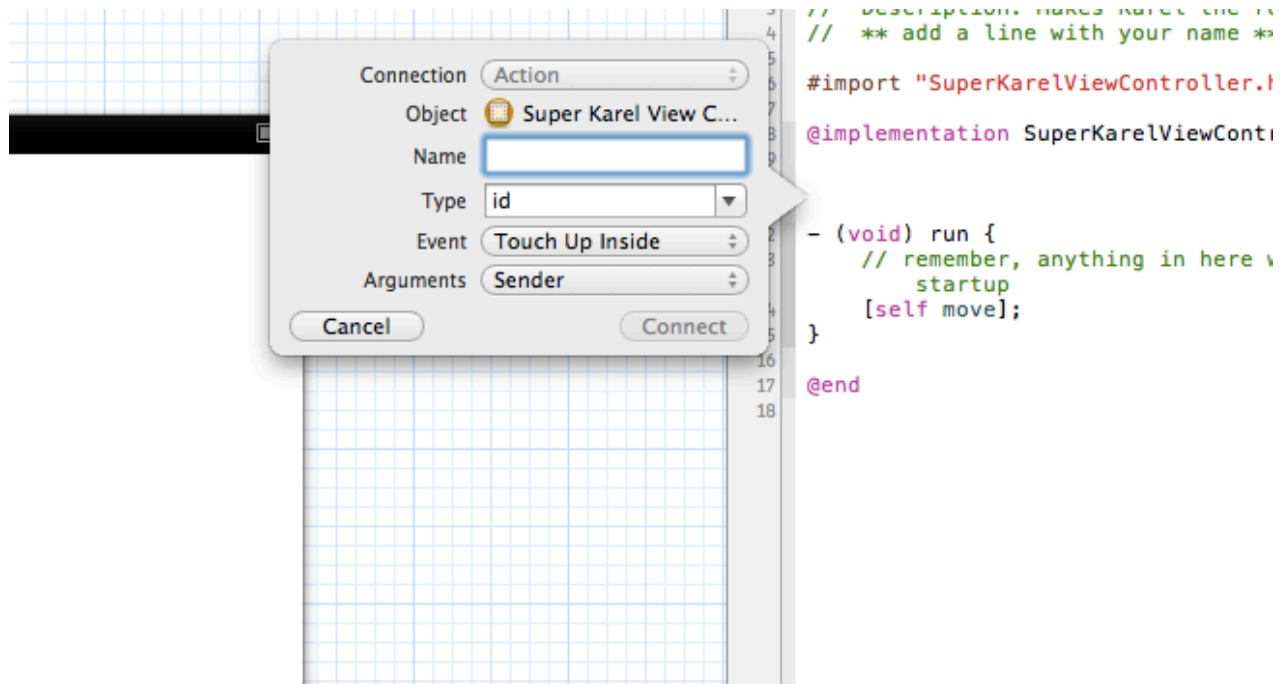
This will give you a **split screen** with two storyboards!



Now open **SuperKarelViewController.m** in the **right** panel by clicking “Manual” above it, then “Automatic”, then “**SuperKarelViewController.m**”. Remember, we want the **.m** file, *not the .h file*, because “m” stands for *implementation*.



**Now, make sure you do this carefully! Hold down the *control* key on the keyboard, and drag the Button on the left to inside the implementation on the right. Then release the mouse:**



This will **define a new method** for what happens when the button is clicked! You will need to do three things.

1. Name the method. Type myButtonPressed (all one word) into the name field.
2. Change the Type from id to UIButton using the arrow, so that the computer knows that this is a Button. Then click Connect.

Your SuperKarelViewController.m file should now look like this:

```
// File name: SuperKarelViewController.m
// Description: Makes Karel the robot do cool things
// ** add a line with your name **

#import "SuperKarelViewController.h"

@implementation SuperKarelViewController

- (IBAction)myButtonPressed:(UIButton *)sender {
}

- (void) run {
    // remember, anything in here will be run automatically on startup
    [self move];
}

@end
```

Now, any code inside of the opening { and the closing } of

```
- (IBAction)myButtonPressed:(UIButton *)sender {  
}
```

will be run whenever that button is pressed.

For instance, if you change it so that it looks like this:

```
- (IBAction)myButtonPressed:(UIButton *)sender {  
    [self move];  
    [self putBeeper];  
    [self turnRight];  
    [self move];  
}
```

Now, if you press Run, every time you press the button, then Karel will move, putDown a Beeper, turnRight, and move again. Try it and see!

If you double-click the button text, you can change what it says, too:



**If you have time, create multiple buttons that do the following:**

- Place an entire row of beepers
- Write a letter of the alphabet
- Draw a heart
- Anything else you can think of!

**As a reminder**, here are some of the methods we wrote last time that may be helpful:

```
- (void) turnLeft {  
    [self turnRight];  
    [self turnRight];  
    [self turnRight];  
}  
  
- (void) moveAndPutBeeper {  
    [self move];  
    [self putBeeper];  
}
```