

# IoT Programming with Basic for iOS



## Walking Around and Installing B4i

October 23, 2017

FRED EADY

# IoT Programming with Basic for iOS

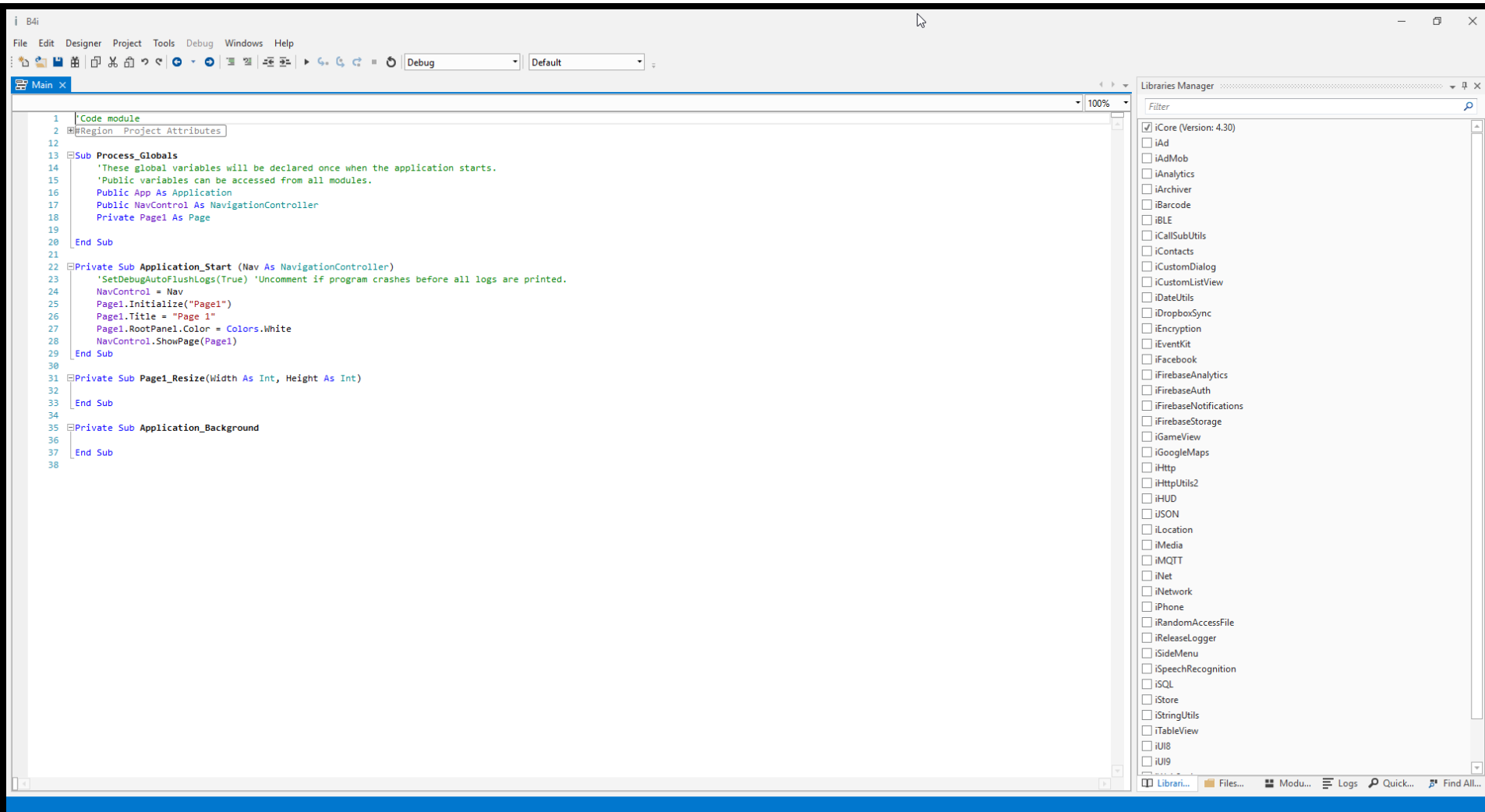
## AGENDA

- **Install B4i**
- **Lay Your Money Down and Take a Byte**
- **Install the B4i Bridge**
- **Day 1's Done**



# IoT Programming with Basic for iOS

## Install B4i - IDE



# IoT Programming with Basic for iOS

## Install B4i – License File

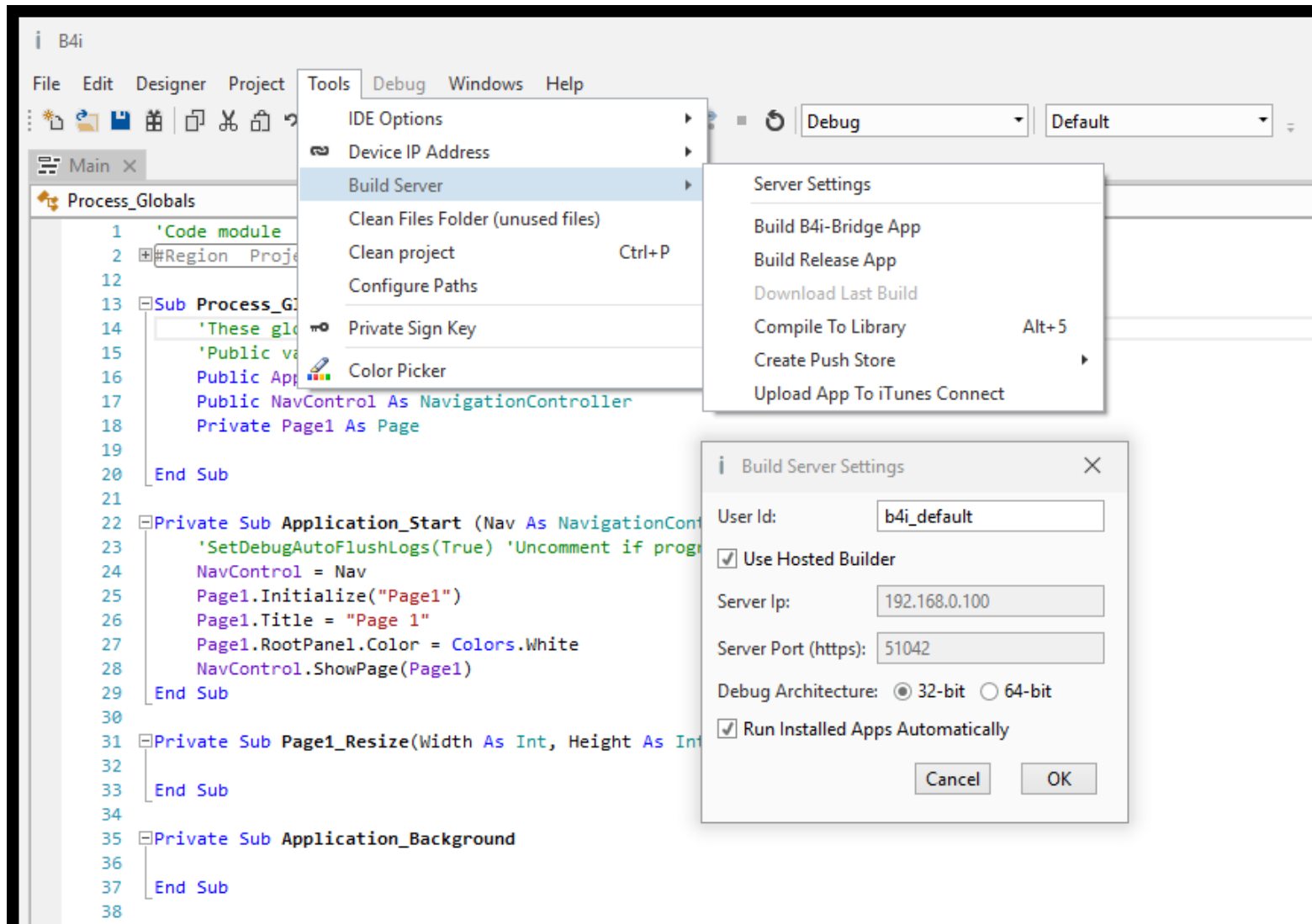
The screenshot shows a Windows File Explorer window titled 'Open' with the address bar set to 'This PC > Documents'. The left sidebar shows 'Quick access' and 'This PC' locations. The main pane displays a list of folders in the 'Documents' directory:

Name	Date modified	Type
Adobe	9/28/2017 12:23 PM	File folder
CCS C Projects	1/14/2017 3:14 PM	File folder
cec-ios	9/28/2017 11:50 AM	File folder
Custom Office Templates	1/17/2017 1:37 PM	File folder
eagle	5/2/2017 3:40 PM	File folder
ExpressPCB	9/5/2017 3:14 PM	File folder
LabVIEW Data	8/24/2017 7:58 PM	File folder
MCSX	9/11/2017 12:01 PM	File folder
nRF5_SDK_12.2.0_f012efa	1/19/2017 2:37 PM	File folder
nv-k40dstick	9/21/2017 2:27 PM	File folder
nv-pw1	2/9/2017 2:42 PM	File folder
Outlook Files	9/28/2017 12:34 PM	File folder
PBP3	9/4/2017 1:03 PM	File folder

A 'B4i Registration' dialog box is overlaid on the window. It contains the following text: 'Please enter the email address used when purchasing B4i: (Contact support@basic4ppc.com if you require any assistance.)'. The text input field contains 'fred@edtp.com'. There are 'Ok' and 'Cancel' buttons. Below the dialog box, the 'File name' field in the File Explorer shows 'B4i-License.txt' and the file type is set to 'B4i License File (B4i-License.txt)'. The 'Open' button is highlighted in blue.

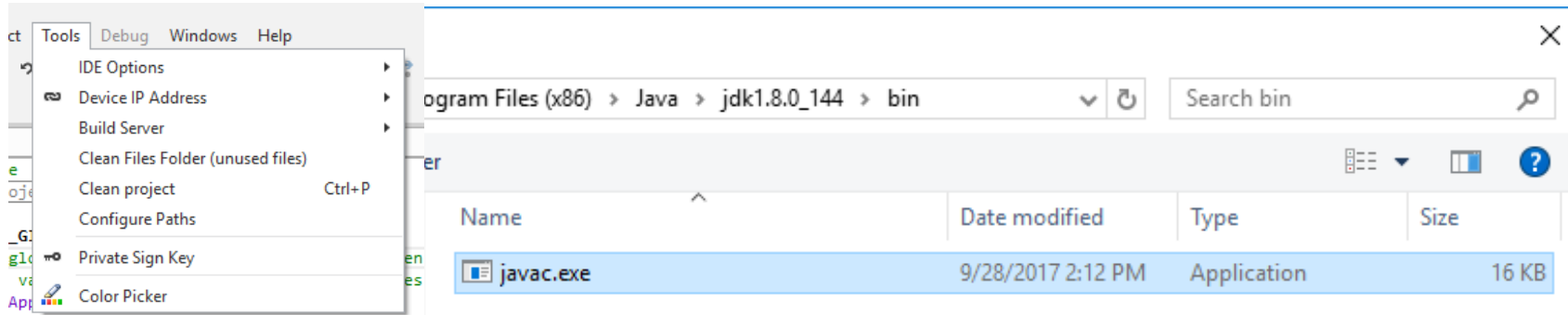
# IoT Programming with Basic for iOS

## Install B4i – Hosted Mac Builder



# IoT Programming with Basic for iOS

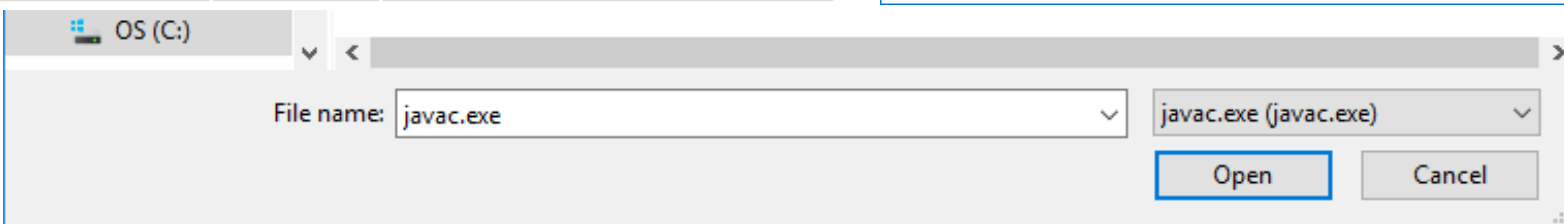
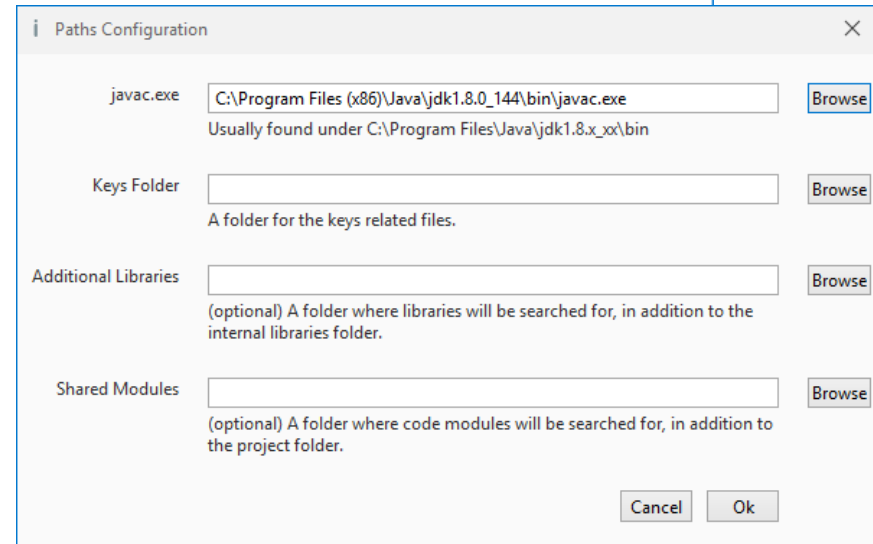
## Install B4i – Configure Paths in the IDE



### Java SE Development Kit 8u144

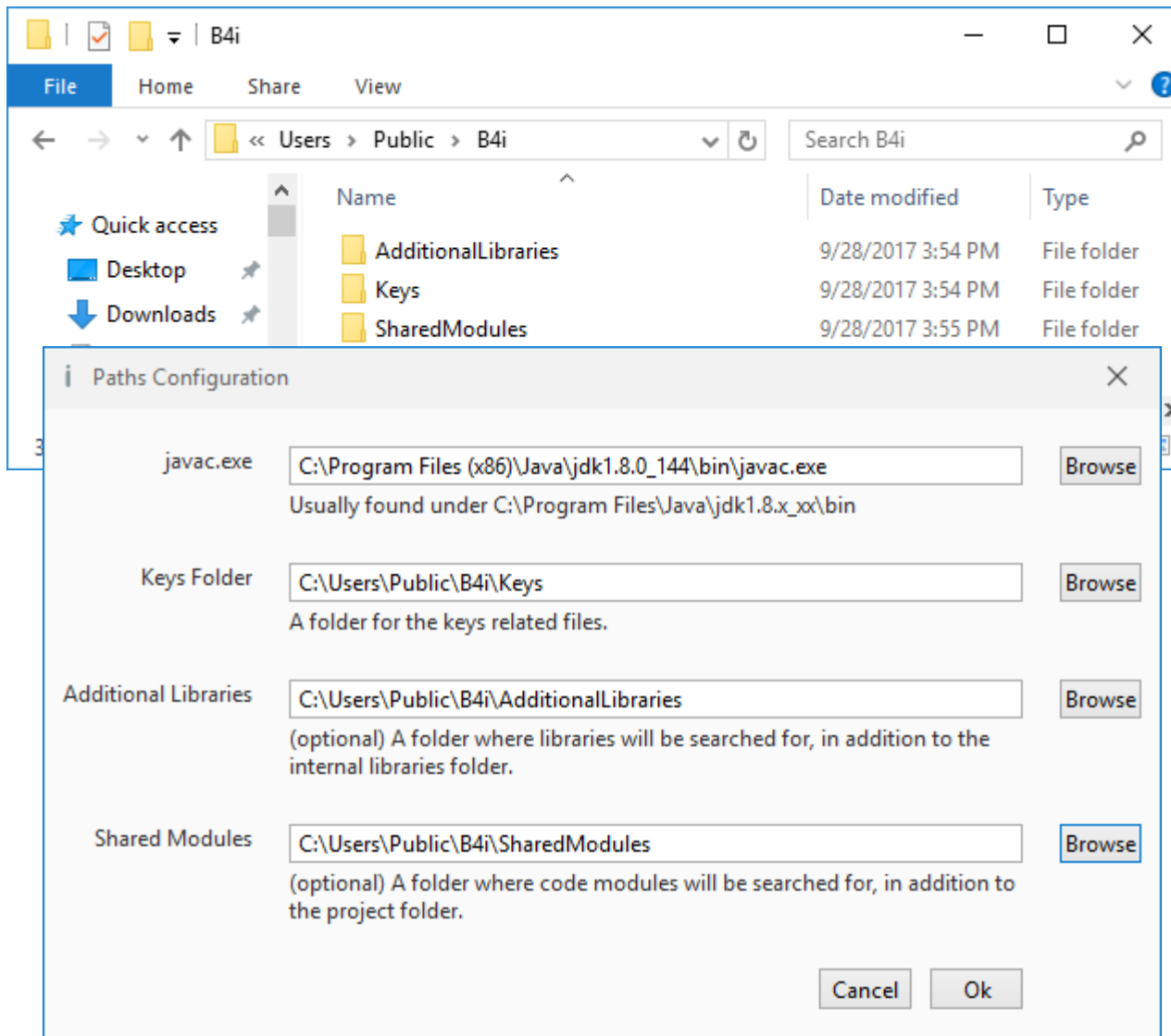
You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.  
Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.

Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	77.89 MB	<a href="#">jdk-8u144-linux-arm32-vfp-hflt.tar.gz</a>
Linux ARM 64 Hard Float ABI	74.83 MB	<a href="#">jdk-8u144-linux-arm64-vfp-hflt.tar.gz</a>
Linux x86	164.65 MB	<a href="#">jdk-8u144-linux-i586.rpm</a>
Linux x86	179.44 MB	<a href="#">jdk-8u144-linux-i586.tar.gz</a>
Linux x64	162.1 MB	<a href="#">jdk-8u144-linux-x64.rpm</a>
Linux x64	176.92 MB	<a href="#">jdk-8u144-linux-x64.tar.gz</a>
Mac OS X	226.6 MB	<a href="#">jdk-8u144-macosx-x64.dmg</a>
Solaris SPARC 64-bit	139.87 MB	<a href="#">jdk-8u144-solaris-sparcv9.tar.Z</a>
Solaris SPARC 64-bit	99.18 MB	<a href="#">jdk-8u144-solaris-sparcv9.tar.gz</a>
Solaris x64	140.51 MB	<a href="#">jdk-8u144-solaris-x64.tar.Z</a>
Solaris x64	96.99 MB	<a href="#">jdk-8u144-solaris-x64.tar.gz</a>
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Windows x64	197.78 MB	<a href="#">jdk-8u144-windows-x64.exe</a>



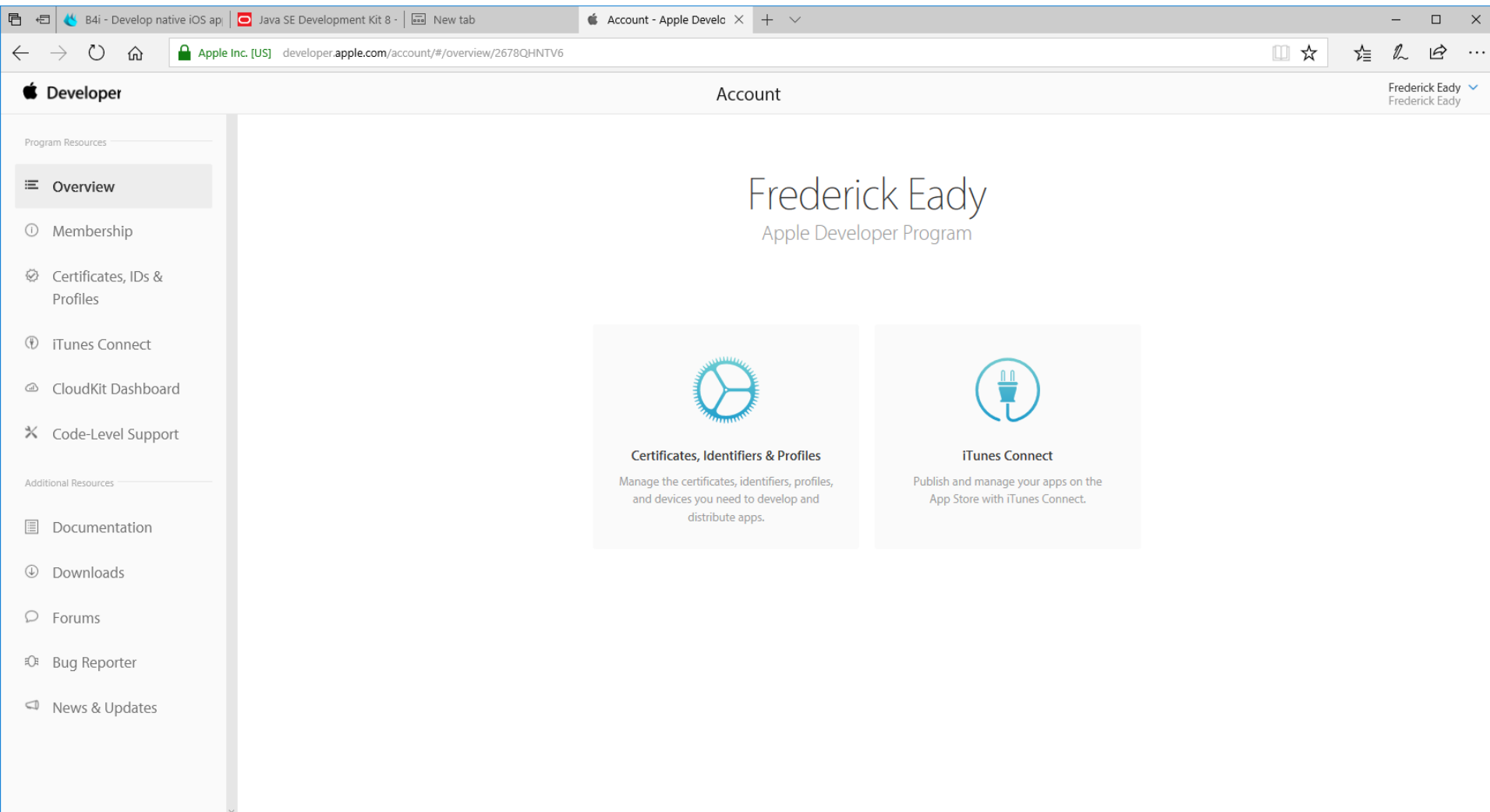
# IoT Programming with Basic for iOS

## Install B4i – Configure Paths in the IDE



# IoT Programming with Basic for iOS

## Lay Your Money Down and Take a Byte

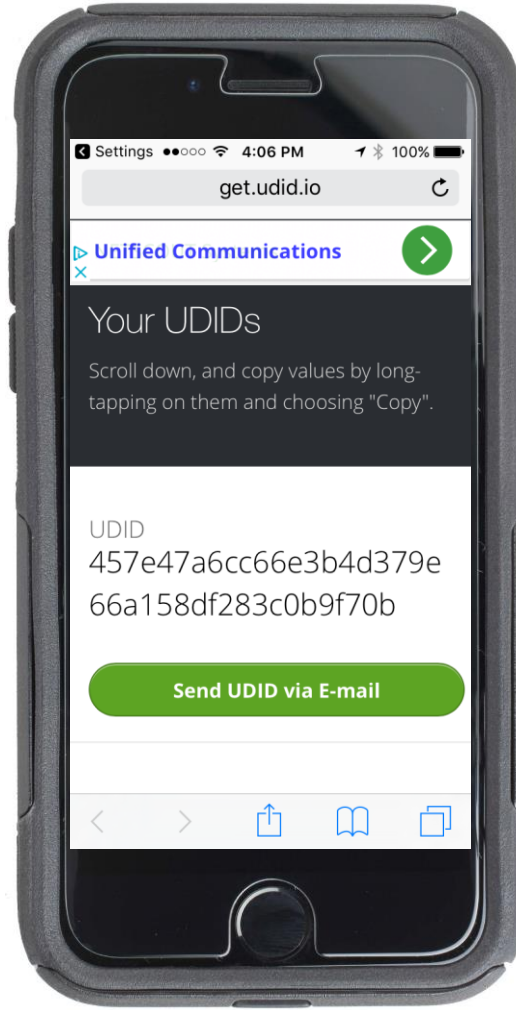




# IoT Programming with Basic for iOS

## Lay Your Money Down and Take a Byte

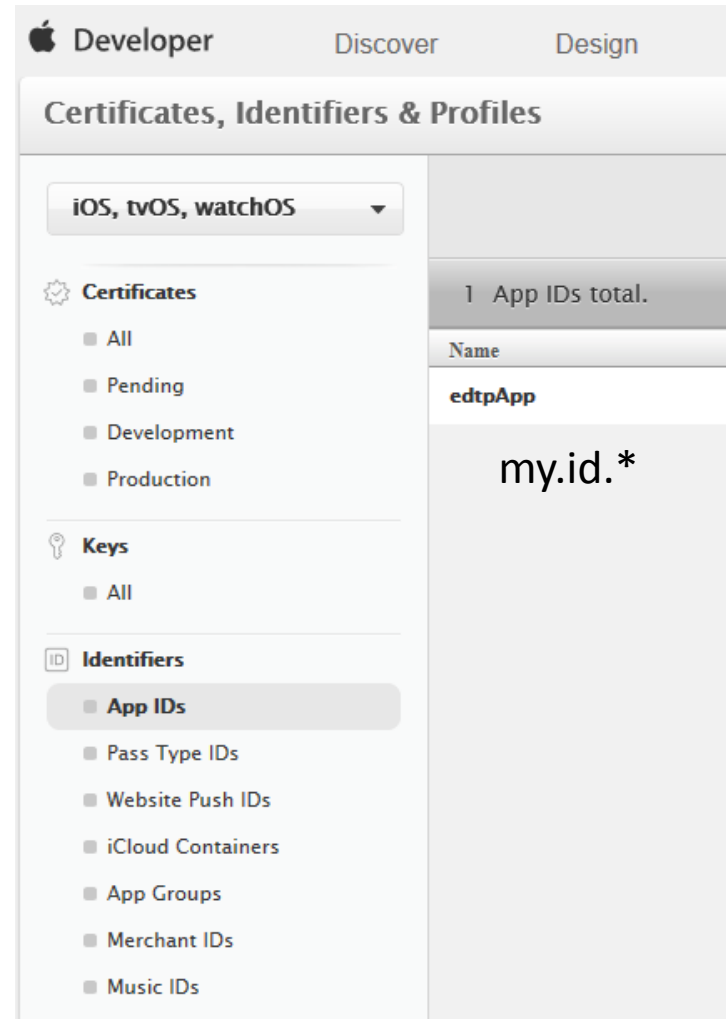
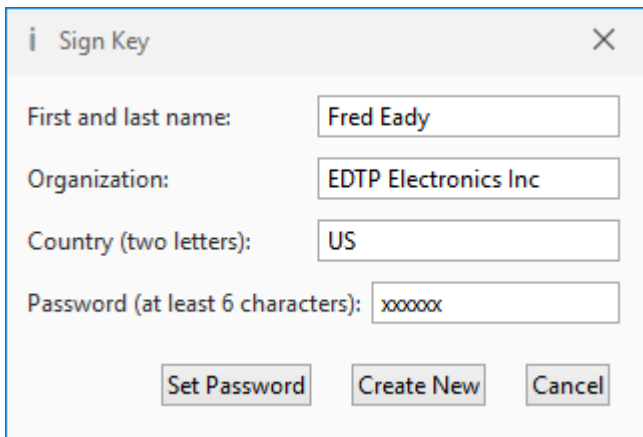
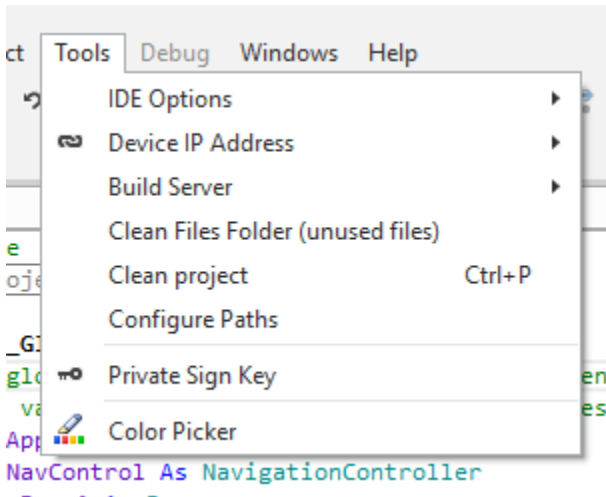
### Obtaining the Device UDID



# IoT Programming with Basic for iOS

## Lay Your Money Down and Take a Byte

### Create Key and App ID



# IoT Programming with Basic for iOS

## Lay Your Money Down and Take a Byte

### Add My Device

Developer Discover Design Develop Distribute Support Account

Certificates, Identifiers & Profiles Frederick Eady

iOS, tvOS, watchOS iPhone + [edit] [search]

You can register 99 additional devices.

**Reset your device list before adding any new devices.** [Get Started](#)

Name	Identifier
frediphone	457e47a6cc66e3b4d379e66a158df283c0b9f70b

**Certificates**

- All
- Pending
- Development
- Production

**Keys**

- All

**Identifiers**

- App IDs
- Pass Type IDs
- Website Push IDs
- iCloud Containers
- App Groups
- Merchant IDs
- Music IDs

**Devices**

- All
- Apple TV
- Apple Watch
- iPad
- iPhone**

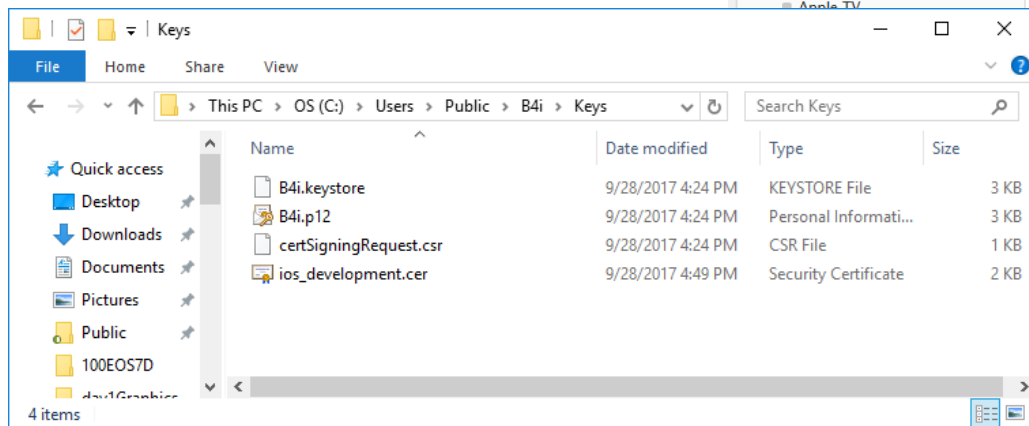
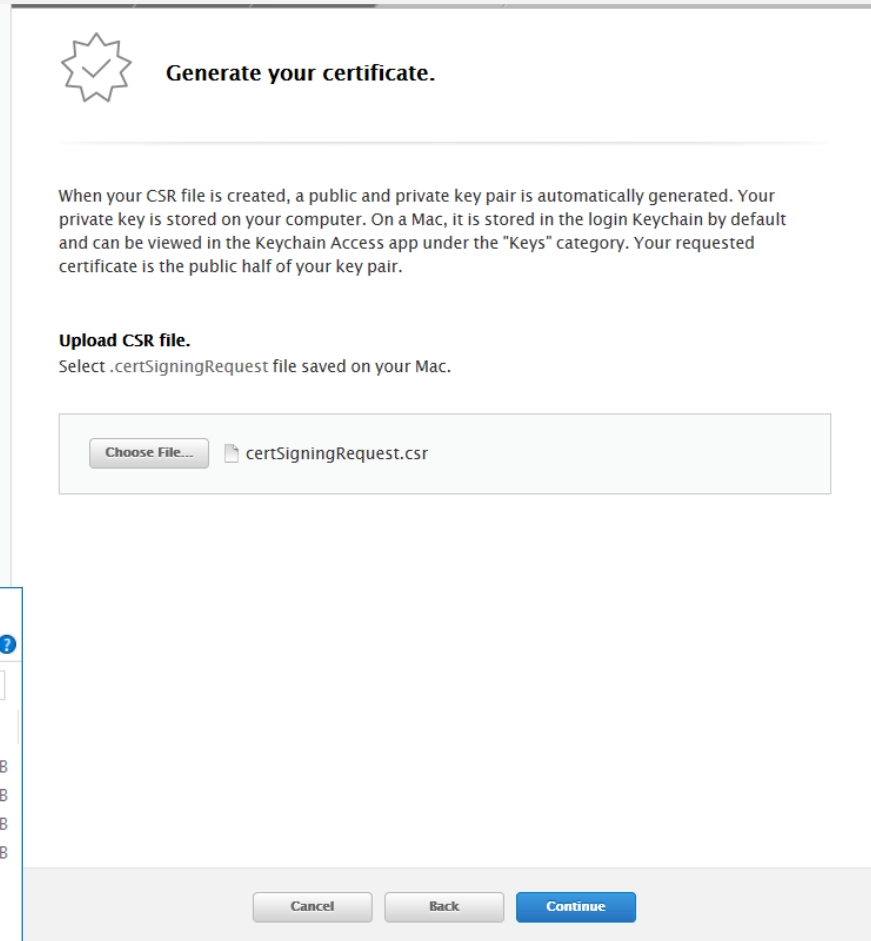
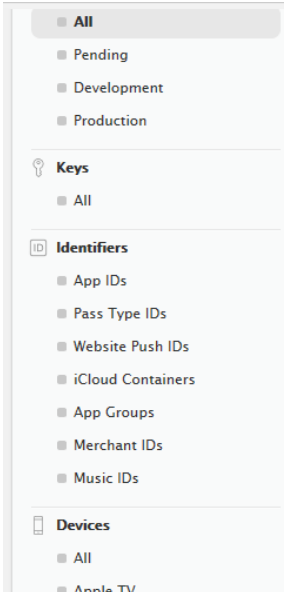


# IoT Programming with Basic for iOS

## Lay Your Money Down and Take a Byte

### Get a Development Certificate

- Select **App ID**
- Select **Type of Certificate**

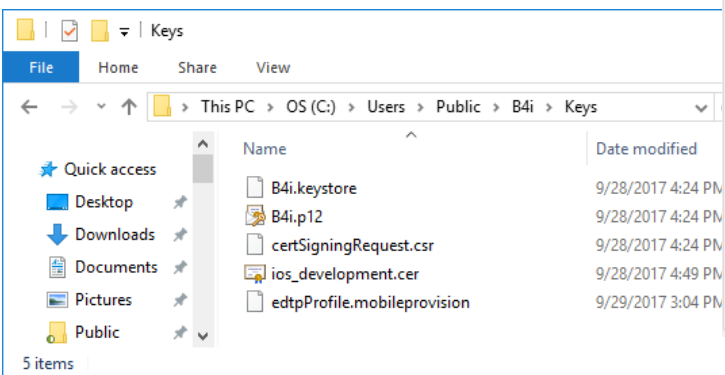
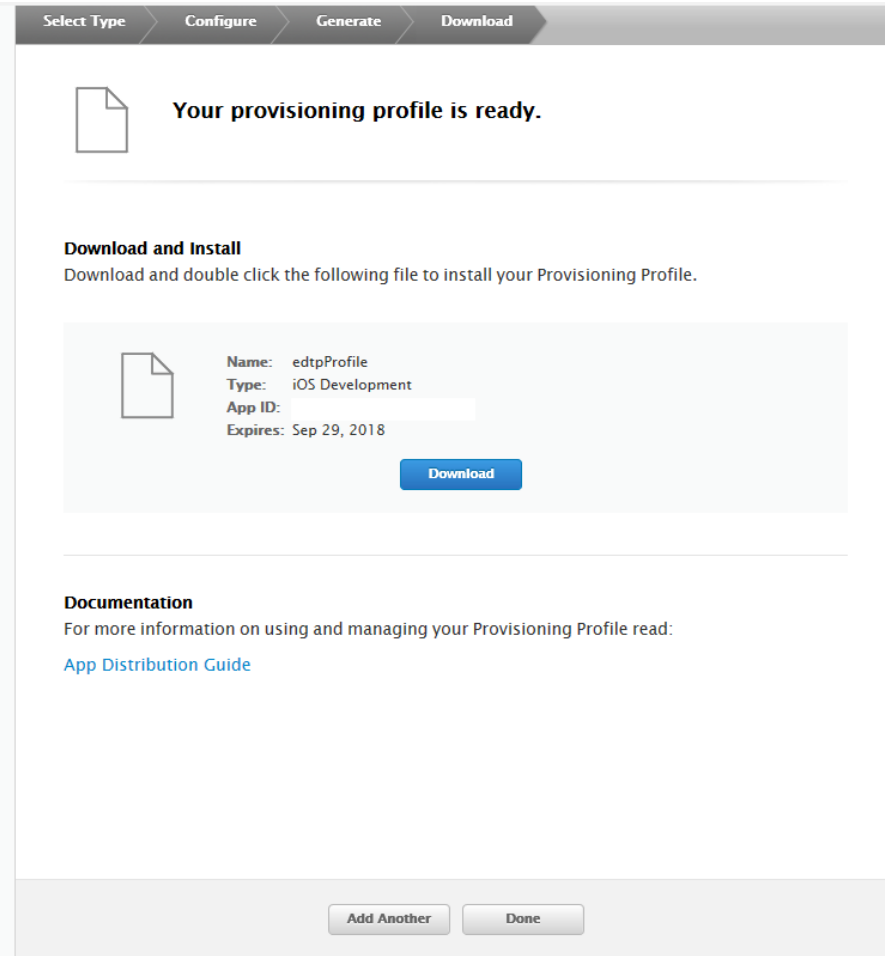
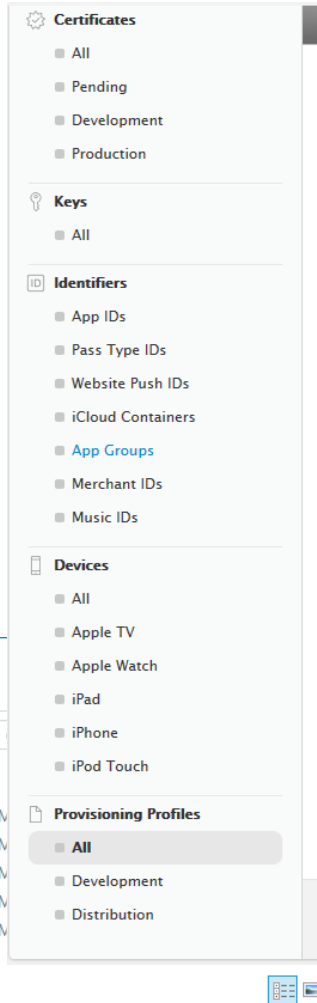


# IoT Programming with Basic for iOS

## Lay Your Money Down and Take a Byte

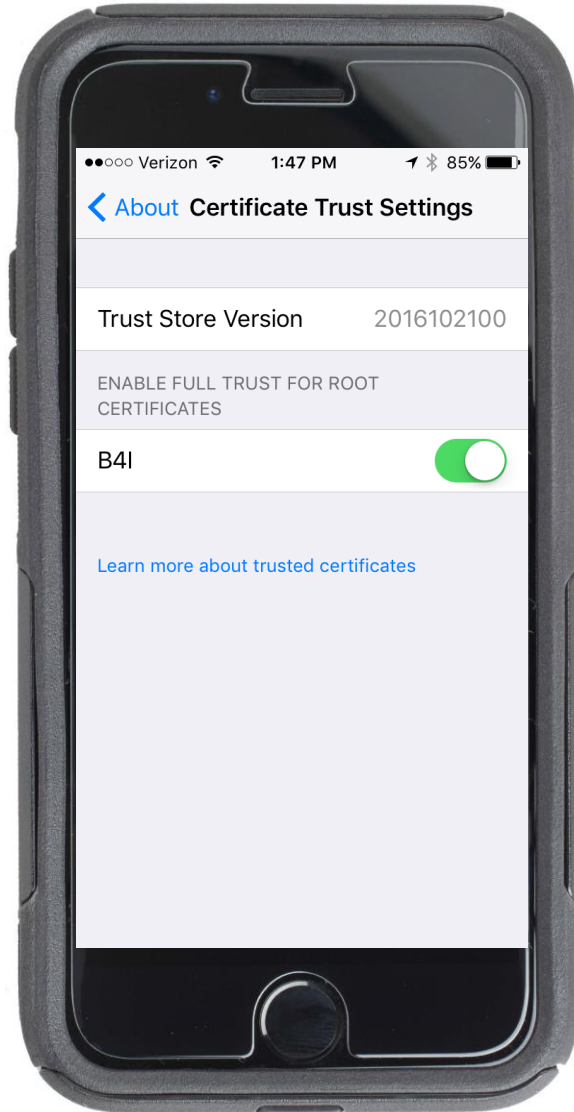
### Establish a Provisioning Profile

- Select **App ID**
- Select **Certificates**
- Select **Devices**



# IoT Programming with Basic for iOS

## Install the B4i Bridge



# IoT Programming with Basic for iOS

## Install the B4i Bridge – Define Configuration

The screenshot shows the B4i IDE interface. The main window displays a code editor with the following code:

```
1 'Code
2 #Region
12
13 Sub Pr
14 'T
15 'P
16 Public App As Application
17 Public NavControl As Navigation
18 Private Page1 As Page
19
20 End Sub
21
22 Private Sub Application_Start (Nav
23 'SetDebugAutoFlushLogs(True) 'U
24 NavControl = Nav
25 Page1.Initialize("Page1")
26 Page1.Title = "IoT Programming
27 Page1.RootPanel.Color = Colors.
28 NavControl.ShowPage(Page1)
29 End Sub
30
31 Private Sub Page1_Resize(Width As I
32
33 End Sub
34
35 Private Sub Application_Background
36
37 End Sub
38
```

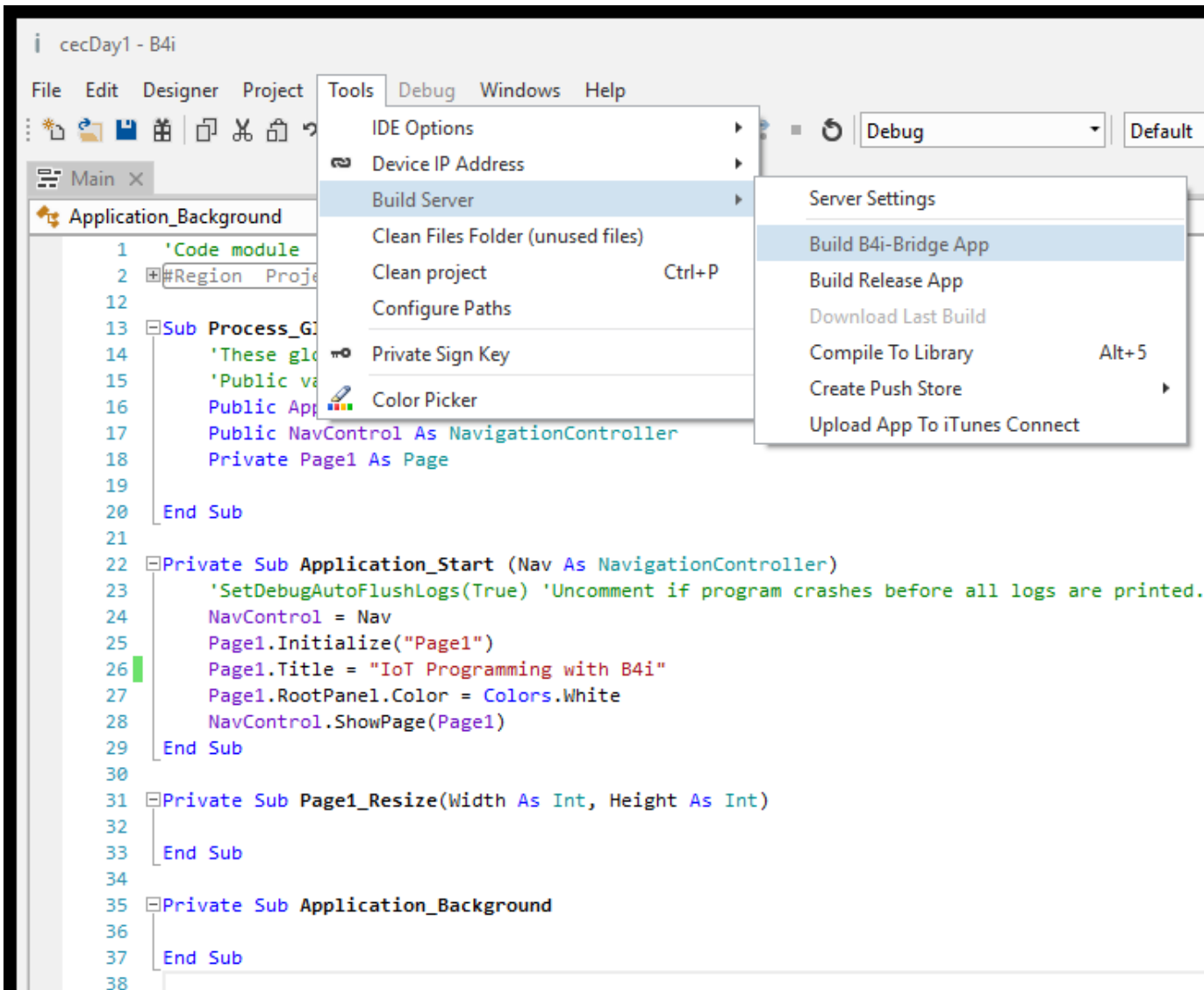
The 'Build Configurations' dialog box is open, showing the following configuration details:

- Configuration: Default
- Configuration Name: Default
- Package: my.id.cecDay1
- Conditional Symbols: (empty)

Buttons: Create New, Delete, Cancel, OK

# IoT Programming with Basic for iOS

## Install the B4i Bridge – **Build the Bridge**



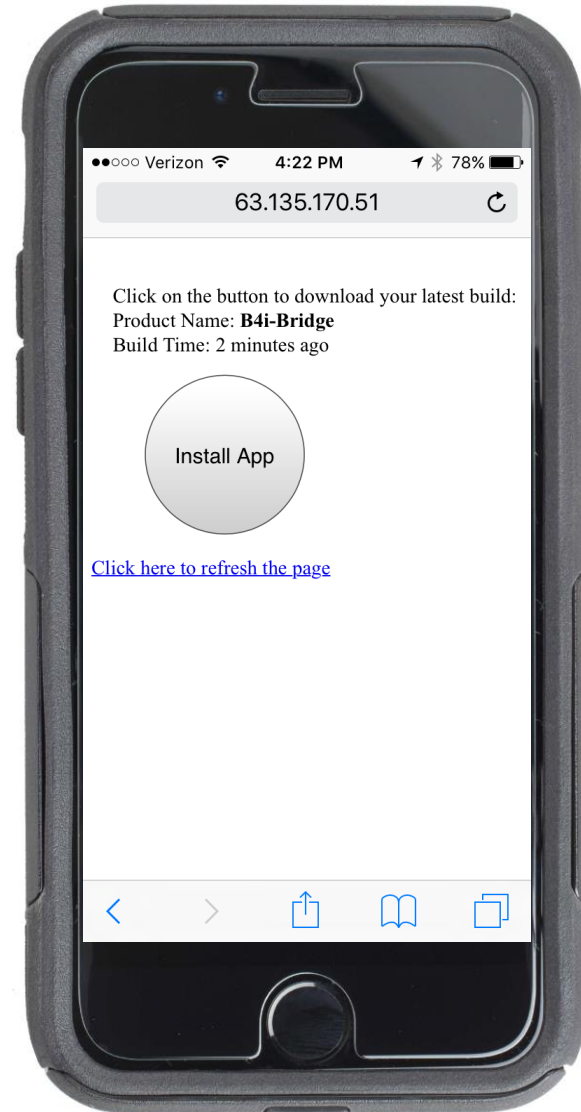
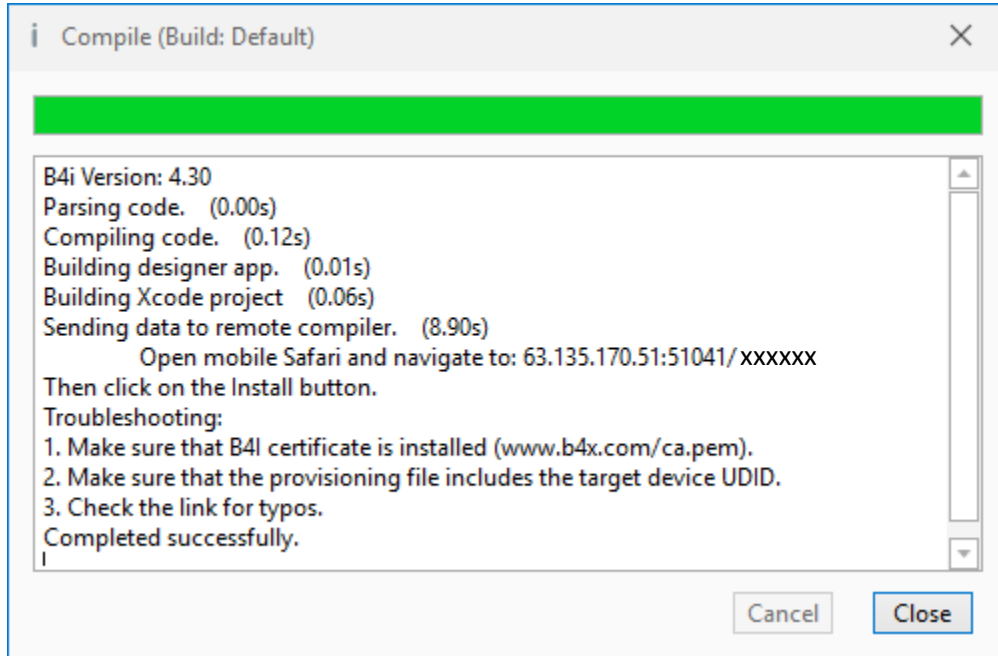
The screenshot shows the Basic IDE interface for a project named 'cecDay1 - B4i'. The 'Tools' menu is open, and the 'Build B4i-Bridge App' option is highlighted. The code editor shows the following code:

```
1 'Code module
2 #Region Project
12
13 Sub Process_G
14 'These glo
15 'Public va
16 Public App
17 Public NavControl As NavigationController
18 Private Page1 As Page
19
20 End Sub
21
22 Private Sub Application_Start (Nav As NavigationController)
23 'SetDebugAutoFlushLogs(True) 'Uncomment if program crashes before all logs are printed.
24 NavControl = Nav
25 Page1.Initialize("Page1")
26 Page1.Title = "IoT Programming with B4i"
27 Page1.RootPanel.Color = Colors.White
28 NavControl.ShowPage(Page1)
29 End Sub
30
31 Private Sub Page1_Resize(Width As Int, Height As Int)
32
33 End Sub
34
35 Private Sub Application_Background
36
37 End Sub
38
```



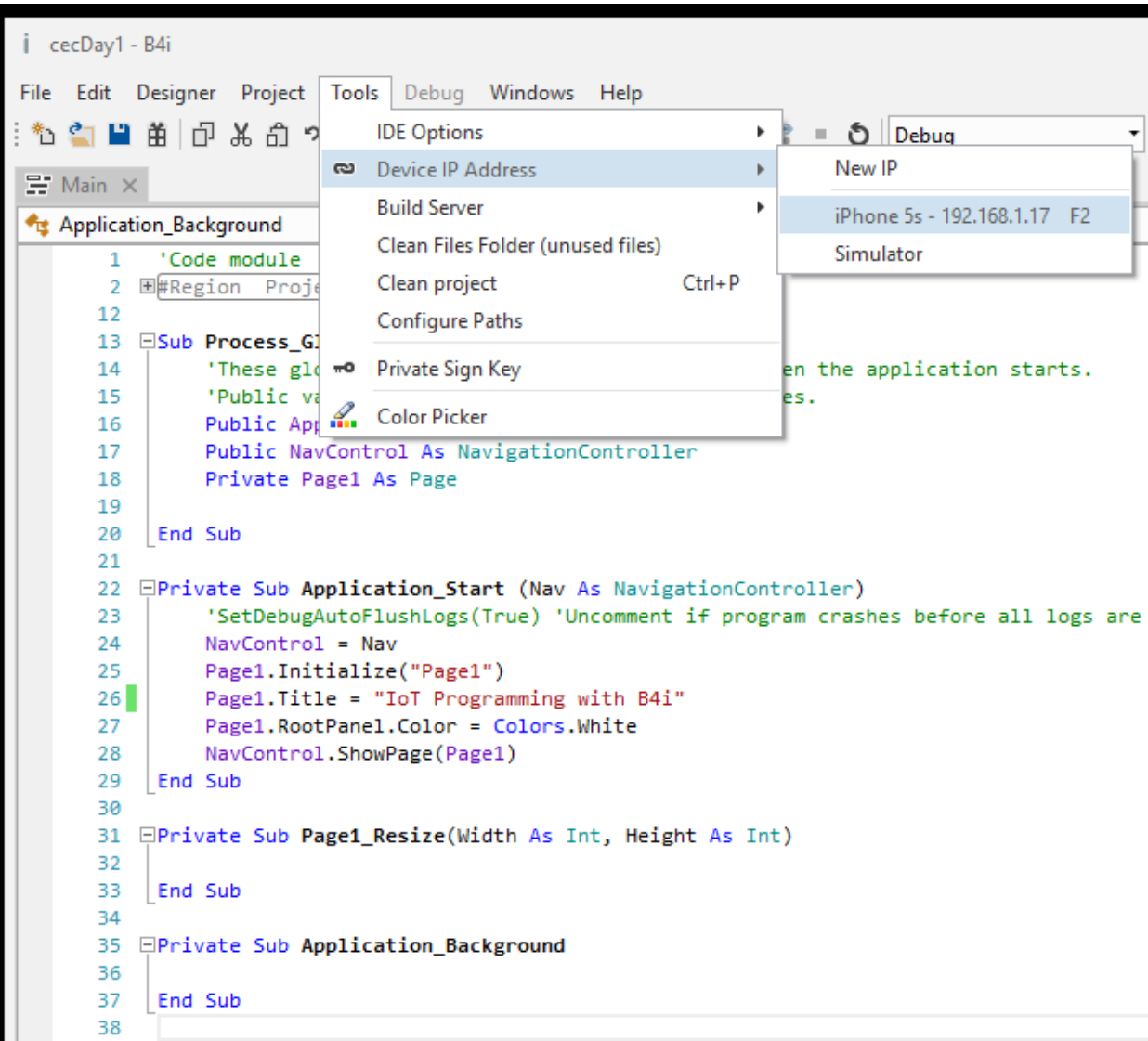
# IoT Programming with Basic for iOS

## Install the B4i Bridge – **Install App**



# IoT Programming with Basic for iOS

## Install the B4i Bridge – **Connect and Debug**



```
cecDay1 - B4i
File Edit Designer Project Tools Debug Windows Help
IDE Options
Device IP Address
Build Server
Clean Files Folder (unused files)
Clean project
Configure Paths
Private Sign Key
Color Picker
Debug
New IP
iPhone 5s - 192.168.1.17 F2
Simulator

Application_Background
1 'Code module
2 #Region Project
12
13 Sub Process_G
14 'These glo
15 'Public va
16 Public App
17 Public NavControl As NavigationController
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37 End Sub
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```



# IoT Programming with Basic for iOS

## Install the B4i Bridge – Run as Red

```
cecDay1 - B4i
File Edit Designer Project Tools Debug Windows Help
Main X
Application_Start
1 'Code module
2 #Region Project Attributes
12
13 Sub Process_Globals
14 'These global variables will be declared once when the application starts.
15 'Public variables can be accessed from all modules.
16 Public App As Application
17 Public NavControl As NavigationController
18 Private Page1 As Page
19
20 End Sub
21
22 Private Sub Application_Start (Nav As NavigationController)
23 'SetDebugAutoFlushLogs(True) 'Uncomment if program crashes before all logs are printed.
24 NavControl = Nav
25 Page1.Initialize("Page1")
26 Page1.Title = "IoT Programming with B4i"
27 Page1.RootPanel.Color = Colors.Red
28 NavControl.ShowPage(Page1)
29 End Sub
30
31 Private Sub Page1_Resize(Width As Int, Height As Int)
32
33 End Sub
34
35 Private Sub Application_Background
36
37 End Sub
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```



# IoT Programming with Basic for iOS

## Day 1's Done

- We Installed B4i on a Windows-based Personal Computer
- We Took a Big Byte of the Apple
- We Built a Bridge
- We Successfully Used Our Bridge to Verify Our New B4i System

```
cecDay1 - B4i
File Edit Designer Project Tools Debug Windows Help
Main x
Application_Start
1 'Code module
2 #Region Project Attributes
12
13 Sub Process_Globals
14 'These global variables will be declared once when the application starts.
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