

# Hello World IGB App

This article demonstrates the IGB plug-able architecture using a simple example plugin that adds a menu item to the IGB Tools menu.

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## Overview

IGB runs within an OSGi framework, also called an OSGi "container" or "runtime." This means you can extend IGB without modifying the core IGB code base. By implementing a few well-described interfaces and using the Apache maven project management tool, you can add new functionality without re-installing or even re-starting IGB.

This tutorial introduces the IGB platform by demonstrating a very simple IGB App that adds a new entry to the IGB **Tools** menu.

## Requirements

- Install Java version 1.8 for your platform from Oracle ([https://docs.oracle.com/javase/8/docs/technotes/guides/install/install\\_overview.html](https://docs.oracle.com/javase/8/docs/technotes/guides/install/install_overview.html)).
- Install NetBeans or other integrated development environment (IDE).
- Clone a copy of the Hello World App source code from Bitbucket - <https://bitbucket.org/lorainelab/hello-world-igb-app>

## Compile the App

Open the **hello-world** project in Netbeans (or your preferred IDE).

In Netbeans, select the Hello World IGB App from the **Projects** tab, right-click, and select **Build**.

Building the App creates a new directory named "target" which can serve as a new App repository. This new directory contains compiled code as well as a meta-data about the App it contains.

## Add target directory as new App repository

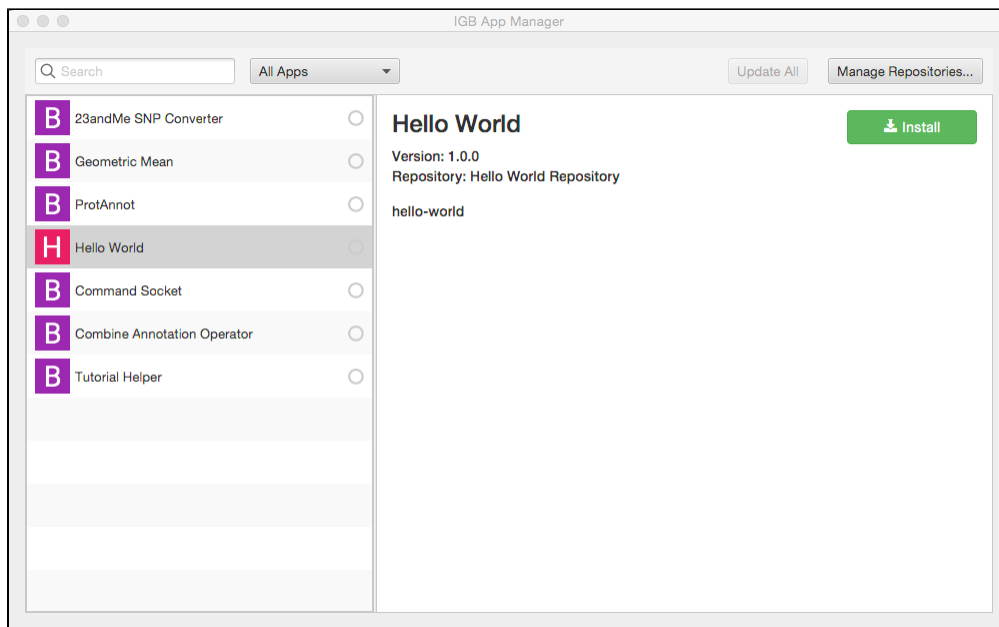
Normally, Apps are deployed on-line in a Web-accessible location called an "App Store." This enables multiple users to install and run them.

However, you can also deploy an App Store on your local computer - useful for developing and testing new Apps.

To add your target directory as a local App Store:

1. Start IGB
2. Select **Tools > Open App Manager**
3. Click **Manage Repositories...** button (opens **Plug-in Repositories** tab in **Preferences** window)
4. Click **Add...** button (opens Plugin Repository dialog)
5. Enter a name for your repository (can be anything)
6. Click **Choose local folder** button
7. Select the "target" folder in your igb-app-hello-world project folder.

Once you add "target" as a new local App repository, you should see the Hello World App added as a new App in the IGB App Manager window, as shown below:



## Install App

To install the hello world App:

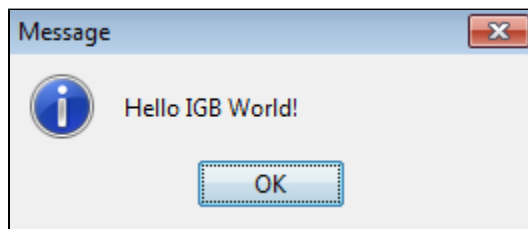
- Select **Tools > Open App Manager**
- Select the App
- Click **Install**

To check that installation worked correctly, select the **Tools** menu. Check that there is now a new menu item named **Hello World**.

## Run App

To run the App:

- Select **Edit > Hello World App**
- Observe a dialog appears containing the message "Hello IGB World!"



## Next step: Modify your code

Open the file `HelloWorldIgbApp.java` in the Netbeans editor. Edit the message your IGB App prints and re-build your App. Then, return to the IGB App Manager, un-install and then re-install your App. When you select the the menu item again, a dialog should appear showing your new message.

Note that you can rapidly repeat this edit-build-uninstall-install cycle. You don't have to re-build IGB or even restart it, which makes development much faster than if you had to modify the IGB code directly.