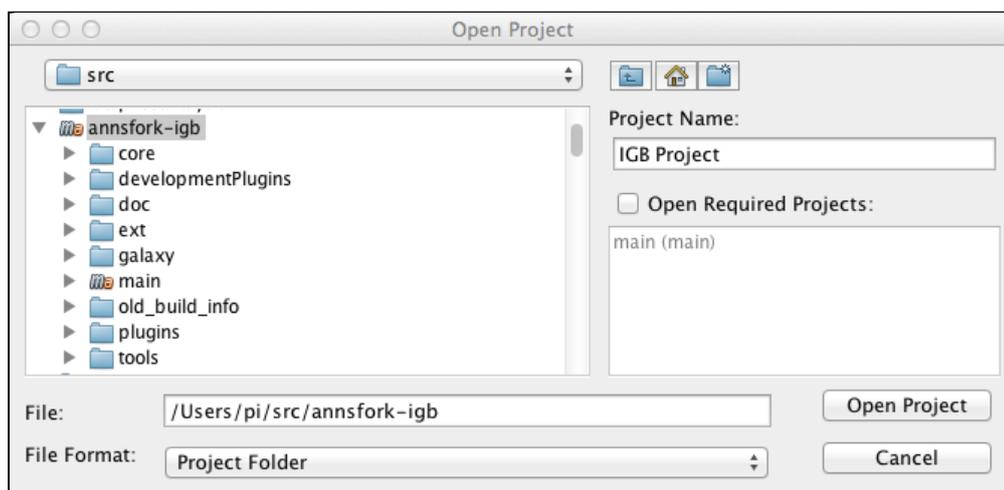# Compile and run IGB using NetBeans

Why NetBeans

NetBeans is a powerful IDE for Java that is also easy for beginners to learn - an important consideration for students. As of July 2014, the IGB team is using Apache Maven to build IGB. NetBeans has good support for maven, which is another reason we are using it.

In addition, IGB contains user interface components that were created using the NetBeans GUI builder. If you want to modify those components, you'll need to use NetBeans.
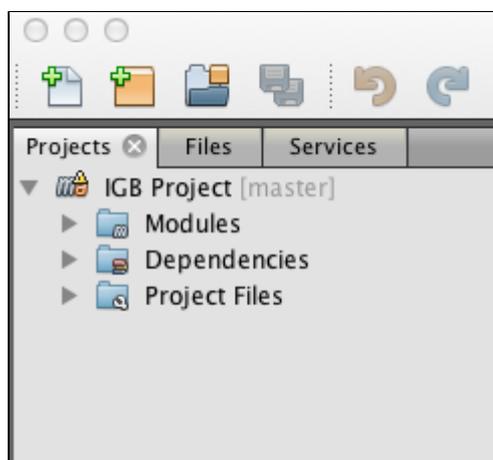
Open IGB Project

1. Start Netbeans.
2. Select **File > Open Project...**
3. Choose the root directory of your cloned copy of the IGB code (see image)

In this example, the top level directory of a cloned fork of the IGB project is selected.

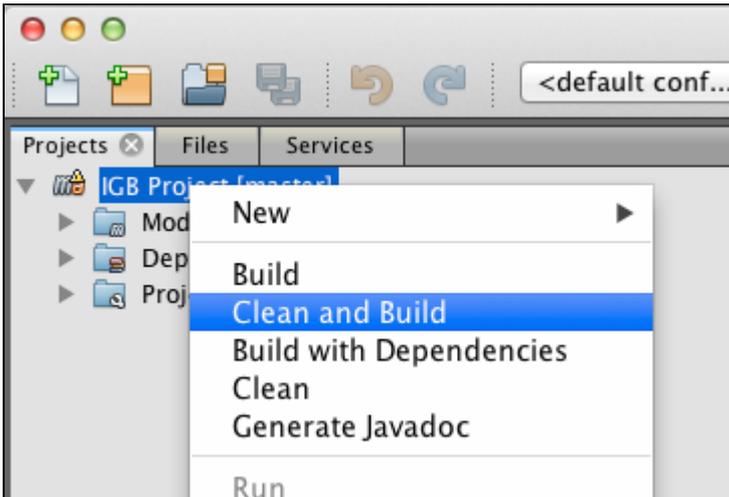Your projects tab should now contain a project called **IGB Project**:

Compile the project

IGB uses Apache maven for compilation. Note that first time you compile IGB, maven will download external libraries IGB needs from our maven repositories. Maven will store these files in your local maven repository, typically the directory ".m2" in your home directory.
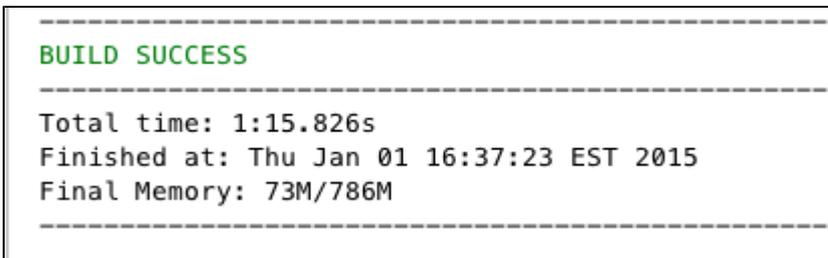
Note that this means you must be connected to the internet to compile IGB for the first time.

To compile IGB:

- Right-click IGB project in the **Projects** tab
- Select **Clean and Build**

If the project builds (compiles) successfully, you should see something like the following in the output tab:
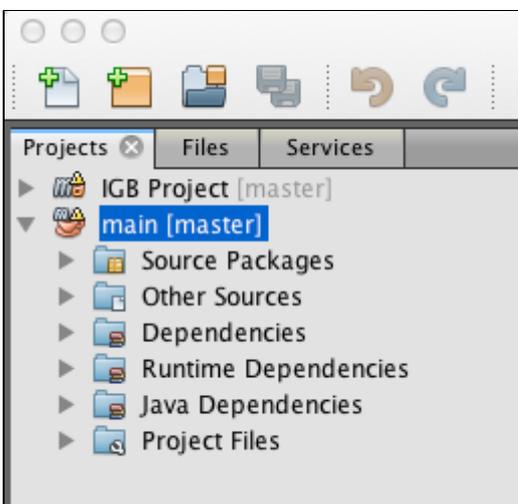

Run IGB

After the project compiles, open and run the **main module project** to run IGB in Netbeans.

To open the IGB main module:

- In the **Projects** tab, select **IGB Project > Modules > main**
- Right-click **main**
- Select **Open Project**

A new project named "main" will appear in the same level as the IGB Project under the Projects tab:

To run IGB, run the main project. To run main, you can

- Select **Run > Project (main)** in the NetBeans application menu (only active if "main" is selected in the **Projects** tab)
- Right-click the main project and select **Run**

- Click the **Run** icon (green triangle) in the toolbar