# How to Build

IVA is developed in HTML5, therefore it is mainly developed in JavaScript and makes a heavy usage of HTML and CSS. It uses NPM as building tool. IVA also requires of OpenCB JSorolla project to be built, this is a JavaScript library developed for several OpenCB web-based projects, this can be found as Git submodule in IVA.

Stable releases are merged and tagged at *master* branch, you are encourage to use latest stable release for production. Current active development is carried out at *develop* branch, only building is guaranteed and bugs are expected, use this branch for development or for testing new functionalities. The only dependency of IVA from OpenCB is JSorolla.

#### **Prerequisites**

The following technologies are needed to build IVA: Node.js and npm

Installing Node.js and npm

To install Node.js you can visit this link.

npm stands for node packaged modules and it is the dependency manager of Node is.

### Cloning

IVA is an open-source project and can be downloaded either as package(tar.gz) from GitHub releases or source code by cloning the repository.

Default develop branch can be downloaded by executing:

```
$ git clone https://github.com/opencb/iva.git
Cloning into 'iva'...
remote: Counting objects: 624, done.
remote: Total 624 (delta 0), reused 0 (delta 0), pack-reused
624
Receiving objects: 100% (624/624), 139.37 KiB | 0 bytes/s,
done.
Resolving deltas: 100% (356/356), done.
Checking connectivity... done.
```

Latest stable release at master branch can be downloaded by executing:

```
$ git clone -b master https://github.com/opencb/iva.git
Cloning into 'iva'...
remote: Counting objects: 624, done.
remote: Total 624 (delta 0), reused 0 (delta 0), pack-reused
624
Receiving objects: 100% (624/624), 139.37 KiB | 191.00 KiB
/s, done.
Resolving deltas: 100% (356/356), done.
Checking connectivity... done.
```

After this, in both cases, you must execute the following command to fetch the JSorolla submodule (only the first time):

```
git submodule update --init

Go to lib/jsorolla and checkout to develop branch of Jsorolla by

cd lib/jsorolla
git checkout develop
```

#### Build

First, you must update JSorolla dependencies, from the root folder execute:

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```
cd lib/jsorolla
npm install
```

Finally, to build IVA execute:

We have to install npm packages for IVA, from the the root folder execute:

```
npm install
```

This will make npm to look at file package.json and install locally all the dependencies listed there. *Note*: Because a bug in Google Polymer npm script you have to create a symbolic link, this is likely to be solved soon, execute:

```
cd node_modules/@polymer
ln -s .../@webcomponents/shadycss/
```

And now execute:

```
npm run build
```

when completed, all compiled files will be located under the build folder.

## **Testing**

You can copy build content to a web server such as Apache HTTP Server and open your favourite internet browser to open IVA.