Setup developer PC

This is a description how to setup a developer PC with Ubuntu 14.04, ROS Indigo Igloo and Eclipse Neon.

Install Ubuntu 14.04 LTS (Trusty Tahr)

Download the desktop image which is appropriate for your machine:
http://releases.ubuntu.com/14.04/

A comprehensive installation instruction can be found here:
http://howtoubuntu.org/how-to-install-ubuntu-14-04-trusty-tahr

Important!: For the later installation of ROS you have to configure your Ubuntu repositories to allow "restricted," "universe," and "multiverse.". You can follow the Ubuntu guide for instructions on doing this: https://help.ubuntu.com/community/Repositories/Ubuntu

We recommend you to use terminator, that allows you to have multiple terminals in one window. It can be installed with:

```
> sudo add-apt-repository ppa:gnome-terminator
> sudo apt-get update
> sudo apt-get install terminator
```

Install git (https://www.atlassian.com/git/tutorials/what-is-git):

```
> sudo apt-get update
> sudo apt-get install git
```

Install ROS Indigo

Install ROS Indigo (recommended: “Desktop-Full Install”) following these instructions: http://wiki.ros.org/indigo/Installation/Ubuntu

We work with Catkin Command Line Tools (`catkin build` instead of `catkin_make`) to build packages in your workspace. They can be installed with apt-get http://catkin-tools.readthedocs.io/en/latest/installing.html#installing-on-ubuntu-with-apt-get

Setup your catkin workspace in which your packages will be built as follows:

Source the environment:

```
> source /opt/ros/indigo/setup.bash
```

Create workspace:

```
> mkdir -p ~/catkin_ws/src
> cd ~/catkin_ws/src
> catkin_init_workspace
```

Build the workspace:

```
> cd ~/catkin_ws/
> catkin build
```

Source your workspace:

```
> source devel/setup.bash
```

Add your workspace to the `.bashrc` such that it is sourced every time you start a new shell (terminal).

```
> echo "source ~/catkin_ws/devel/setup.bash" >> ~/.bashrc
```

To build your packages in release mode add the build type to the catkin config:

```
> catkin config -DCMAKE_BUILD_TYPE=Release
```

Install Eclipse

Install oracle java 7 (REALLY recommended for eclipse):

```
> sudo add-apt-repository ppa:webupd8team/java
> sudo apt-get update
> sudo apt-get install oracle-java8-installer
```

Download Eclipse Neon from https://www.eclipse.org/downloads/download.php?file=/technology/epp/downloads/release/neon/2/eclipse-cpp-neon-2-linux-gtk-x86_64.tar.gz to your download directory.

Navigate to the downloaded file:

```
> cd ~/Downloads
```

Unpack and install:

```
> tar -zxvf eclipse-cpp-neon-2-linux-gtk-x86_64.tar.gz
> sudo mv eclipse /opt
> sudo chown $USER -R /opt/eclipse/
> sudo ln -s /opt/eclipse/eclipse /usr/sbin/eclipse
> rm eclipse-cpp-neon-2-linux-gtk-x86_64.tar.gz
```

Give eclipse more space:

```
> sudo sed -i "s/-XX:MaxPermSize=256m/-XX:MaxPermSize=1024m/g" /opt/eclipse/eclipse.ini
> sudo sed -i "s/-Xms40m/-Xms512m/g" /opt/eclipse/eclipse.ini
> sudo sed -i "s/-Xmx512m/-Xmx1024m/g" /opt/eclipse/eclipse.ini
```

Setup unity link

```
> cat > eclipse.desktop << "EOF"
[Desktop Entry]
Name=Eclipse
Type=Application
Exec=eclipse
Terminal=false
Icon=eclipse
Comment=Integrated Development Environment
NoDisplay=false
Categories=Development;IDE;
Name[en]=Eclipse
EOF
> sudo mv eclipse.desktop /opt/eclipse/
```

```
> sudo desktop-file-install /opt/eclipse/eclipse.desktop
> sudo cp /opt/eclipse/icon.xpm /usr/share/pixmaps/eclipse.xpm
```

Import the google coding style settings to Eclipse:

- Download the style sheet to some location: https://github.com/google/styleguide/blob/gh-pages/eclipse-cpp-google-style.xml
- Start Eclipse.
- Select Window->Preferences->C/C++->Code Style->Formatter.
- Click Import…
- Select the downloaded sheet.
- Click OK

Add additional build flags to your catkin config to generate the eclipse related files

```
> cd ~/catkin_ws
> catkin config -G"Eclipse CDT4 - Unix Makefiles"
-DCMAKE_CXX_COMPILER_ARG1=-std=c++11 -DCMAKE_BUILD_TYPE=Release
```