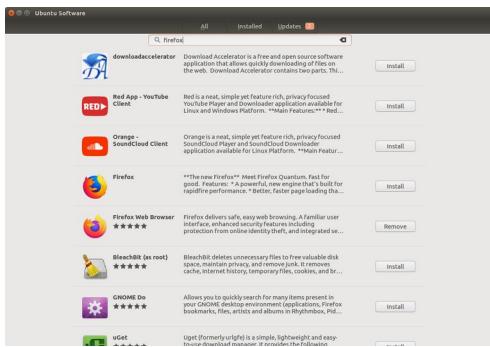


If you are using your own PC these steps will help to install ROS.  
Linux basic commands and ROS installation:

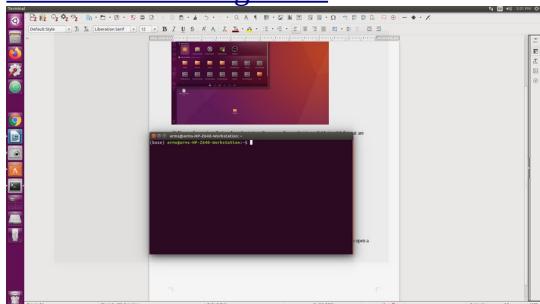
1) Unity interface in Ubuntu. It is similar to Windows. The Win keyboard button opens the menu from which you can search for an application



2) New software installation. In order to install a new software that is available in .deb format are accessible for installation from “Ubuntu Software”. You can also install a new software from a command line (ROS will be installed from command lines).

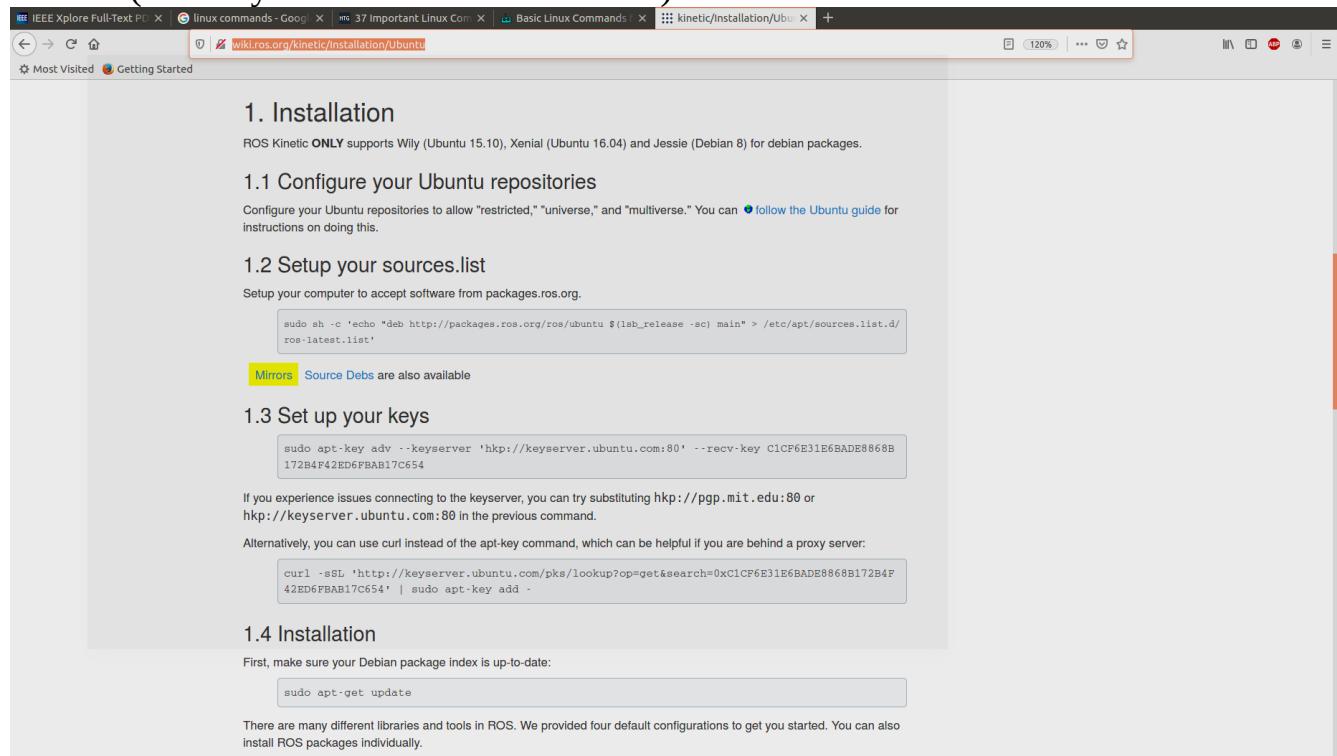


3) Terminal and navigation in folders. Press Win and type Terminal (or use CTRL+Alt+T) to open a terminal. In order to copy from or to paste into the Terminal, use CTRL+SHIFT+c and CTRL+SHIFT+v combination. In order to open a folder with the name “Desktop”, type “cd Desktop/”. In order to list the files and folders inside a folder, type “ls”. In order to open this folder folder “Desktop” in in a graphical way, type “nautilus .” The dot means this (here). Learn more commands in Linux from different sources similar to <https://maker.pro/linux/tutorial/basic-linux-commands-for-beginners>.



4) Install ROS from command line. Open the terminal and follow the steps in <http://wiki.ros.org/kinetic/Installation/Ubuntu>. In order to run the commands (they are shaded and framed ) copy (CTRL+c) and paste (CTRL+SHIFT+v) into the terminal the

commands (for example, the first command is to add ROS packages to your repository  
`sudo sh -c 'echo "deb http://packages.ros.org/ros/ubuntu $(lsb_release -sc) main" > /etc/apt/sources.list.d/ros-latest.list'`). Install the Desktop-Full Install: (Recommended) version (be ready to download around 1 Gb).



The screenshot shows a web browser window with the URL [wiki.ros.org/kinetic/installation/Ubuntu](http://wiki.ros.org/kinetic/installation/Ubuntu). The page is titled "kinetic/installation/Ubuntu". The content is divided into sections: 1. Installation, 1.1 Configure your Ubuntu repositories, 1.2 Setup your sources.list, 1.3 Set up your keys, and 1.4 Installation. In the 1.2 section, there is a code block with the command `sudo sh -c 'echo "deb http://packages.ros.org/ros/ubuntu $(lsb_release -sc) main" > /etc/apt/sources.list.d/ros-latest.list'`. Below this command, there are two options: "Mirrors" and "Source Deb". In the 1.3 section, there is another code block with the command `sudo apt-key adv --keyserver 'hkp://keyserver.ubuntu.com:80' --recv-key C1CF6E31E6BADE8868B172B4F42ED6FBAB17C654`. Below this command, it says "curl instead of the apt-key command". In the 1.4 section, there is a code block with the command `sudo apt-get update`.

After installation complete, you can check ROS by running `roscore` (in Terminal type `roscore` ). Stop the program by **CTRL+c** combination.

5) Check whether **git** program is installed (`git --version`) . Install git if it is not installed. **git** is a software version control tool that became a default way of uploading open source software to Internet. There are many tutorials available for learning how to use git. In this course, we will use mostly one command: `git clone`.