

MPLAB IDE Installation guide for Linux



Tools required to be installed



- MPLAB X IDE (Development Environment)
- MPLAB® XC8 Compiler (Cross Compiler)
- PICSimLab Simulator (Simulating tool)



Installing MPLAB X IDE

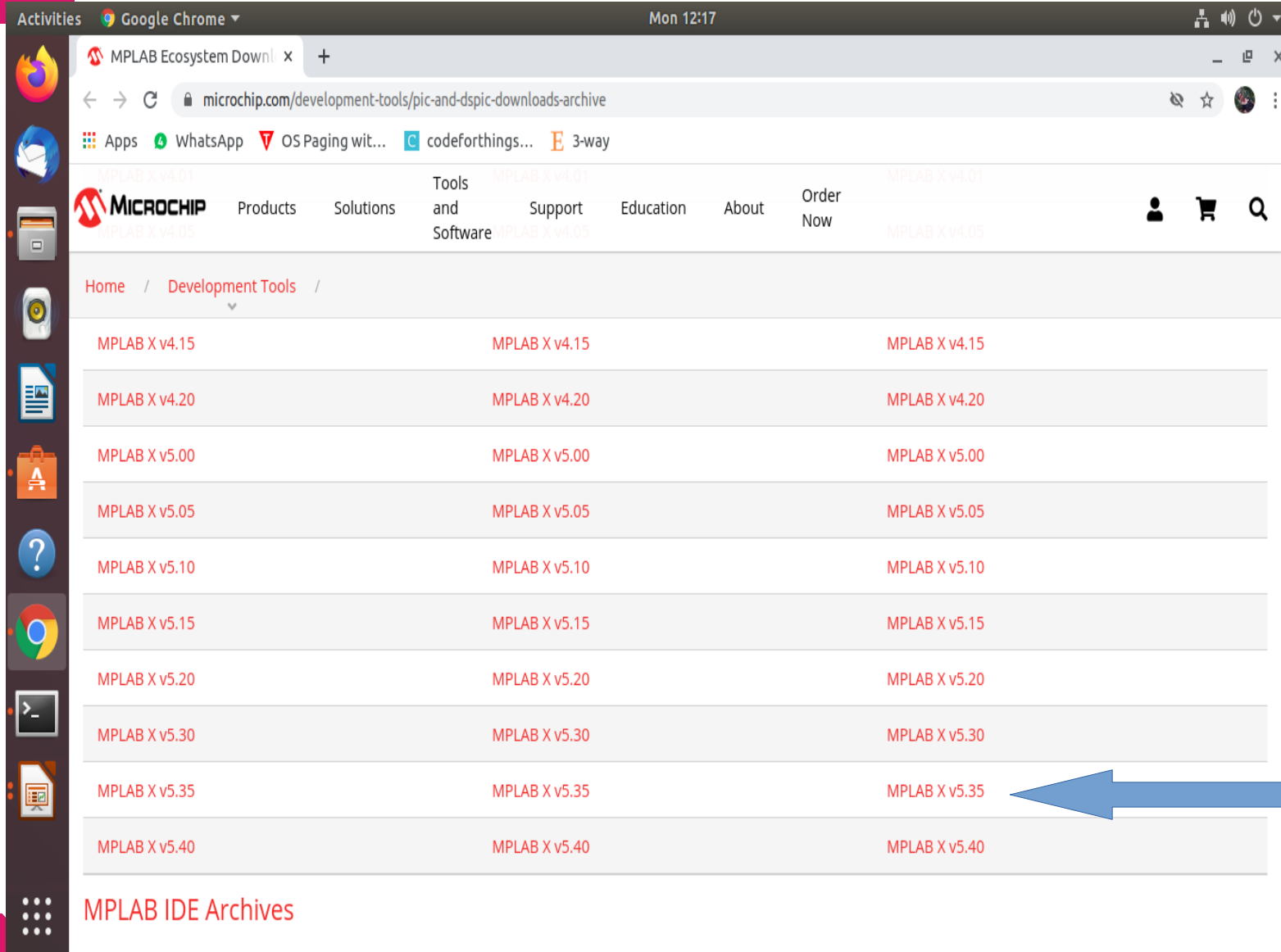


- **Step 1 - Download MPLAB X IDE v5.35 for Linux / Ubuntu**
 - > Open any browser and search for MPLAB X IDE
 - > Click on the very first link and download MPLAB X IDE v5.35 appropriate for your OS.
 - > Otherwise click on the below link to download MPLAB X IDE v5.35 for Ubuntu OS.

<https://ww1.microchip.com/downloads/en/DeviceDoc/MPLABX-v5.35-linux-installer.tar>



Installing MPLAB X IDE



The screenshot shows a web browser window displaying the Microchip website's development tools download archive. The page lists various versions of MPLAB X IDE, with the most recent version, MPLAB X v5.40, highlighted. A blue arrow points to the download link for this version, and a text box labeled 'Click here' is positioned next to it.

Activities Google Chrome Mon 12:17

MPLAB Ecosystem Downl x +

microchip.com/development-tools/pic-and-dspic-downloads-archive

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MPLAB X v4.01	MPLAB X v4.01	MPLAB X v4.01
MPLAB X v4.15	MPLAB X v4.15	MPLAB X v4.15
MPLAB X v4.20	MPLAB X v4.20	MPLAB X v4.20
MPLAB X v5.00	MPLAB X v5.00	MPLAB X v5.00
MPLAB X v5.05	MPLAB X v5.05	MPLAB X v5.05
MPLAB X v5.10	MPLAB X v5.10	MPLAB X v5.10
MPLAB X v5.15	MPLAB X v5.15	MPLAB X v5.15
MPLAB X v5.20	MPLAB X v5.20	MPLAB X v5.20
MPLAB X v5.30	MPLAB X v5.30	MPLAB X v5.30
MPLAB X v5.35	MPLAB X v5.35	MPLAB X v5.35
MPLAB X v5.40	MPLAB X v5.40	MPLAB X v5.40

MPLAB IDE Archives

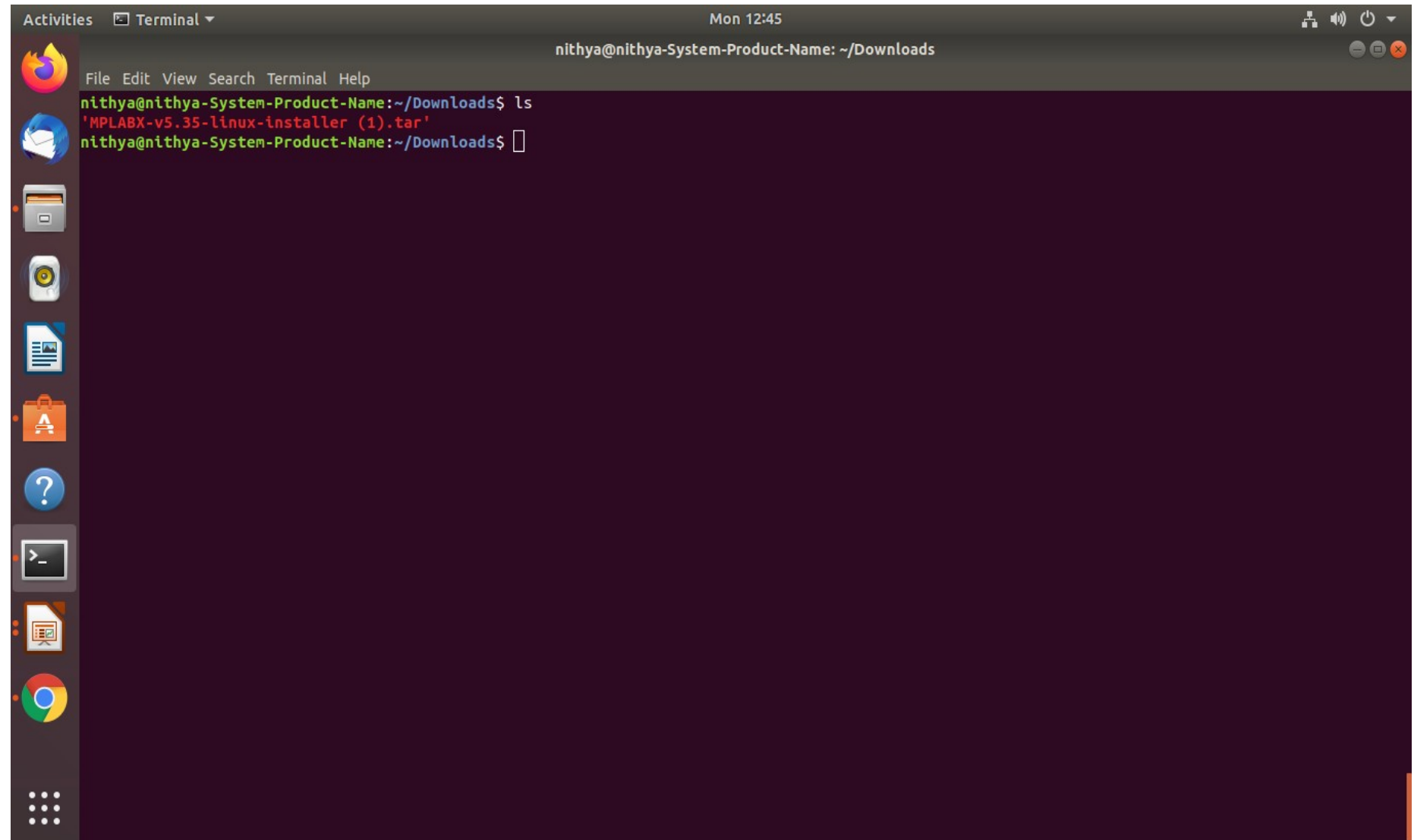
- open the below link
<https://www.microchip.com/development-tools/pic-and-dspic-downloads-archive>

Click here

Installing MPLAB X IDE

-> File size is 958 MB so it may take time to download

-> Once downloading is completed open terminal and move to downloads directory



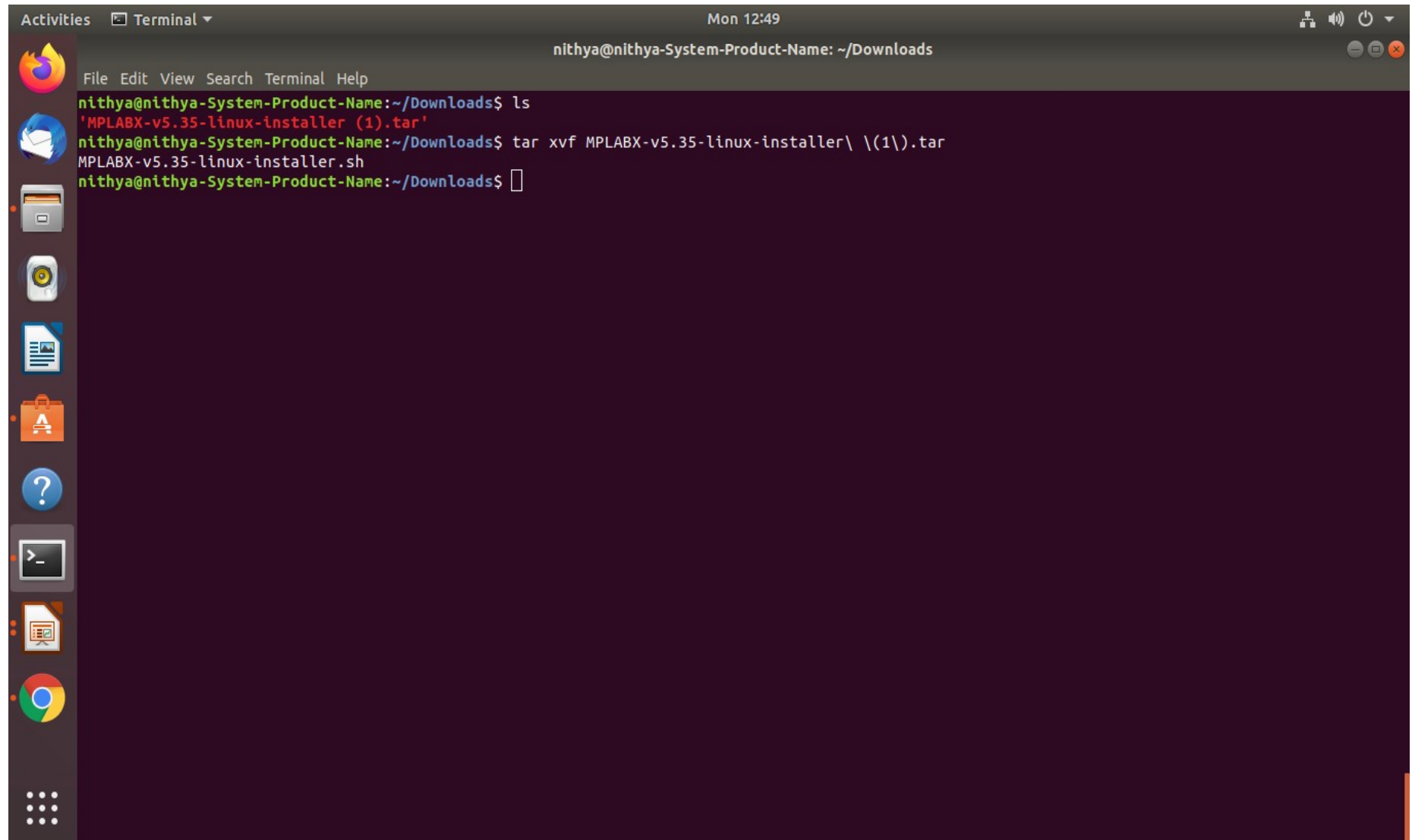
The screenshot shows a Linux desktop environment with a terminal window open. The terminal title bar indicates the user is 'nithya' on a system named 'nithya-System-Product-Name' in the directory '~/Downloads'. The terminal output shows the command 'ls' being executed, which lists the file 'MPLABX-v5.35-linux-installer (1).tar' in red text. The terminal window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The desktop background is dark, and a sidebar on the left contains various application icons including Firefox, a mail client, a file manager, a music player, a document viewer, a presentation viewer, a terminal, a web browser, and a grid icon at the bottom.

```
Mon 12:45
nithya@nithya-System-Product-Name: ~/Downloads
File Edit View Search Terminal Help
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar'
nithya@nithya-System-Product-Name:~/Downloads$
```

Installing MPLAB X IDE

-> It is an archive so extract the file which is inside the archive using tar command as shown in the screen shot.

-> After extracting it you will get .sh file.

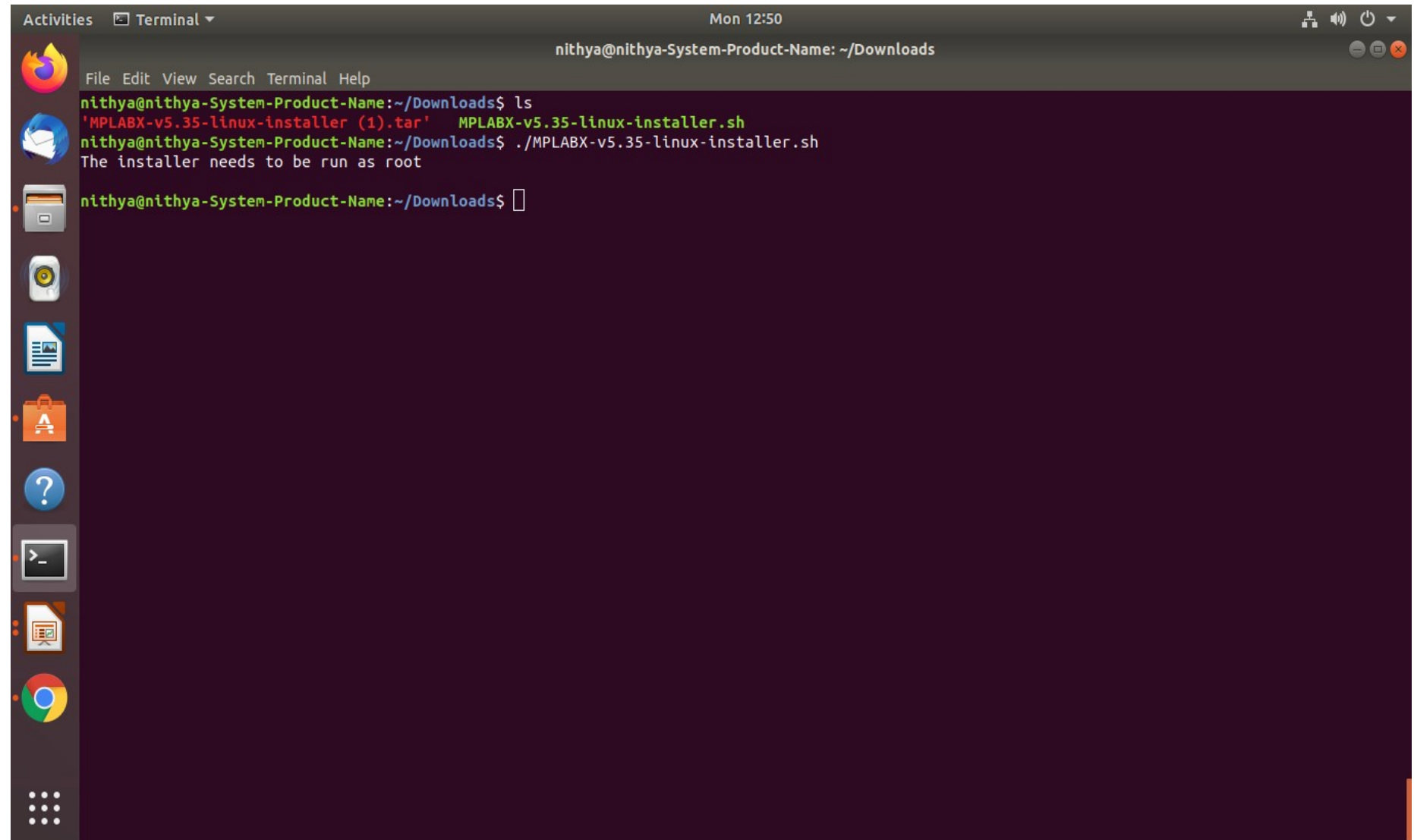


```
Mon 12:49
nithya@nithya-System-Product-Name: ~/Downloads
File Edit View Search Terminal Help
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar'
nithya@nithya-System-Product-Name:~/Downloads$ tar xvf MPLABX-v5.35-linux-installer\ \{(1\)\}.tar
MPLABX-v5.35-linux-installer.sh
nithya@nithya-System-Product-Name:~/Downloads$
```

Installing MPLAB X IDE

-> Now you need to execute the script which you downloaded.

-> You cannot directly execute the file you need root access to execute this script.



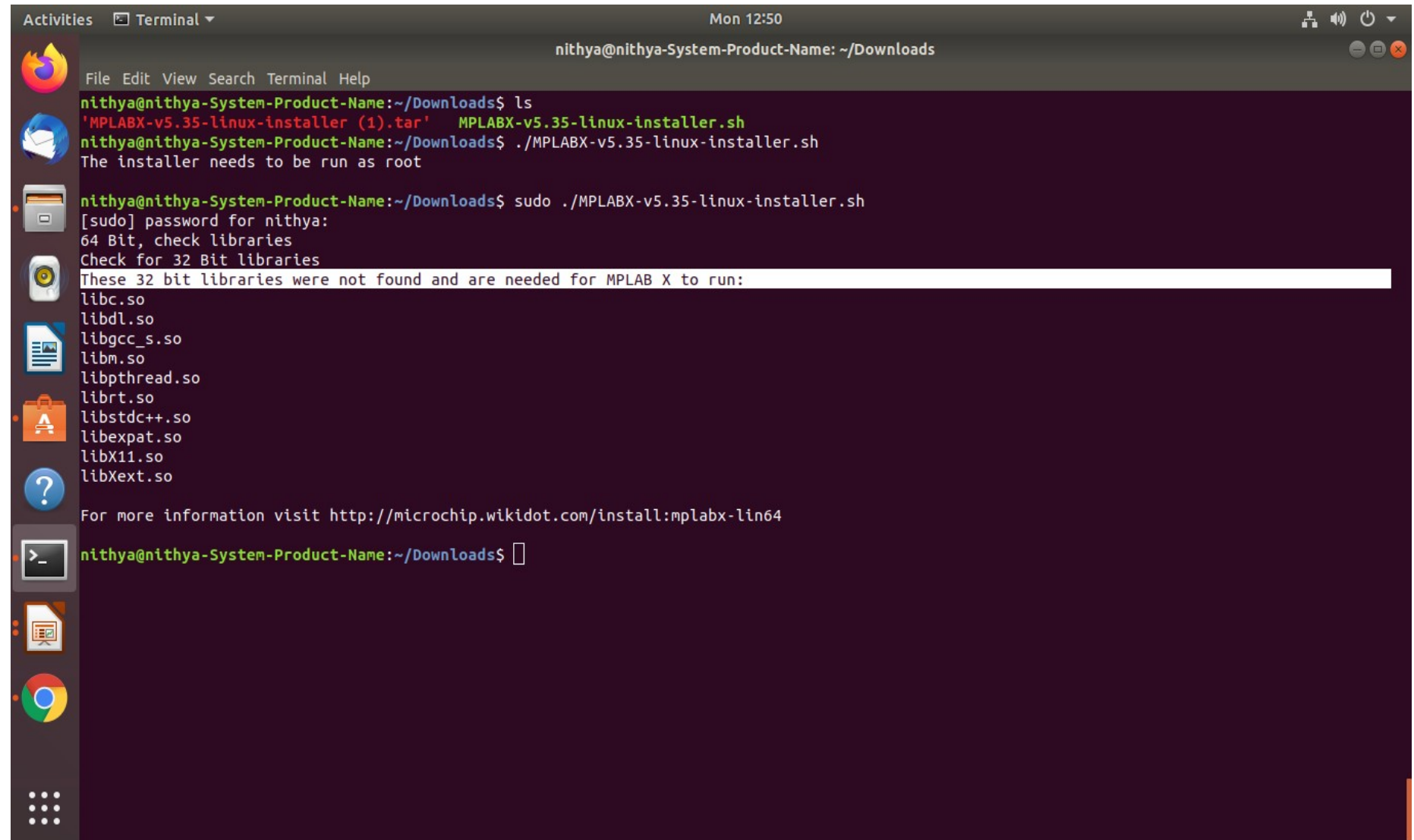
```
Activities Terminal Mon 12:50
nithya@nithya-System-Product-Name: ~/Downloads
File Edit View Search Terminal Help
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar'  MPLABX-v5.35-linux-installer.sh
nithya@nithya-System-Product-Name:~/Downloads$ ./MPLABX-v5.35-linux-installer.sh
The installer needs to be run as root
nithya@nithya-System-Product-Name:~/Downloads$
```

Installing MPLAB X IDE

-> Execute with sudo command as shown in the figure.

-> Here some errors you see. It is showing some libraries are missing.

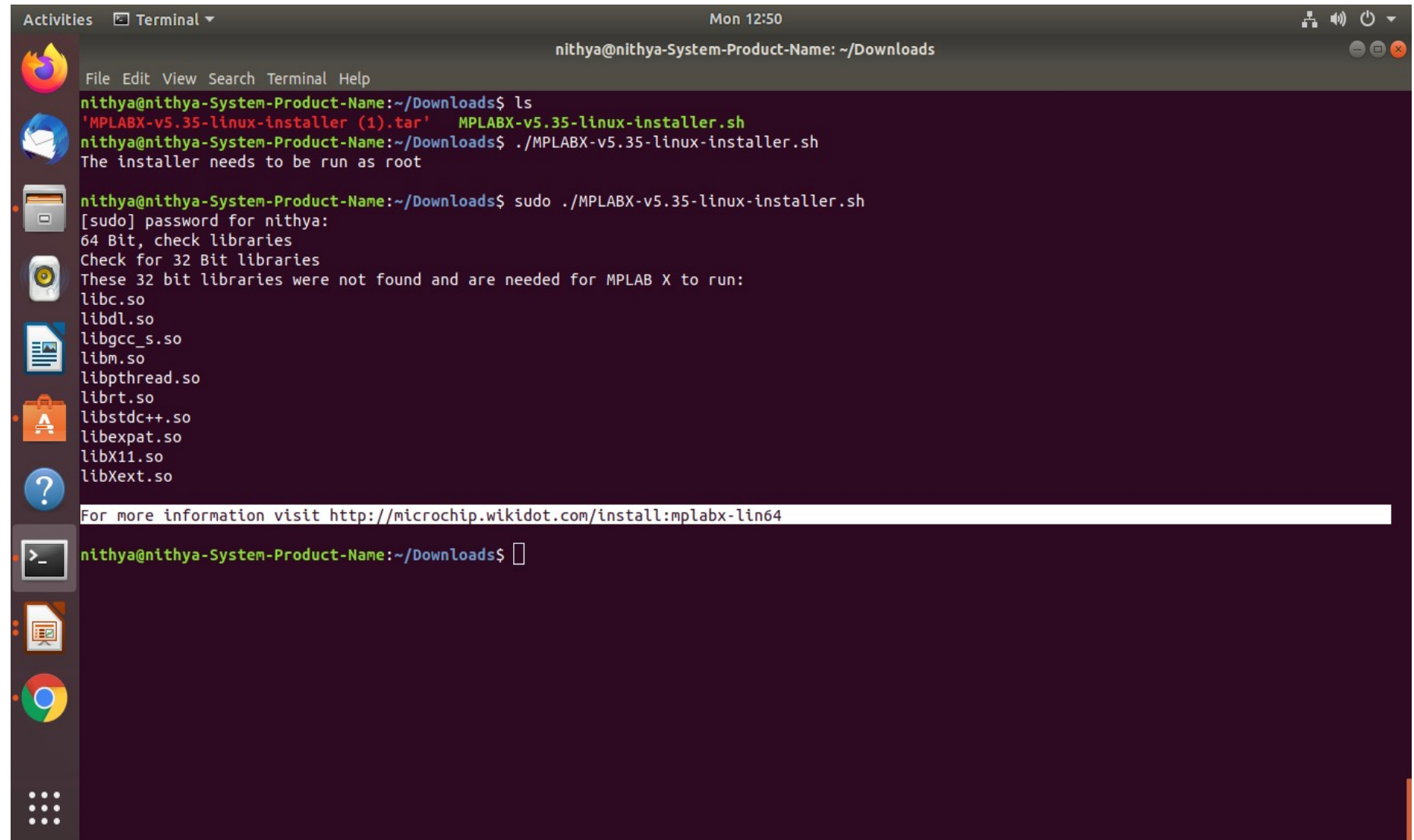
-> We need to install those libraries to install MPLAB X.



```
nithya@nithya-System-Product-Name: ~/Downloads
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar'  MPLABX-v5.35-linux-installer.sh
nithya@nithya-System-Product-Name:~/Downloads$ ./MPLABX-v5.35-linux-installer.sh
The installer needs to be run as root
nithya@nithya-System-Product-Name:~/Downloads$ sudo ./MPLABX-v5.35-linux-installer.sh
[sudo] password for nithya:
64 Bit, check libraries
Check for 32 Bit libraries
These 32 bit libraries were not found and are needed for MPLAB X to run:
libc.so
libdl.so
libgcc_s.so
libm.so
libpthread.so
librt.so
libstdc++.so
libexpat.so
libX11.so
libXext.so
For more information visit http://microchip.wikidot.com/install:mplabx-lin64
nithya@nithya-System-Product-Name:~/Downloads$
```


Installing MPLAB X IDE

-> To install those libraries click on the website link.



```
Mon 12:50
nithya@nithya-System-Product-Name: ~/Downloads

File Edit View Search Terminal Help
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar'  MPLABX-v5.35-linux-installer.sh
nithya@nithya-System-Product-Name:~/Downloads$ ./MPLABX-v5.35-linux-installer.sh
The installer needs to be run as root

nithya@nithya-System-Product-Name:~/Downloads$ sudo ./MPLABX-v5.35-linux-installer.sh
[sudo] password for nithya:
64 Bit, check libraries
Check for 32 Bit libraries
These 32 bit libraries were not found and are needed for MPLAB X to run:
libc.so
libdl.so
libgcc_s.so
libm.so
libpthread.so
librt.so
libstdc++.so
libexpat.so
libX11.so
libXext.so

For more information visit http://microchip.wikidot.com/install:mplabx-lin64

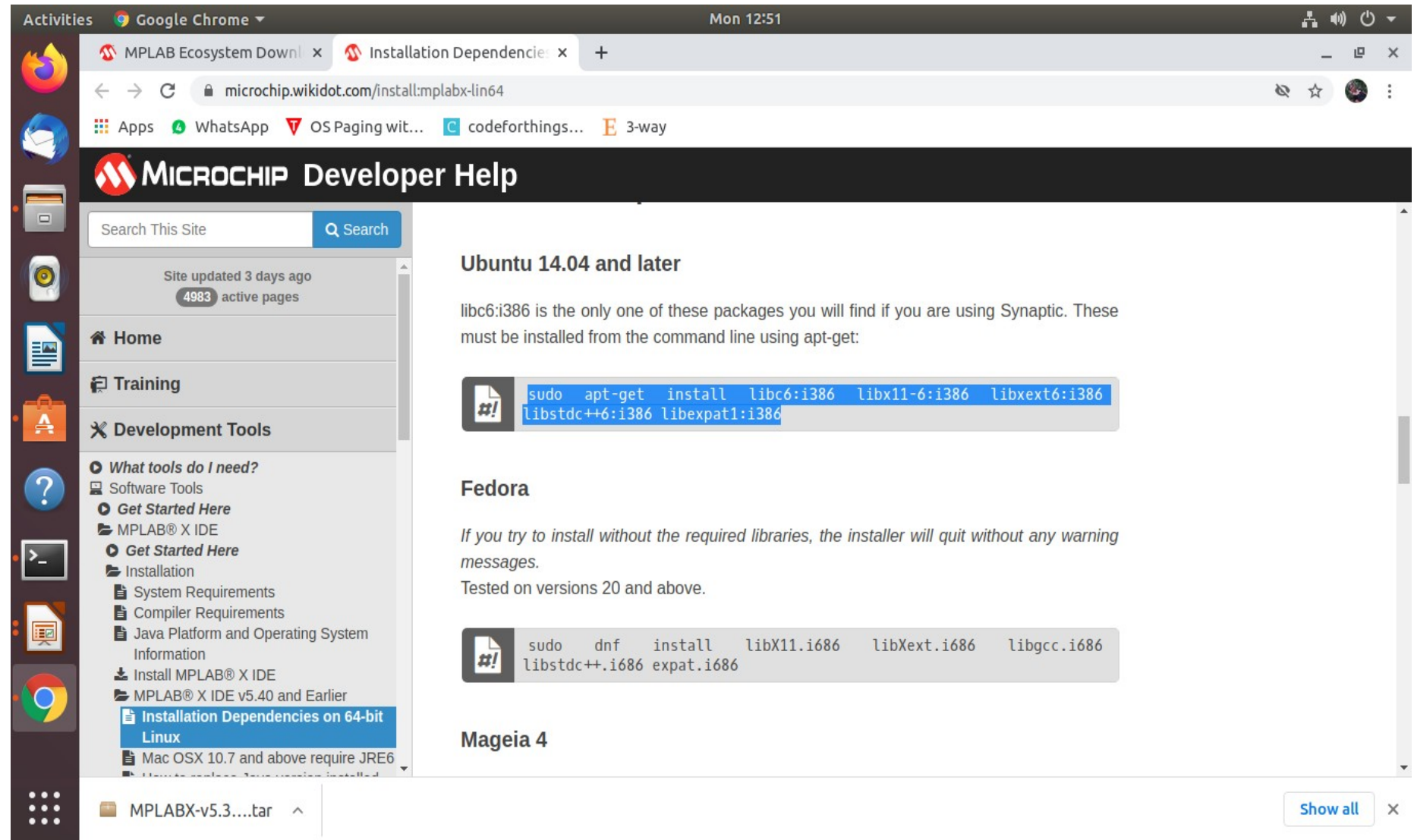
nithya@nithya-System-Product-Name:~/Downloads$
```

Installing MPLAB X IDE

-> To install those libraries click on the website link.

-> Scroll down till reaching the command which selected in image.

-> Copy that command.



The screenshot shows a web browser window displaying the Microchip Developer Help page for MPLAB X IDE installation dependencies on Linux. The page is titled "MICROCHIP Developer Help" and has a search bar. The left sidebar shows a navigation menu with categories like Home, Training, and Development Tools. Under Development Tools, there is a section for "MPLAB® X IDE" with a link to "Installation Dependencies on 64-bit Linux" highlighted. The main content area shows instructions for Ubuntu 14.04 and later, Fedora, and Mageia 4. The Ubuntu section includes a terminal command to install required libraries using apt-get. The Fedora section includes a terminal command to install required libraries using dnf. The Mageia 4 section is partially visible.

Activities Google Chrome Mon 12:51

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microchip.wikidot.com/install:mplabx-linux

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MICROCHIP Developer Help

Search This Site Search

Site updated 3 days ago 4983 active pages

Home Training Development Tools

What tools do I need?

Software Tools

Get Started Here

MPLAB® X IDE

Get Started Here

Installation

System Requirements

Compiler Requirements

Java Platform and Operating System Information

Install MPLAB® X IDE

MPLAB® X IDE v5.40 and Earlier

Installation Dependencies on 64-bit Linux

Mac OSX 10.7 and above require JRE6

How to release your version installed

Ubuntu 14.04 and later

libc6:i386 is the only one of these packages you will find if you are using Synaptic. These must be installed from the command line using apt-get:

```
sudo apt-get install libc6:i386 libx11-6:i386 libxext6:i386 libstdc++6:i386 libexpat1:i386
```

Fedora

If you try to install without the required libraries, the installer will quit without any warning messages.

Tested on versions 20 and above.

```
sudo dnf install libX11.i686 libXext.i686 libgcc.i686 libstdc++.i686 expat.i686
```

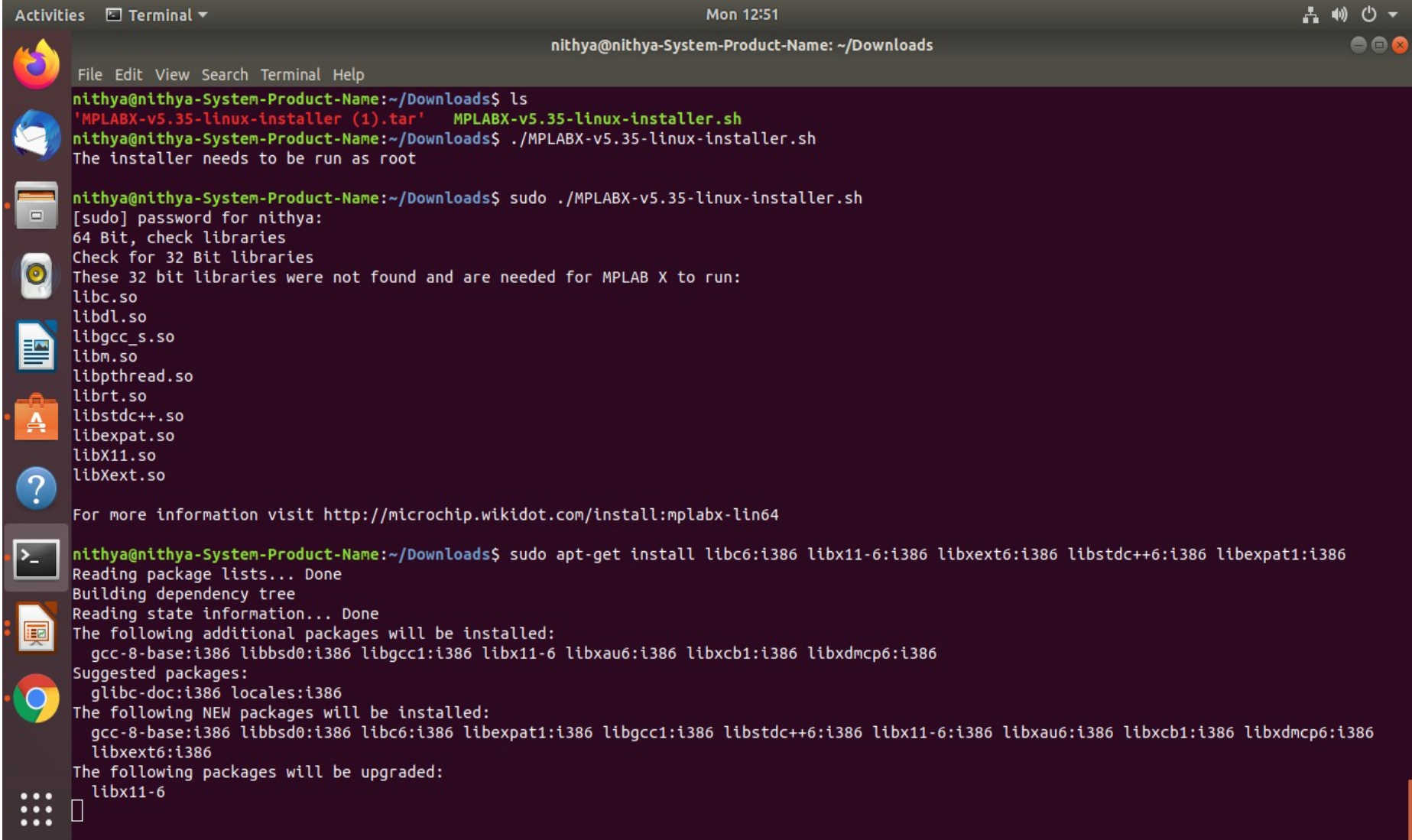
Mageia 4

Show all x

MPLABX-v5.3....tar ^

Installing MPLAB X IDE

-> Paste the copied command and press enter. It will start installing the missing libraries.



```
nithya@nithya-System-Product-Name: ~/Downloads
File Edit View Search Terminal Help
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar'  MPLABX-v5.35-linux-installer.sh
nithya@nithya-System-Product-Name:~/Downloads$ ./MPLABX-v5.35-linux-installer.sh
The installer needs to be run as root

nithya@nithya-System-Product-Name:~/Downloads$ sudo ./MPLABX-v5.35-linux-installer.sh
[sudo] password for nithya:
64 Bit, check libraries
Check for 32 Bit libraries
These 32 bit libraries were not found and are needed for MPLAB X to run:
libc.so
libdl.so
libgcc_s.so
libm.so
libpthread.so
librt.so
libstdc++.so
libexpat.so
libX11.so
libXext.so

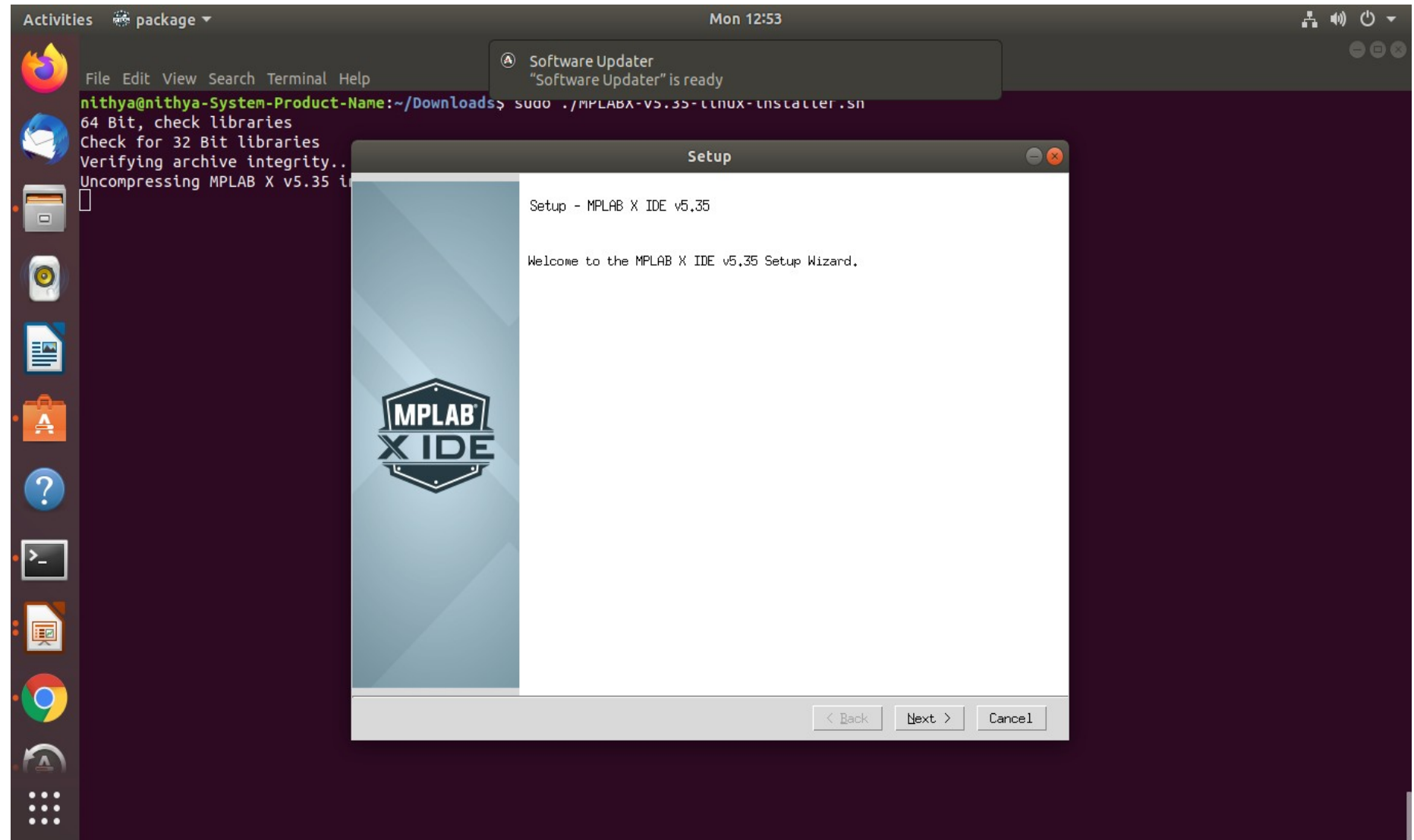
For more information visit http://microchip.wikidot.com/install:mplabx-lin64

nithya@nithya-System-Product-Name:~/Downloads$ sudo apt-get install libc6:i386 libx11-6:i386 libxext6:i386 libstdc++6:i386 libexpat1:i386
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  gcc-8-base:i386 libbsd0:i386 libgcc1:i386 libx11-6 libxau6:i386 libxcb1:i386 libxdmcp6:i386
Suggested packages:
  glibc-doc:i386 locales:i386
The following NEW packages will be installed:
  gcc-8-base:i386 libbsd0:i386 libc6:i386 libexpat1:i386 libgcc1:i386 libstdc++6:i386 libx11-6:i386 libxau6:i386 libxcb1:i386 libxdmcp6:i386
  libxext6:i386
The following packages will be upgraded:
  libx11-6
0
```

Installing MPLAB X IDE

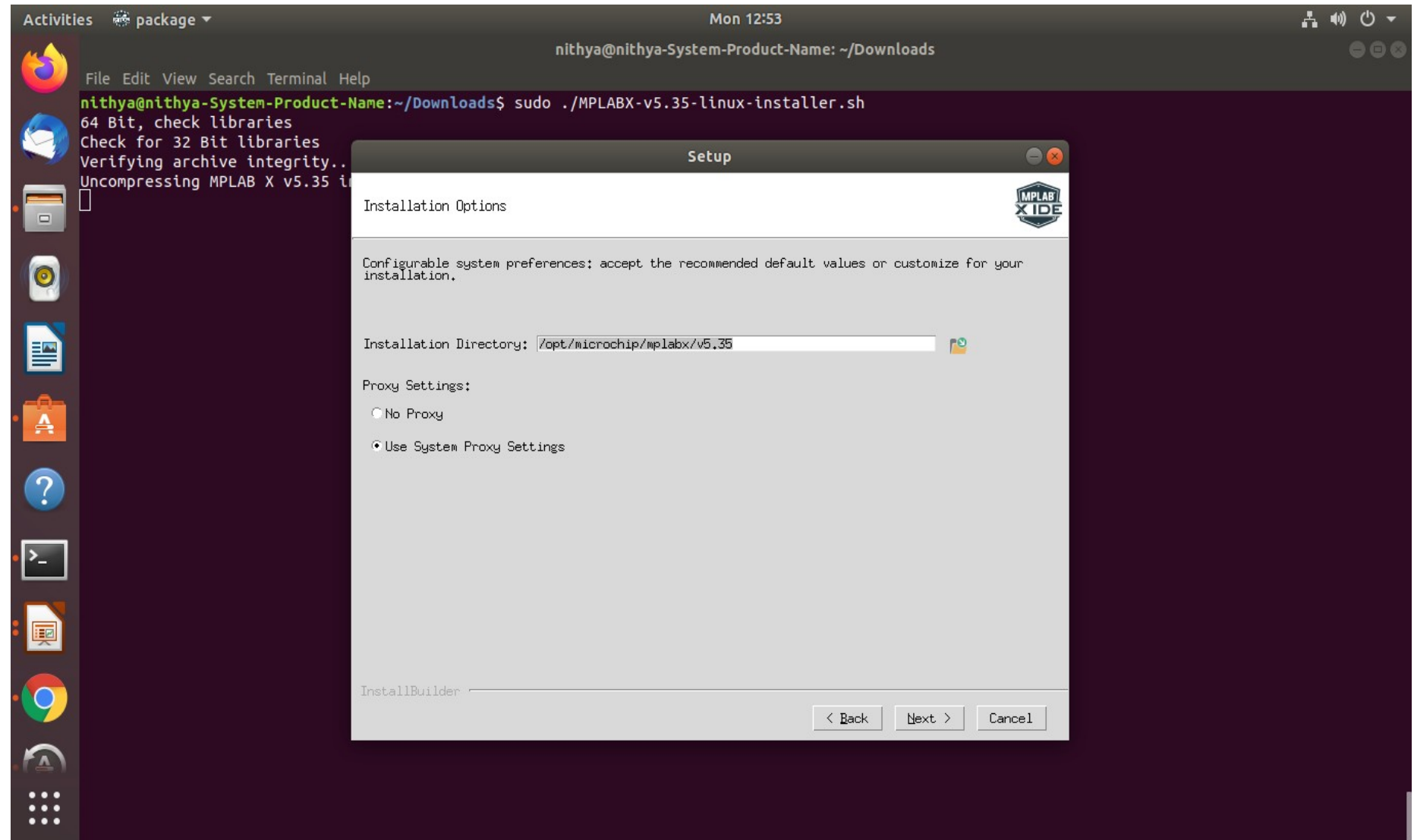
-> After installing the libraries run the script.

-> Dialog box will open. Click on next.



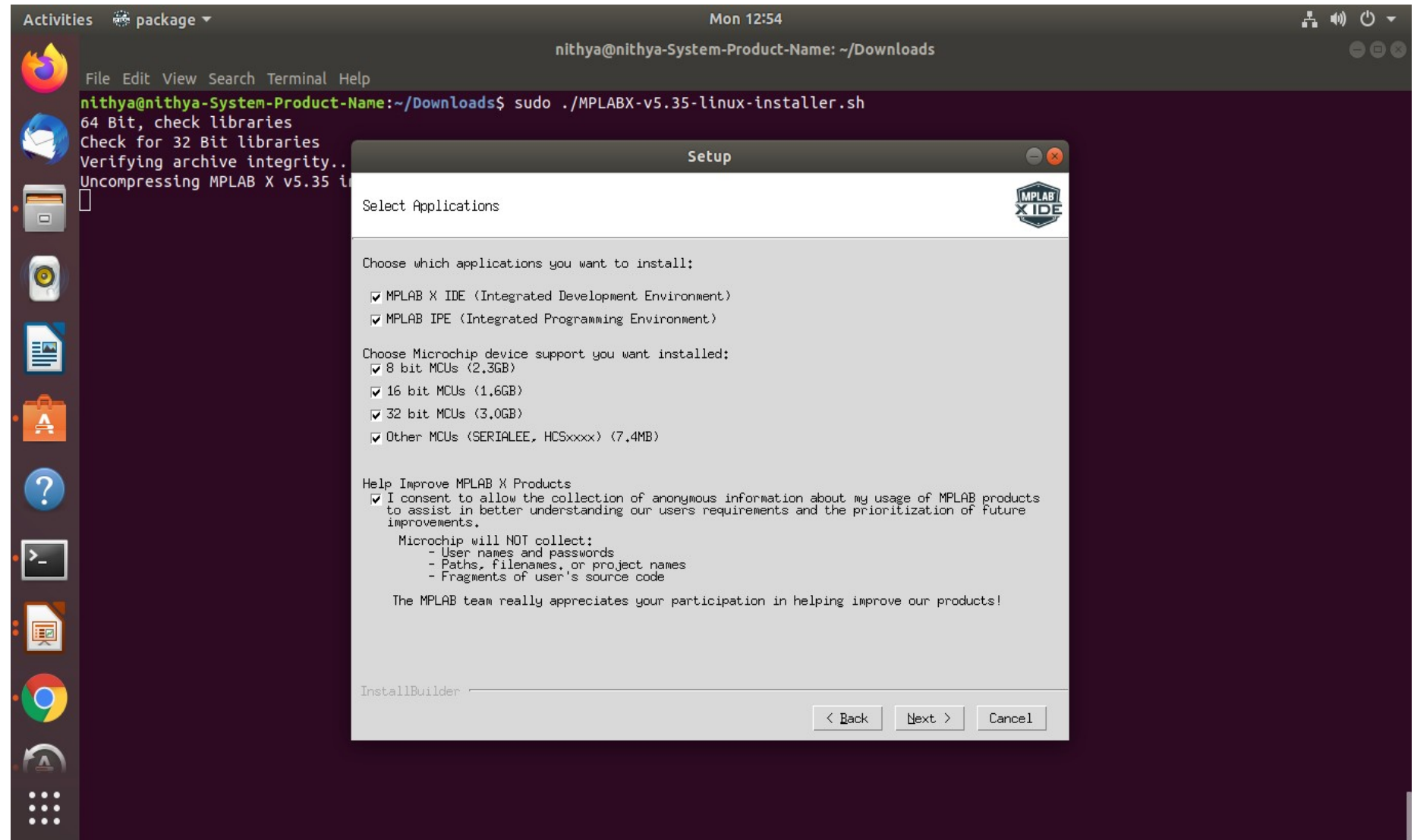
Installing MPLAB X IDE

-> No need to change anything here. Just click on next.



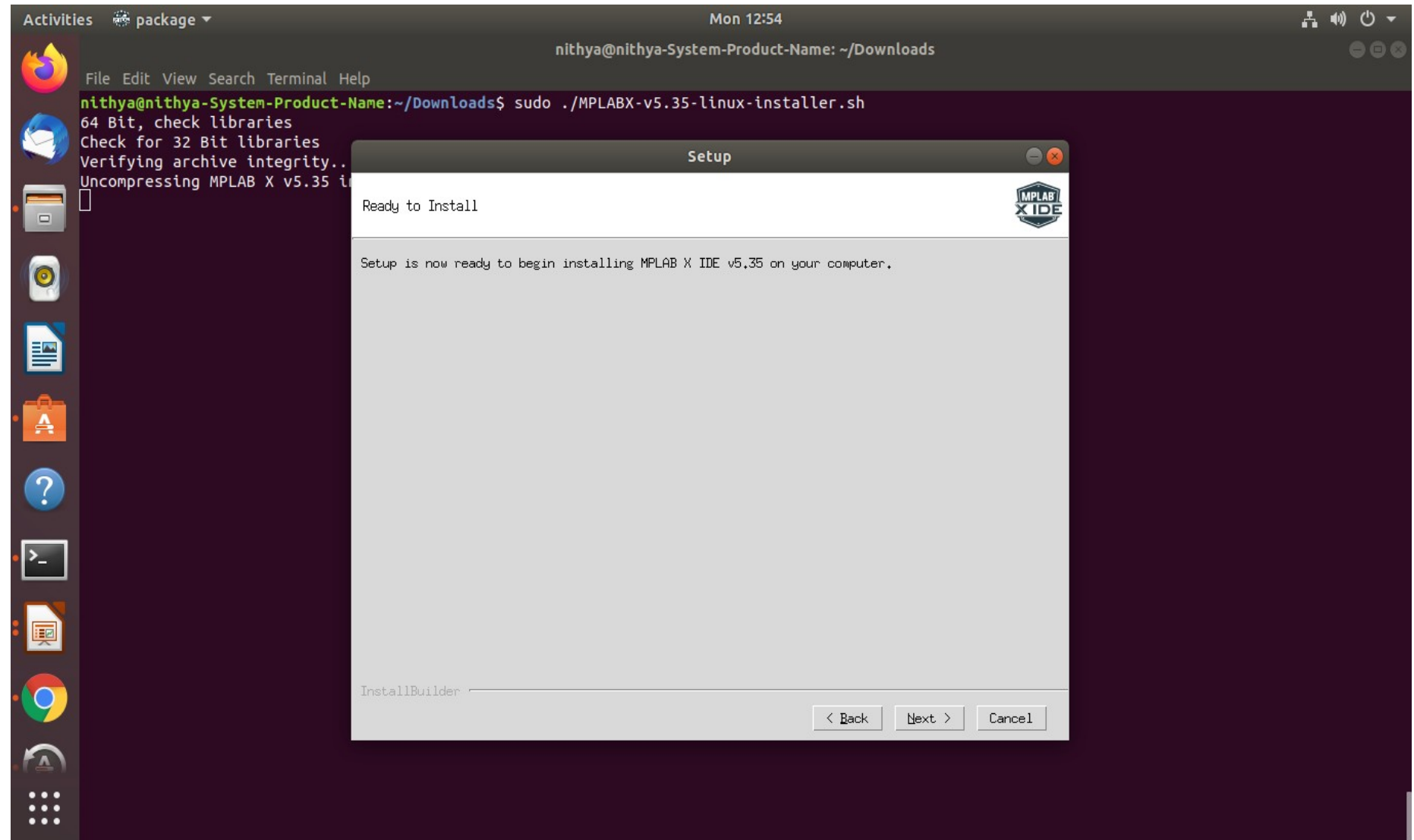
Installing MPLAB X IDE

-> If enough memory is available to install for all bits (8, 16, 32) then select all, otherwise select only 8-bit MCUs. Click on next.



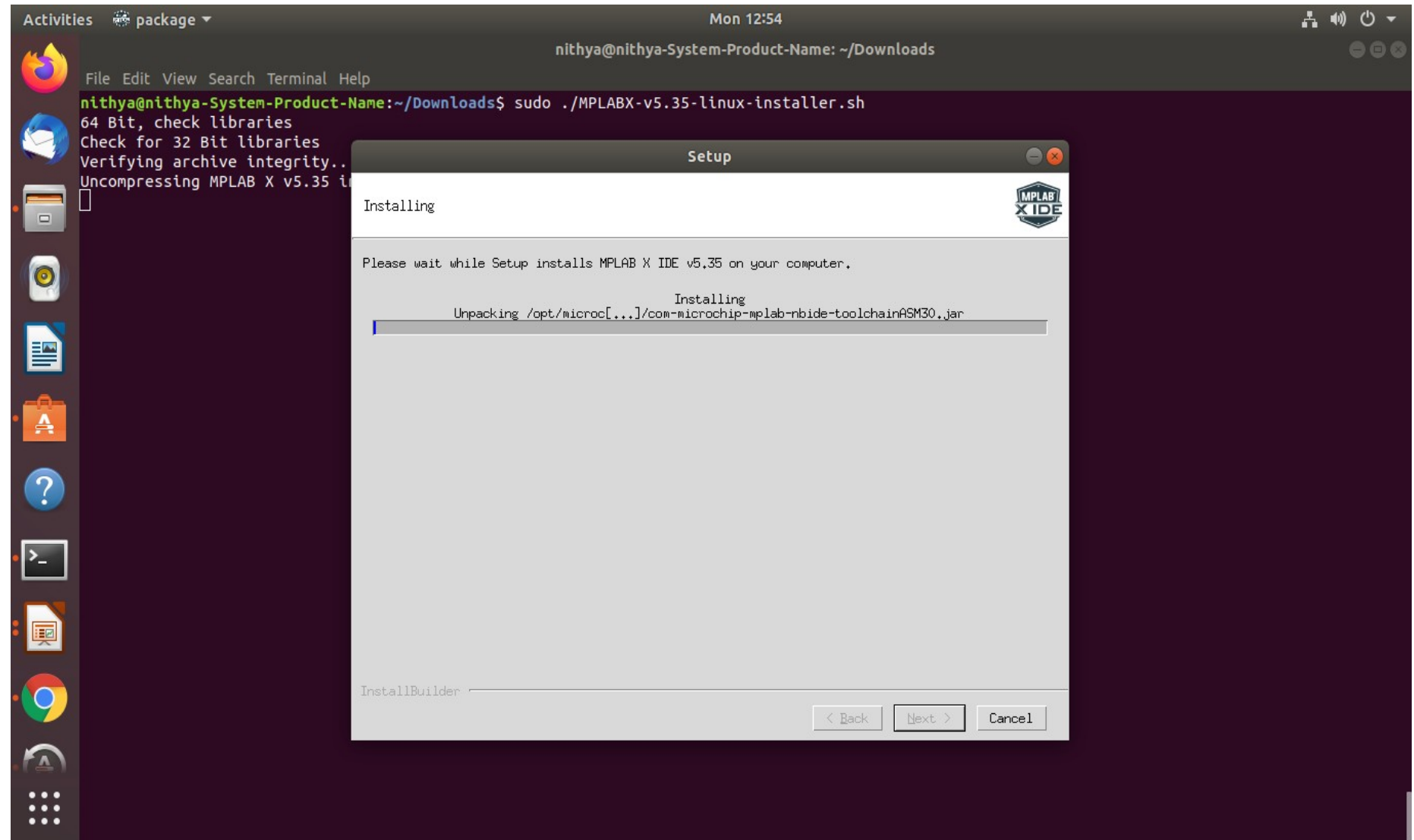
Installing MPLAB X IDE

-> Click on next.



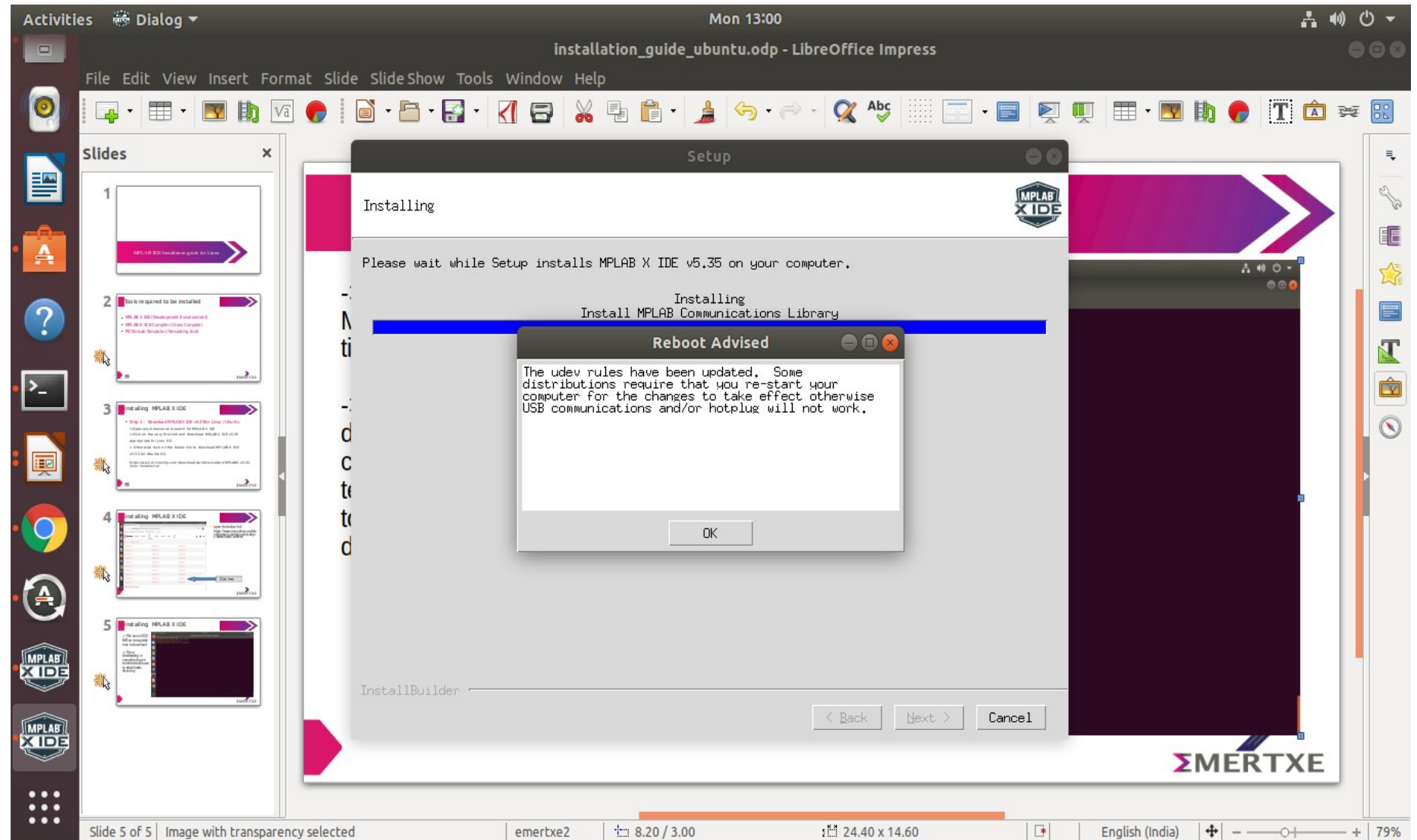
Installing MPLAB X IDE

-> It started installing MPLAB X IDE v5.35



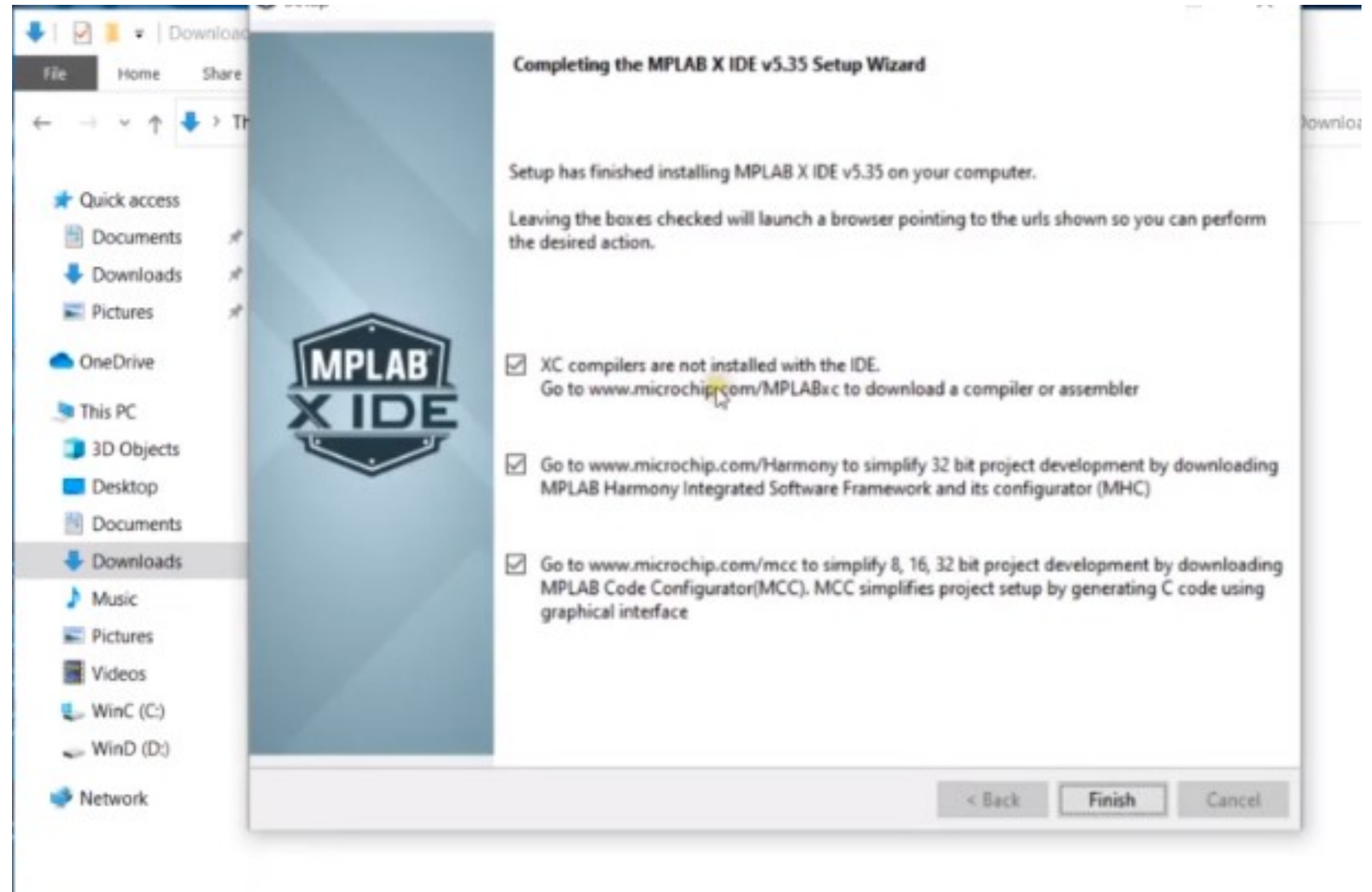
Installing MPLAB X IDE

-> It will ask to reboot the device click on OK.



Installing MPLAB X IDE

-> Click on Finish.
Installation
success.

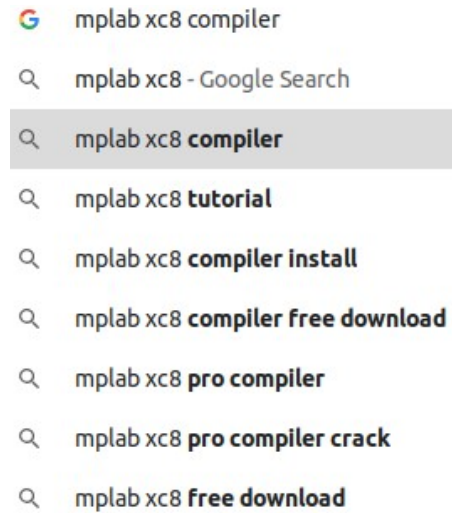


MPLAB XC Compiler Installation



Installing XC8

-> Open any browser and search for XC8 complier



A screenshot of a Google search interface. The search bar at the top contains the text 'mplab xc8 compiler'. Below the search bar, a list of search suggestions is displayed, each preceded by a magnifying glass icon. The suggestions are: 'mplab xc8 - Google Search', 'mplab xc8 **compiler**', 'mplab xc8 **tutorial**', 'mplab xc8 **compiler install**', 'mplab xc8 **compiler free download**', 'mplab xc8 **pro compiler**', 'mplab xc8 **pro compiler crack**', and 'mplab xc8 **free download**'. The 'mplab xc8 **compiler**' suggestion is highlighted with a grey background. At the bottom of the search results area, there is a search bar with the placeholder text 'Search Google or type a URL' and a microphone icon on the right. Below the search bar, there are five circular icons representing different websites: 'OK' (with a yellow 'O' and 'K'), 'Emertxe' (with a red and blue arrow), 'Aladdin' (with a blue 'E'), 'codeforthings' (with a blue 'C'), and 'TalentLMS' (with an orange smiley face).

mplab xc8 compiler

mplab xc8 - Google Search

mplab xc8 **compiler**

mplab xc8 **tutorial**

mplab xc8 **compiler install**

mplab xc8 **compiler free download**

mplab xc8 **pro compiler**

mplab xc8 **pro compiler crack**

mplab xc8 **free download**

Search Google or type a URL

OK

OK

Emertxe

Emertxe

Aladdin

Aladdin

codeforthings

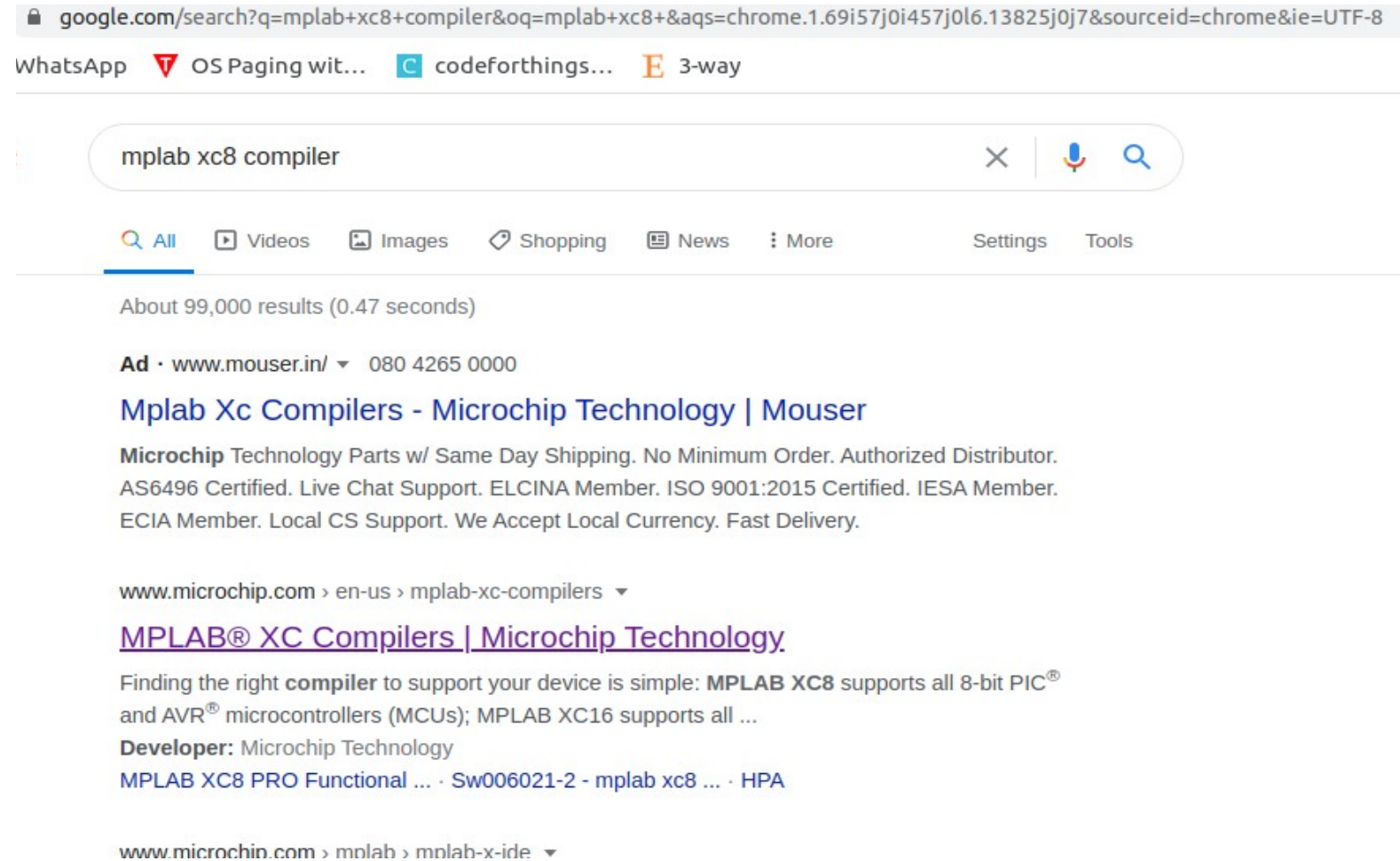
codeforthings

TalentLMS

TalentLMS

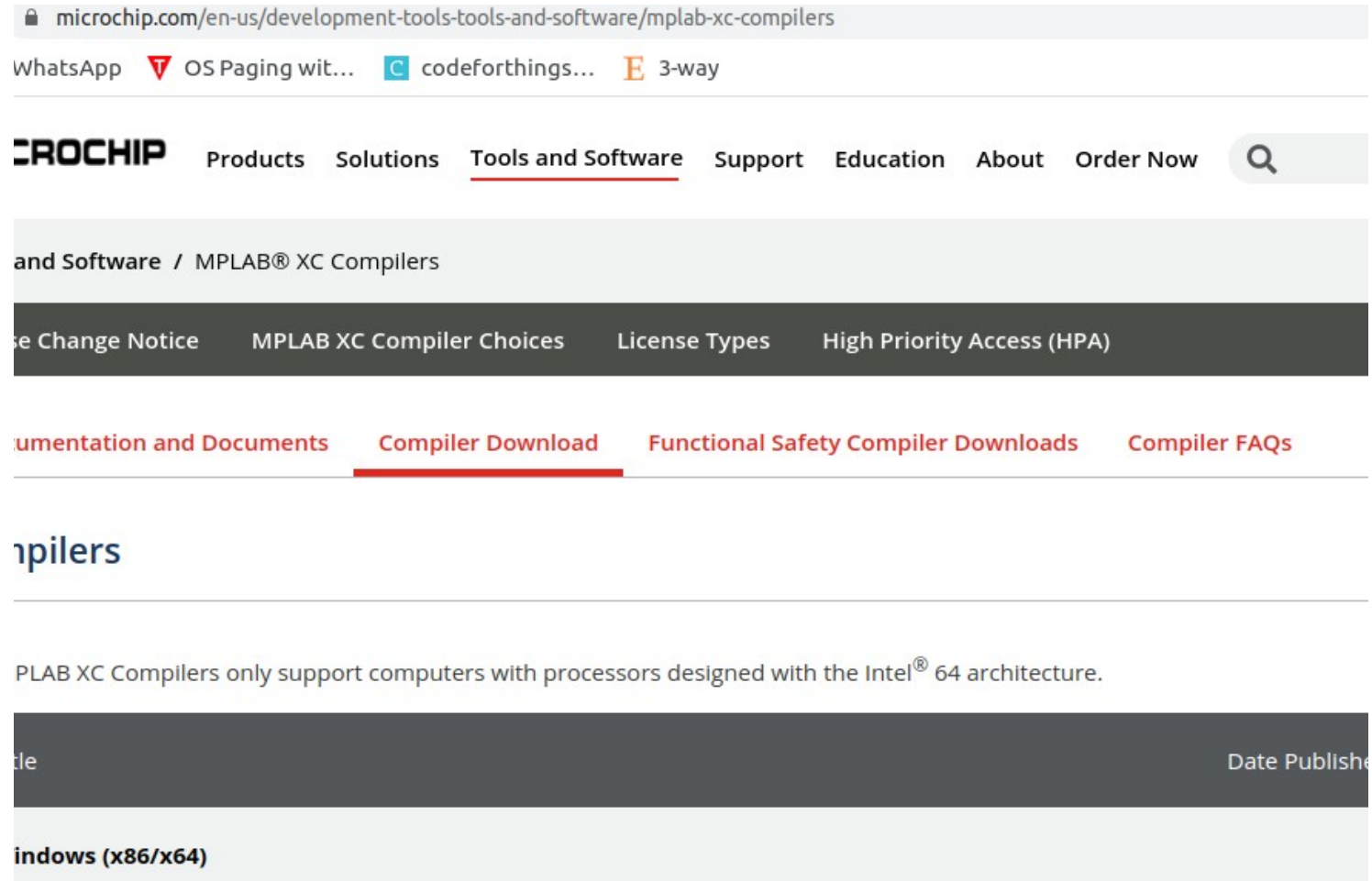
Installing XC8

- > Open any browser and search for XC8 compiler
- > Click on the link shown in the figure.



Installing XC8

-> Scroll down till reaching the downloads which shown in the figure.



The screenshot shows the Microchip website's 'Tools and Software' section for MPLAB XC Compilers. The page includes a navigation bar with links to Products, Solutions, Tools and Software (highlighted), Support, Education, About, and Order Now. Below the navigation bar, there is a breadcrumb trail 'Tools and Software / MPLAB® XC Compilers' and a list of links: 'Release Change Notice', 'MPLAB XC Compiler Choices', 'License Types', and 'High Priority Access (HPA)'. The main content area features a horizontal menu with 'Documentation and Documents', 'Compiler Download' (highlighted), 'Functional Safety Compiler Downloads', and 'Compiler FAQs'. Below this, the heading 'Compilers' is visible. A note states: 'MPLAB XC Compilers only support computers with processors designed with the Intel® 64 architecture.' At the bottom, a table is partially visible with columns for 'Title' and 'Date Published', and a row for 'Windows (x86/x64)'.

microchip.com/en-us/development-tools-tools-and-software/mplab-xc-compilers

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Tools and Software / MPLAB® XC Compilers

Release Change Notice MPLAB XC Compiler Choices License Types High Priority Access (HPA)

Documentation and Documents Compiler Download Functional Safety Compiler Downloads Compiler FAQs

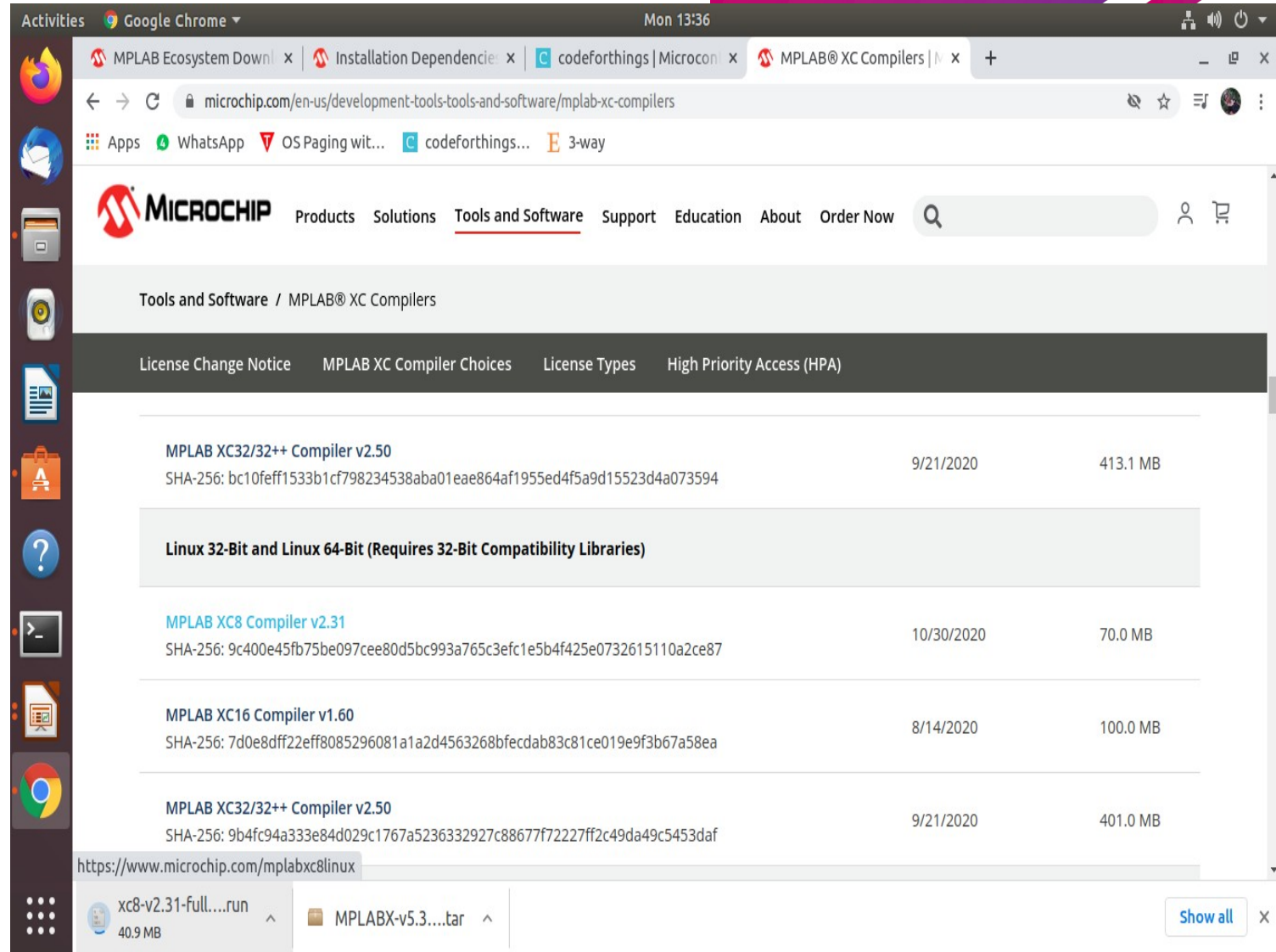
Compilers

MPLAB XC Compilers only support computers with processors designed with the Intel® 64 architecture.

Title	Date Published
Windows (x86/x64)	

Installing XC8

-> Select compiler download.



Activities Google Chrome Mon 13:36

MPLAB Ecosystem Downl x Installation Dependencie x codeforthings | Microcon x MPLAB® XC Compilers | x +

microchip.com/en-us/development-tools-tools-and-software/mplab-xc-compilers

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Tools and Software / MPLAB® XC Compilers

License Change Notice MPLAB XC Compiler Choices License Types High Priority Access (HPA)

MPLAB XC32/32++ Compiler v2.50 SHA-256: bc10feff1533b1cf798234538aba01eae864af1955ed4f5a9d15523d4a073594	9/21/2020	413.1 MB
Linux 32-Bit and Linux 64-Bit (Requires 32-Bit Compatibility Libraries)		
MPLAB XC8 Compiler v2.31 SHA-256: 9c400e45fb75be097cee80d5bc993a765c3efc1e5b4f425e0732615110a2ce87	10/30/2020	70.0 MB
MPLAB XC16 Compiler v1.60 SHA-256: 7d0e8dff22eff8085296081a1a2d4563268bfecdab83c81ce019e9f3b67a58ea	8/14/2020	100.0 MB
MPLAB XC32/32++ Compiler v2.50 SHA-256: 9b4fc94a333e84d029c1767a5236332927c88677f72227ff2c49da49c5453daf	9/21/2020	401.0 MB

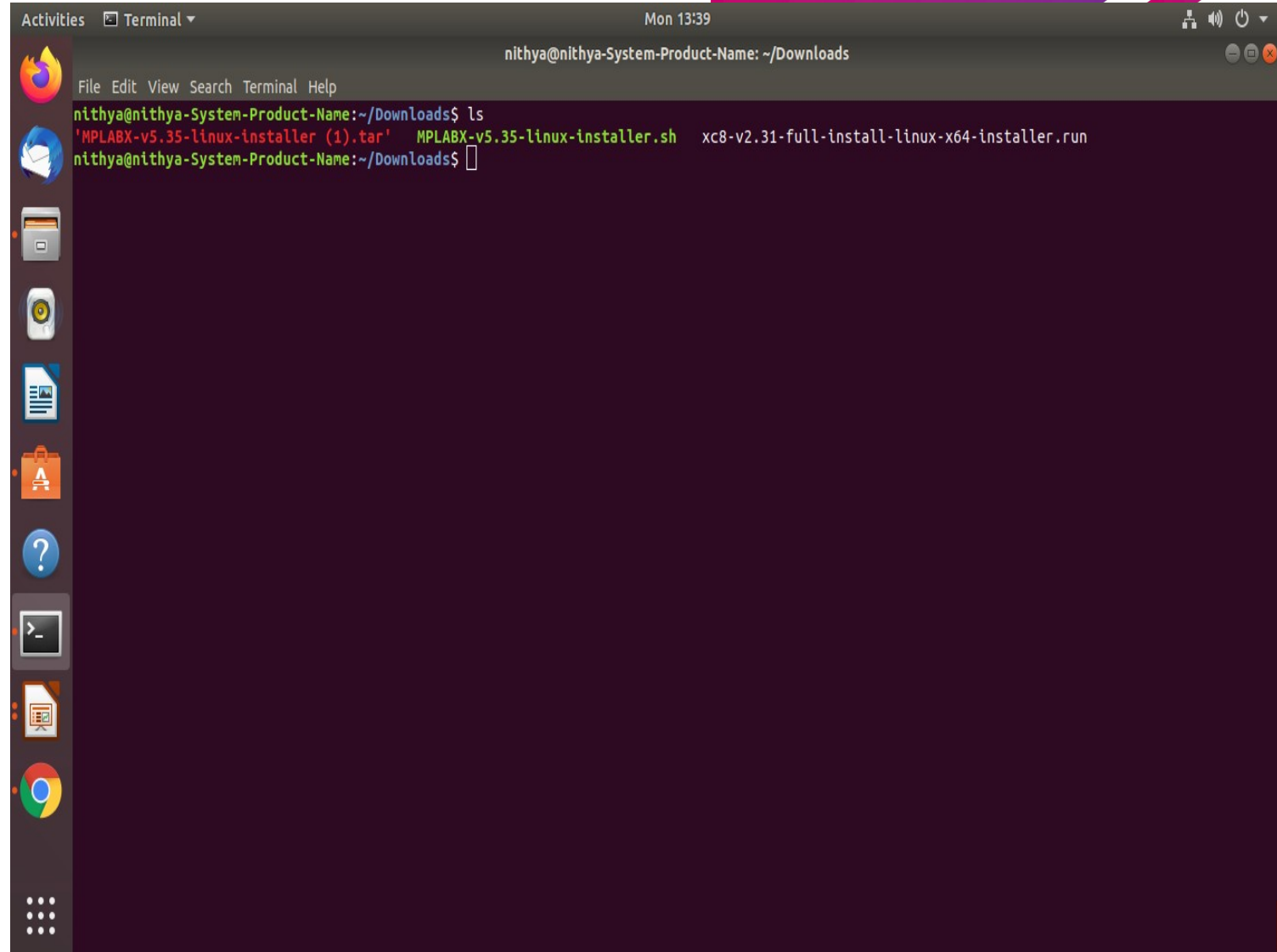
https://www.microchip.com/mplabxc8linux

xc8-v2.31-full....run 40.9 MB MPLABX-v5.3....tar

Show all x

Installing XC8

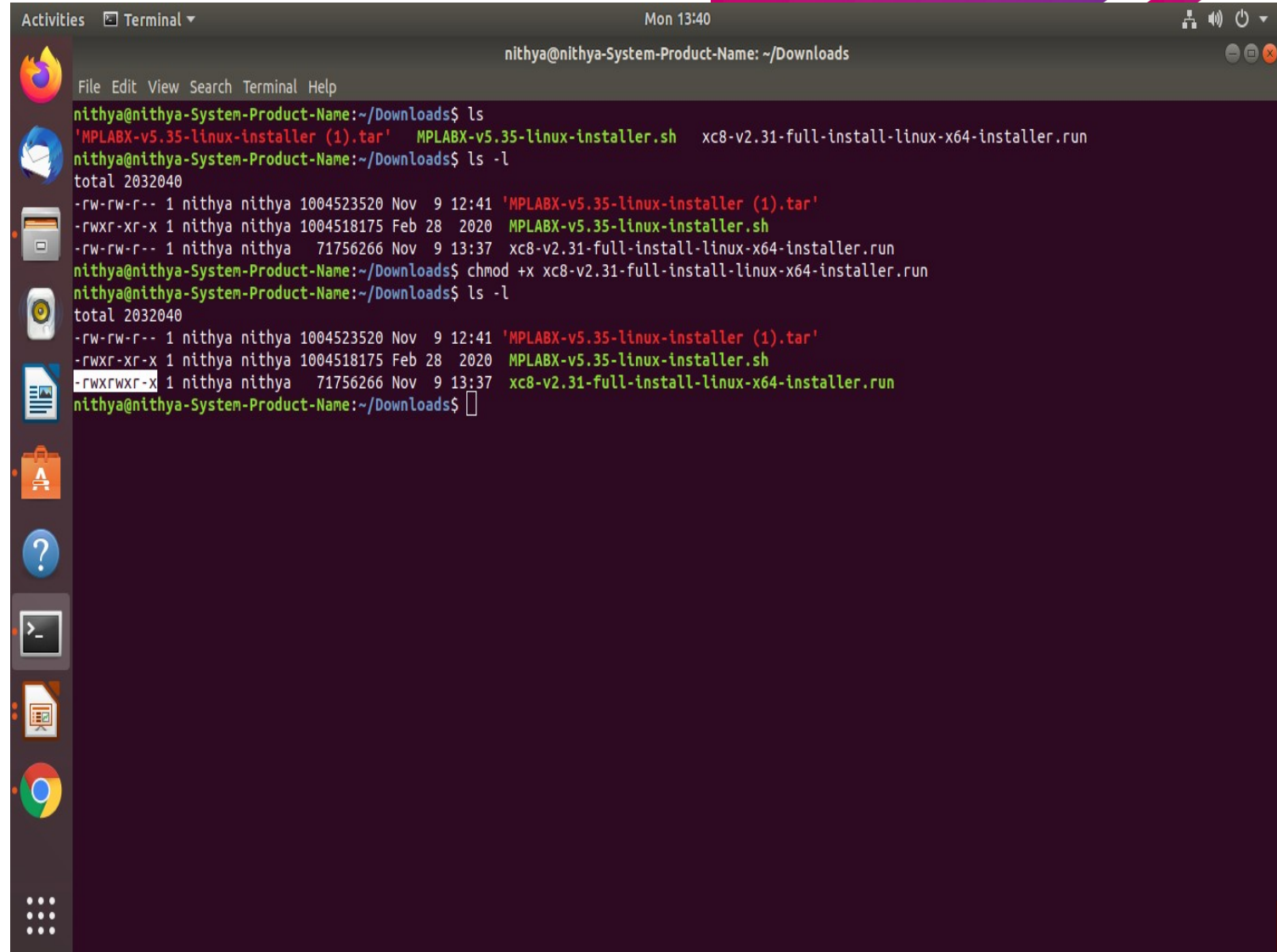
-> Open terminal and move to downloads directory.



```
Activities Terminal Mon 13:39 nithya@nithya-System-Product-Name: ~/Downloads
File Edit View Search Terminal Help
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar' MPLABX-v5.35-linux-installer.sh xc8-v2.31-full-install-linux-x64-installer.run
nithya@nithya-System-Product-Name:~/Downloads$
```


Installing XC8

-> Add executable permission for xc8 compiler.

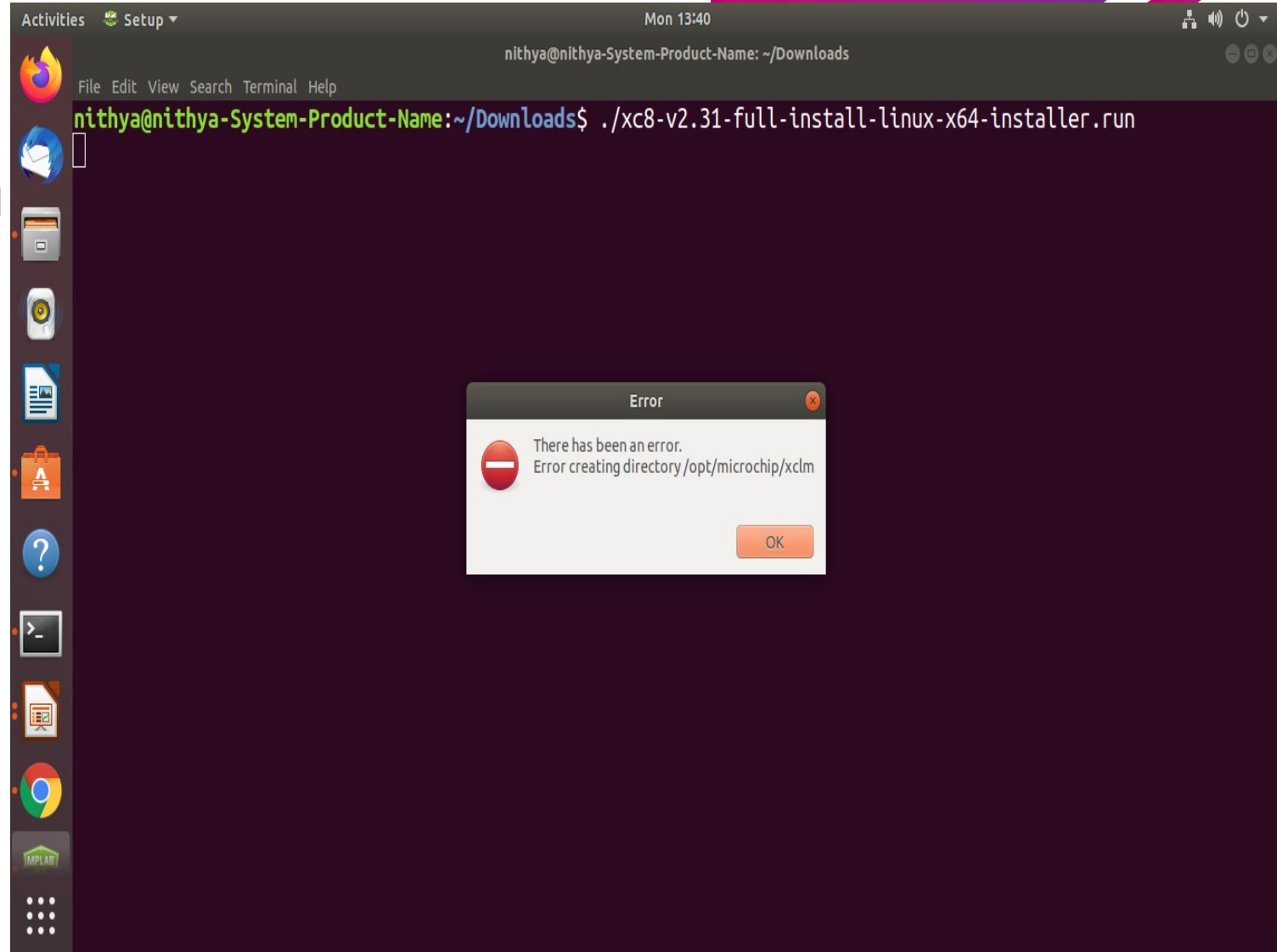


A terminal window titled 'nithya@nithya-System-Product-Name: ~/Downloads' showing the installation of the XC8 compiler. The user runs 'ls' to list files, then 'ls -l' to show details. The output shows three files: 'MPLABX-v5.35-linux-installer (1).tar', 'MPLABX-v5.35-linux-installer.sh', and 'xc8-v2.31-full-install-linux-x64-installer.run'. The user then runs 'chmod +x xc8-v2.31-full-install-linux-x64-installer.run' to add executable permissions. Finally, the user runs 'ls -l' again, and the output shows that the permissions for 'xc8-v2.31-full-install-linux-x64-installer.run' have been updated to '-rwxrwxr-x'.

```
nithya@nithya-System-Product-Name:~/Downloads$ ls
'MPLABX-v5.35-linux-installer (1).tar'  MPLABX-v5.35-linux-installer.sh  xc8-v2.31-full-install-linux-x64-installer.run
nithya@nithya-System-Product-Name:~/Downloads$ ls -l
total 2032040
-rw-rw-r-- 1 nithya nithya 1004523520 Nov  9 12:41 'MPLABX-v5.35-linux-installer (1).tar'
-rwxr-xr-x 1 nithya nithya 1004518175 Feb 28  2020 MPLABX-v5.35-linux-installer.sh
-rw-rw-r-- 1 nithya nithya  71756266 Nov  9 13:37 xc8-v2.31-full-install-linux-x64-installer.run
nithya@nithya-System-Product-Name:~/Downloads$ chmod +x xc8-v2.31-full-install-linux-x64-installer.run
nithya@nithya-System-Product-Name:~/Downloads$ ls -l
total 2032040
-rw-rw-r-- 1 nithya nithya 1004523520 Nov  9 12:41 'MPLABX-v5.35-linux-installer (1).tar'
-rwxr-xr-x 1 nithya nithya 1004518175 Feb 28  2020 MPLABX-v5.35-linux-installer.sh
-rwxrwxr-x 1 nithya nithya  71756266 Nov  9 13:37 xc8-v2.31-full-install-linux-x64-installer.run
nithya@nithya-System-Product-Name:~/Downloads$
```

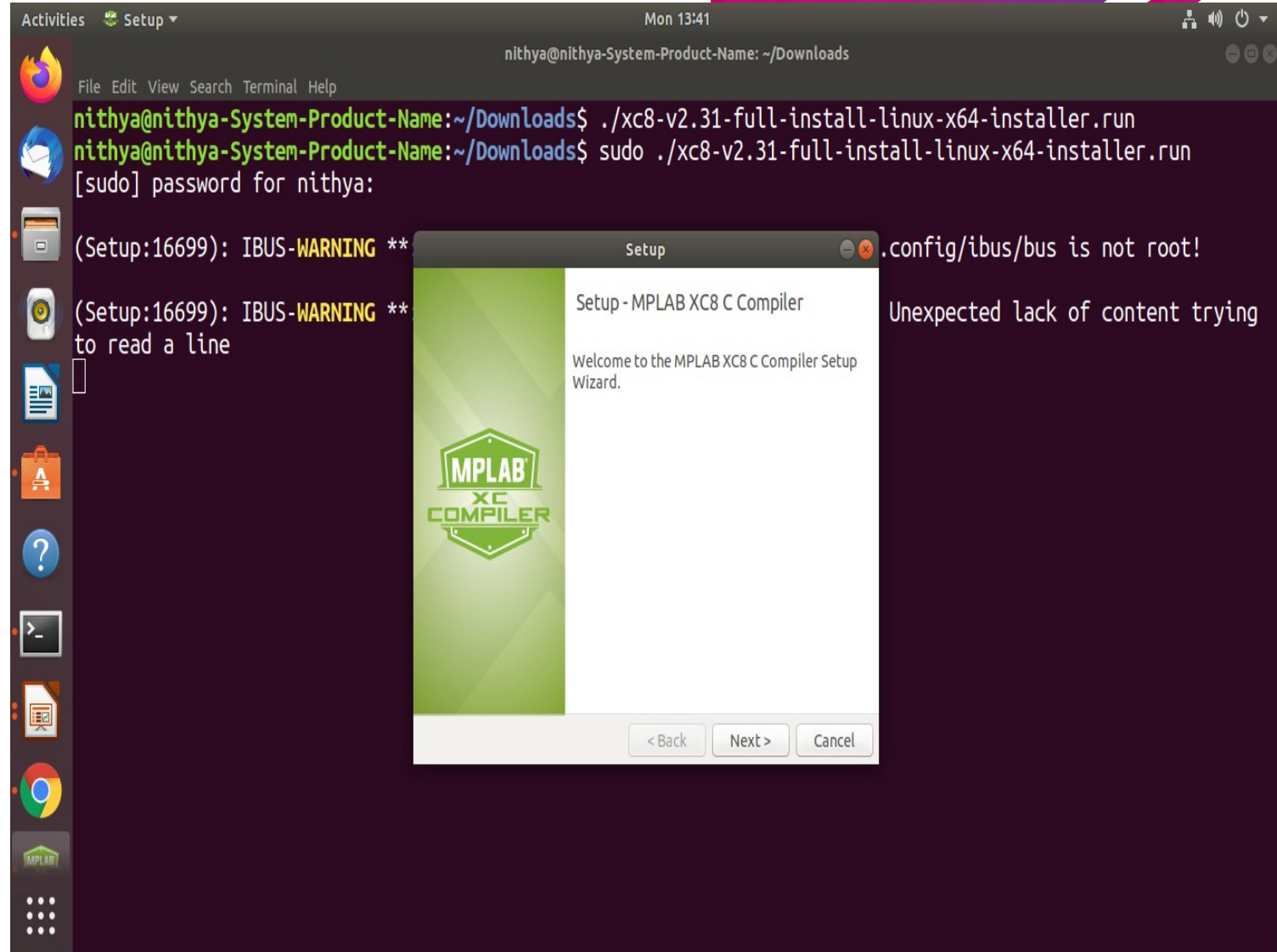
Installing XC8

- > Execute the .run file.
- > If you execute without sudo you will get error as shown in the figure.



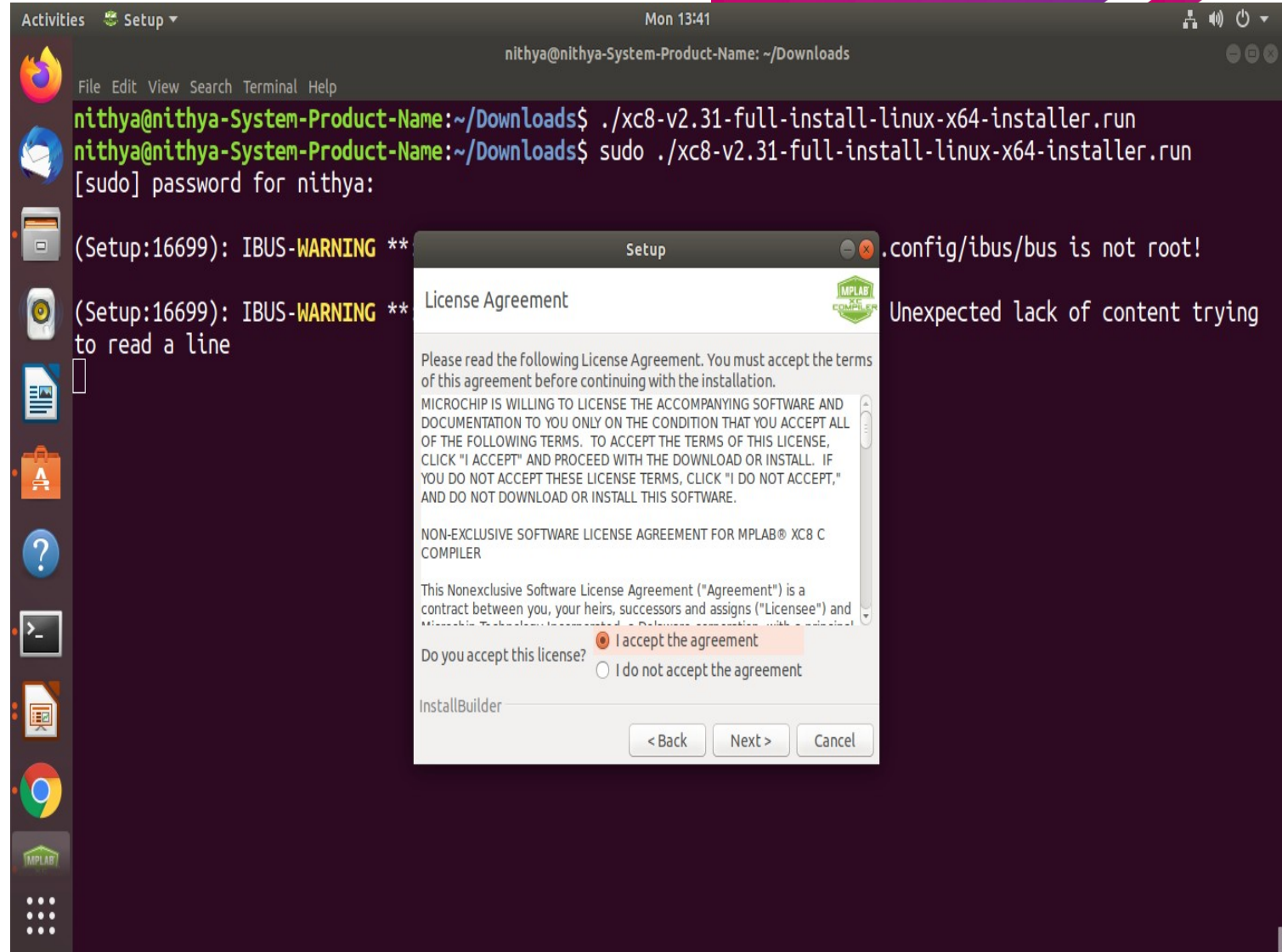
Installing XC8

- > Add sudo and execute the .run file.
- > Dialog box will open and click on next.



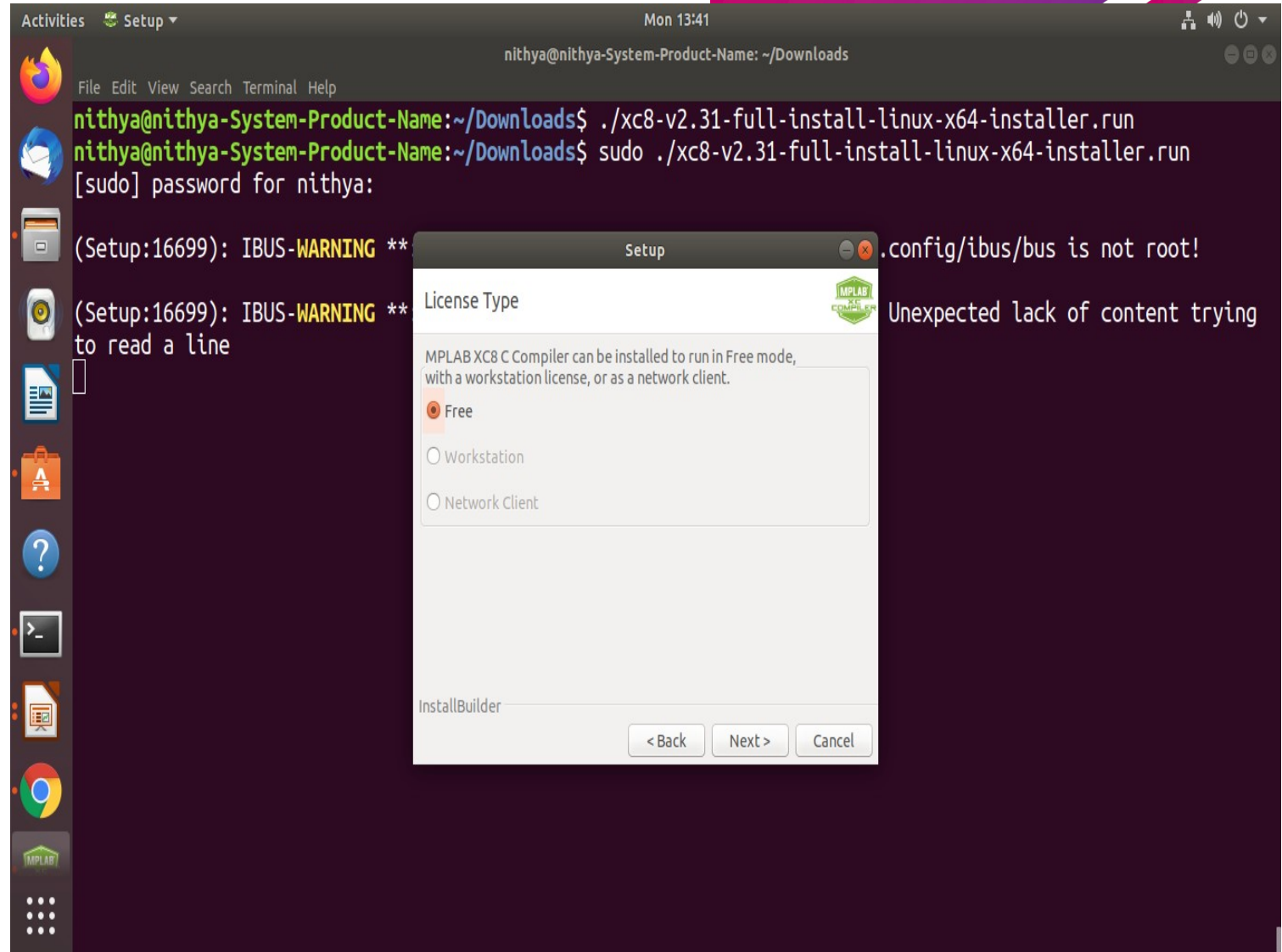
Installing XC8

-> Accept the agreement.



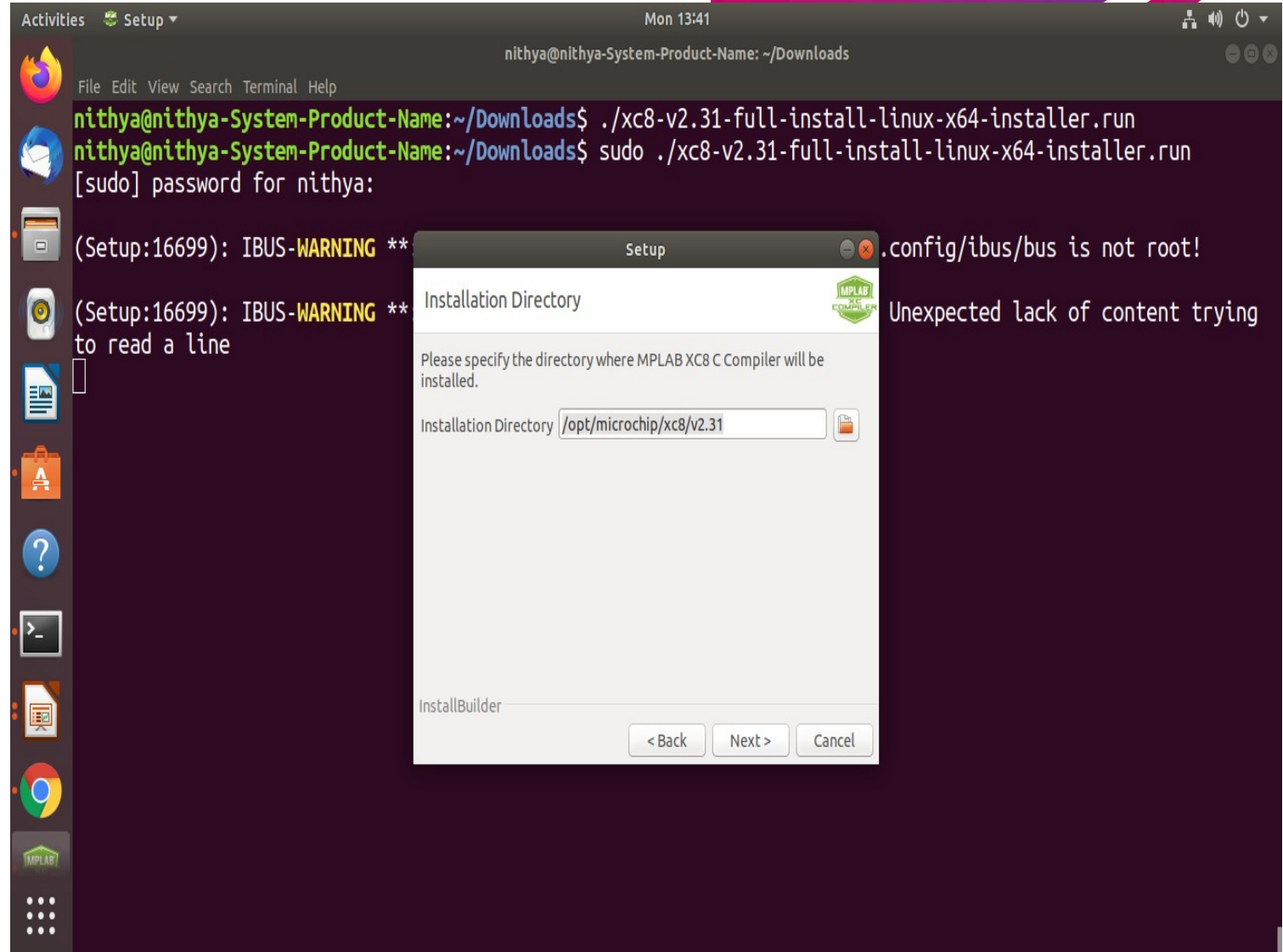
Installing XC8

-> Click on next.



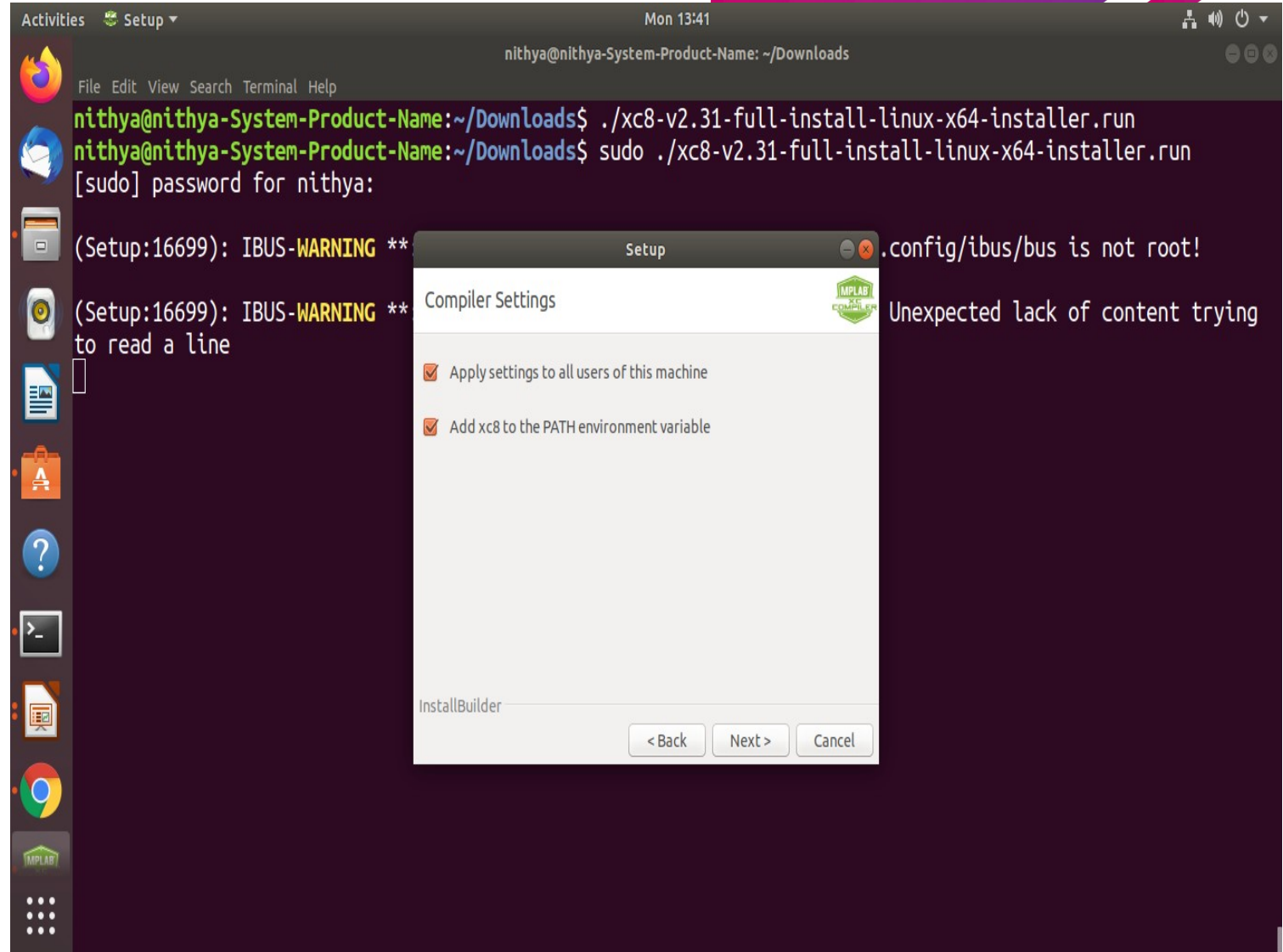
Installing XC8

-> Click on next.



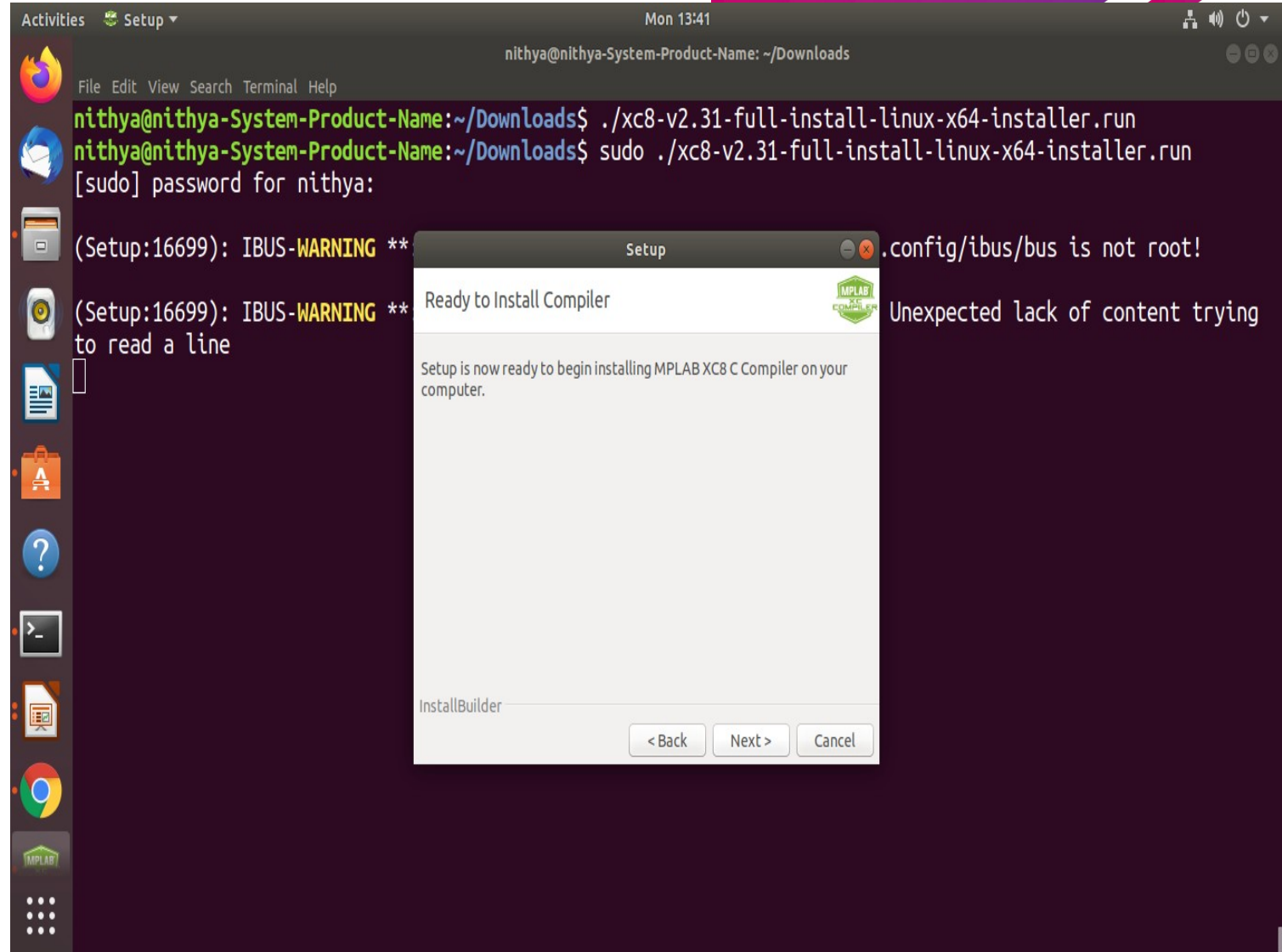
Installing XC8

- > Select both.
- > Click on next.



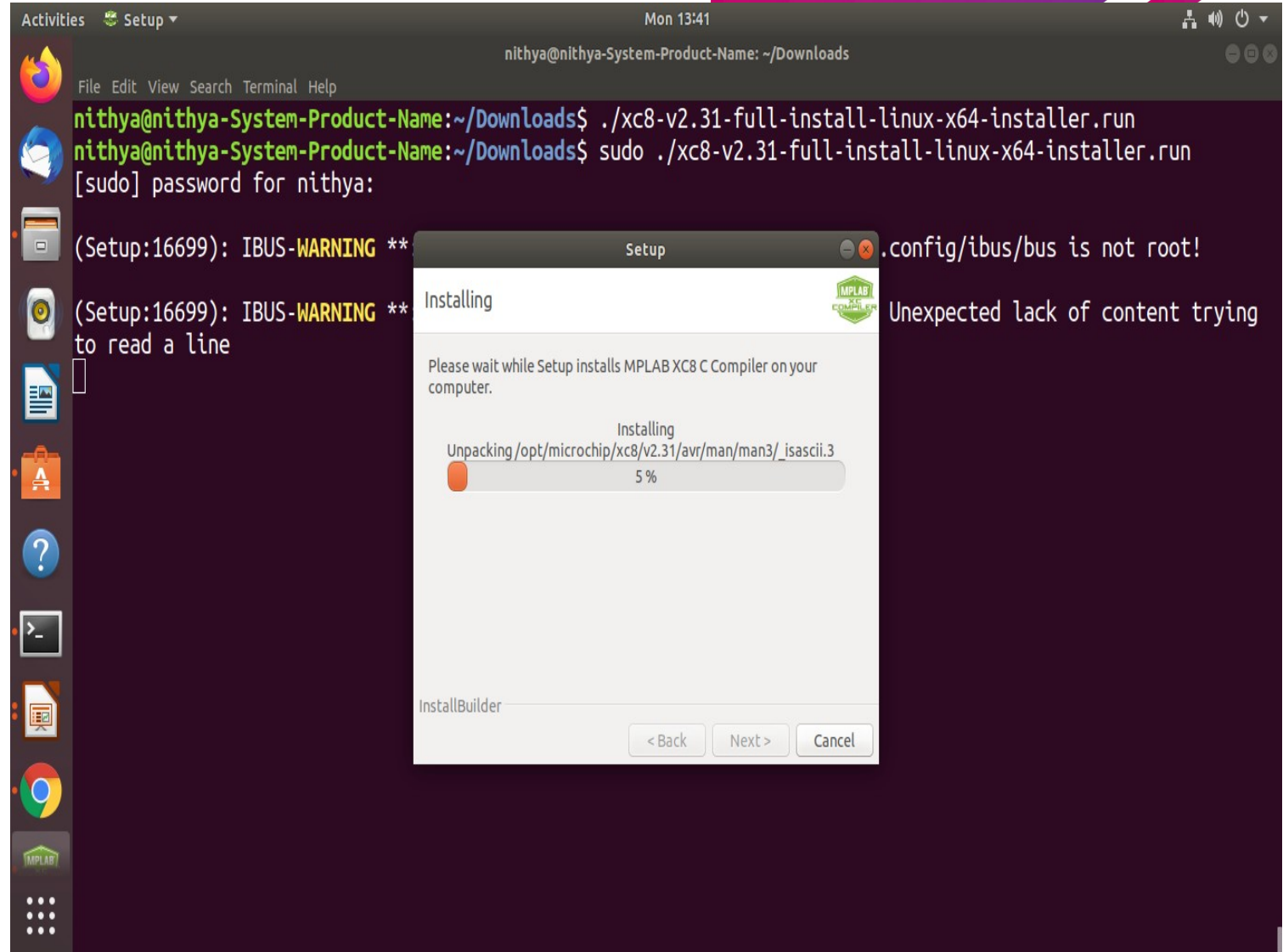
Installing XC8

-> Click on next.



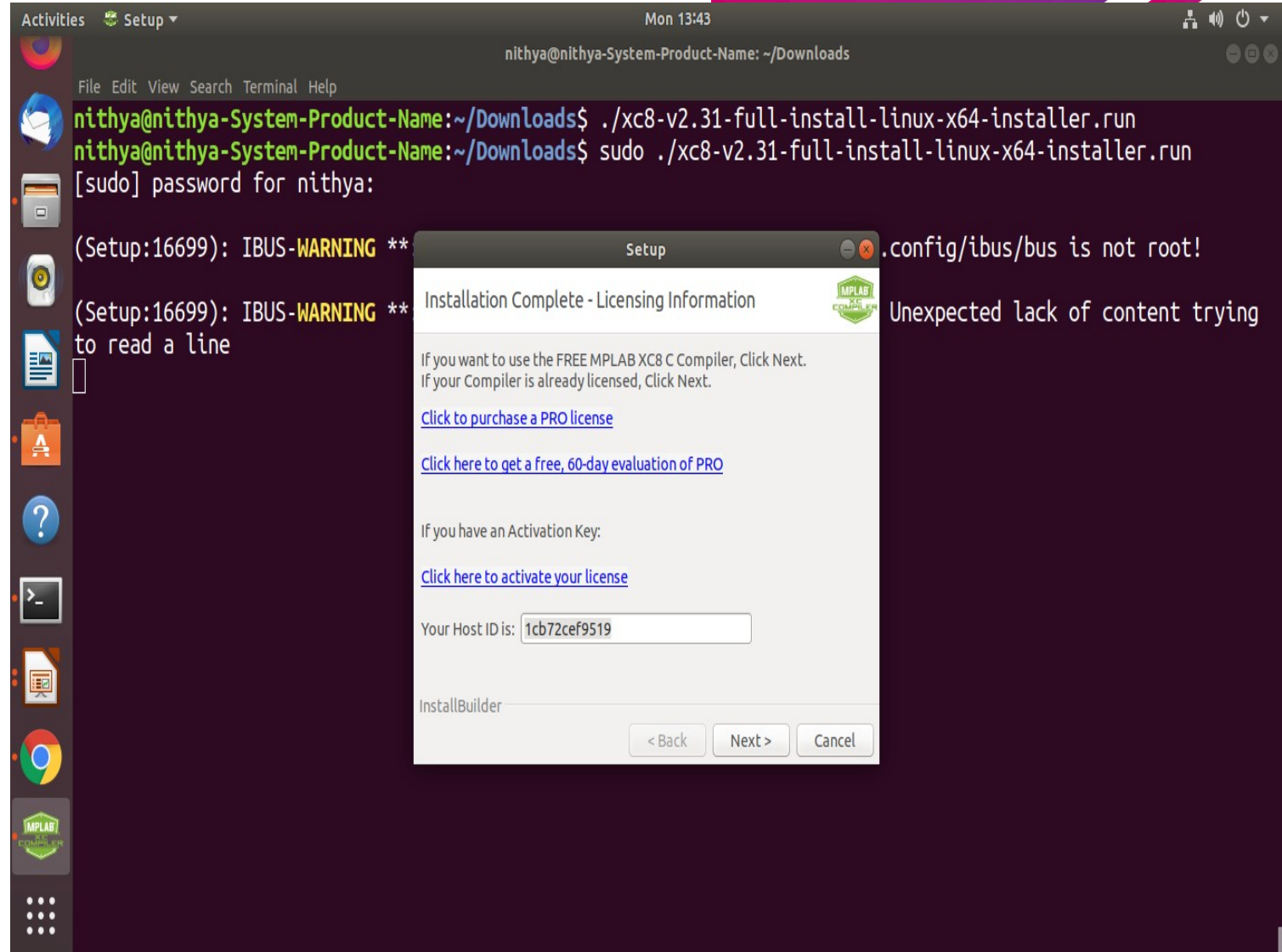
Installing XC8

-> Started installing.



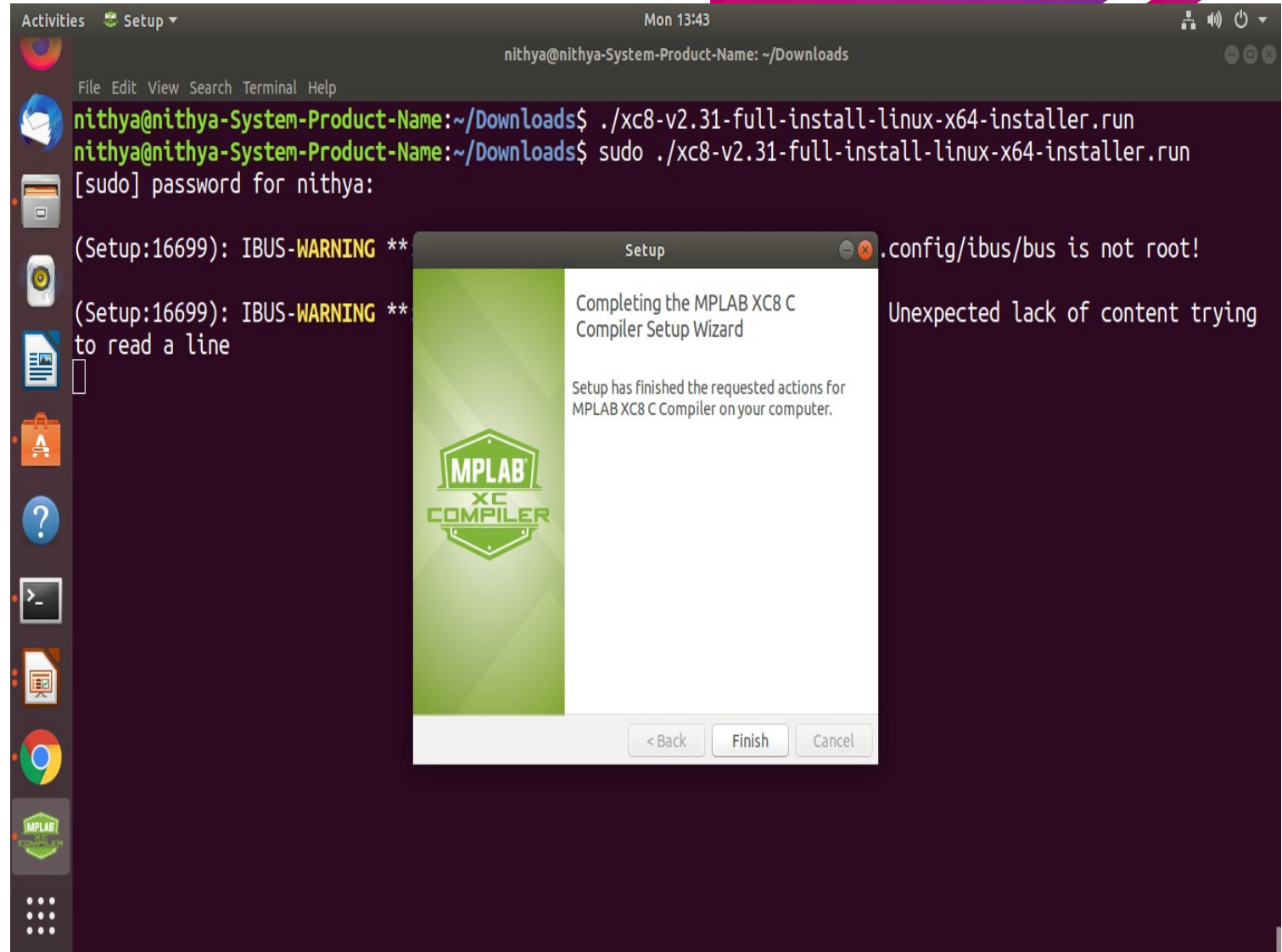
Installing XC8

-> Click on next.



Installing XC8

-> Click on Finish. Compiler installed successfully.



```
Activities Setup ▾ Mon 13:43
nithya@nithya-System-Product-Name: ~/Downloads
File Edit View Search Terminal Help
nithya@nithya-System-Product-Name:~/Downloads$ ./xc8-v2.31-full-install-linux-x64-installer.run
nithya@nithya-System-Product-Name:~/Downloads$ sudo ./xc8-v2.31-full-install-linux-x64-installer.run
[sudo] password for nithya:

(Setup:16699): IBUS-WARNING **:
(Setup:16699): IBUS-WARNING **:
to read a line

Setup
Completing the MPLAB XC8 C
Compiler Setup Wizard

Setup has finished the requested actions for
MPLAB XC8 C Compiler on your computer.

< Back Finish Cancel
```

MPLAB IDE Installation guide for Linux

