AI & Robotics

ROS Melodic Morenia VM

PXL AI & ROBOTICS LAB

Goals

The **junior-colleague**

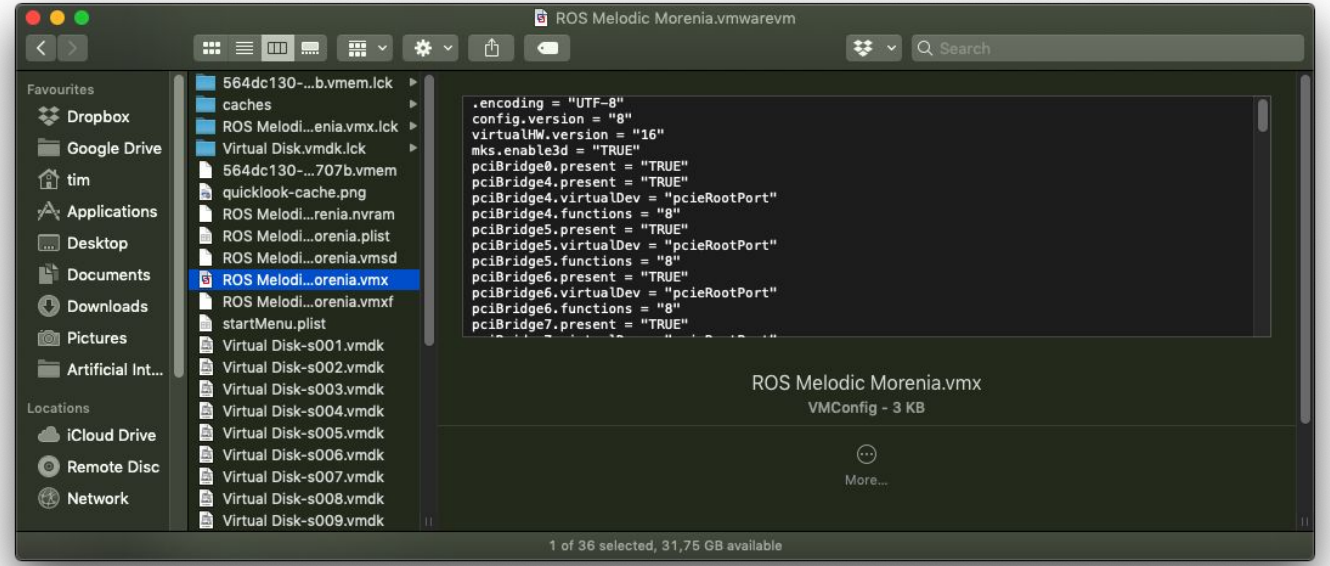
- can explain why an IDE needs to be run from the command line

VMware Workstation Player

[**INFO**]

Free download @ https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html

VMware Workstation Player

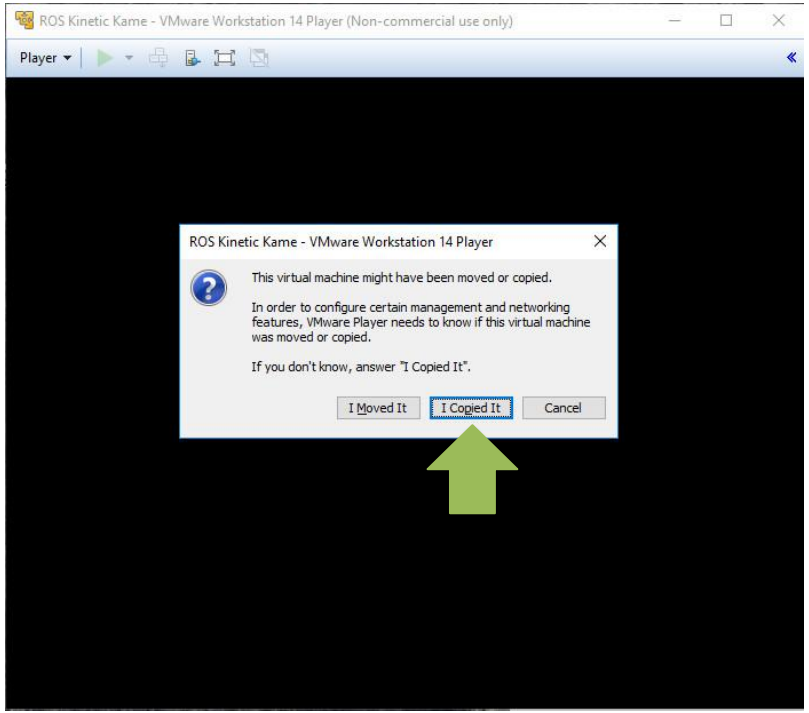


[**INFO**]

Windows/Linux: double click on “ROS Melodic Morenia.vmx”.

OSX: double click on: “ROS Melodic Morenia.vmwarevm”.

VMware Workstation Player



[**INFO**]

Answer “I Copied It”.

Known VMware Errors

- **VT-X Error or AMD-V Error**

  Cause: Hardware virtualization is disabled.

  Solution: Turn “Virtualization” on in BIOS. ***Need help?***

- **Error while opening: VMX File is corrupt.**

  Cause 1: Windows: Selected the wrong file.

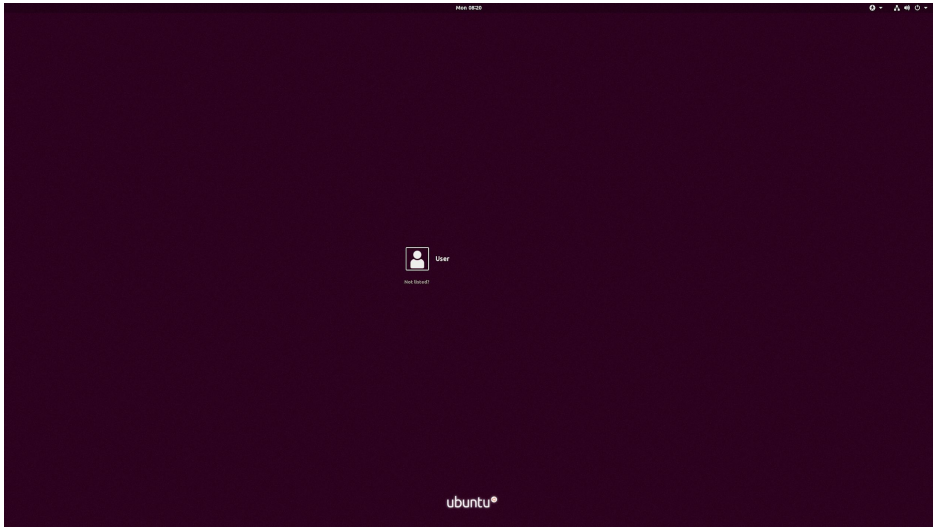
  Solution 1: Start “ROS Kinetic Kame.vmx”

  Cause 2: OSX (Or correct file): Corrupted files.

  Solution 2: Recopy the VM from USB ***and report to us.***

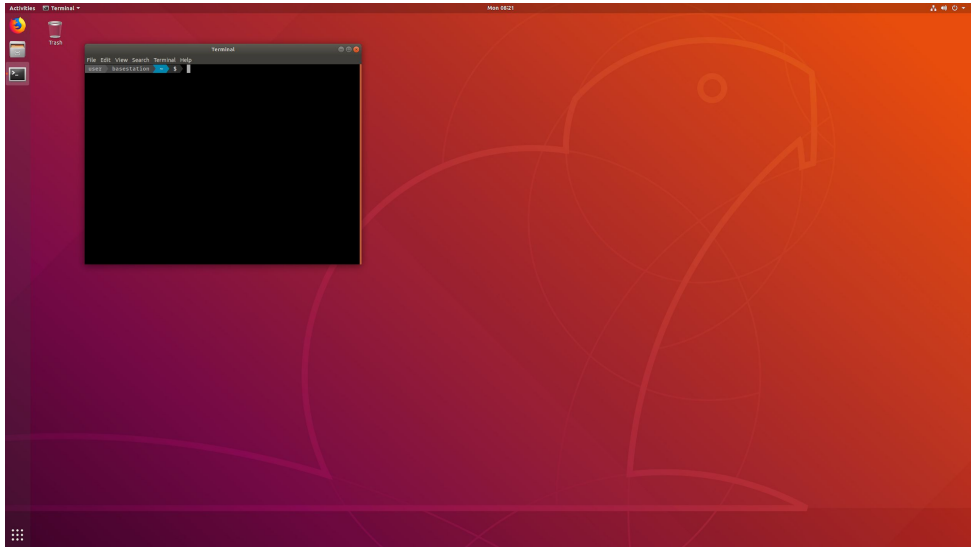
- Other issues? ***Report to us.***

Ubuntu Desktop 18.04 LTS



- Login: user
- Password: user
- The user has sudo rights

Linux Terminal



1. Press: <Win. Key>
2. Type: ter
3. Select/Click: terminal

OR

→Click on terminal icon

→ Press <Win. Key> + 3

[INFO]

The terminal starts automatically in the user home directory: `/home/user`

Exploration of Directories

```
user@basestation:~$ pwd
/home/user
user@basestation:~$ ls
Desktop    Downloads  Pictures  Public     Videos
Documents  Music      Projects  Templates
catkin_wsuser@basestation:~$ ls Projects/
catkin_ws
user@basestation:~$ ls /opt/ros/melodic/
bin     etc      lib         setup.sh        setup.zsh
env.sh  include  setup.bash  _setup_util.py  share
```

[INFO]

A Linux command cheat sheet will be supplied.

Exploration: Workspaces

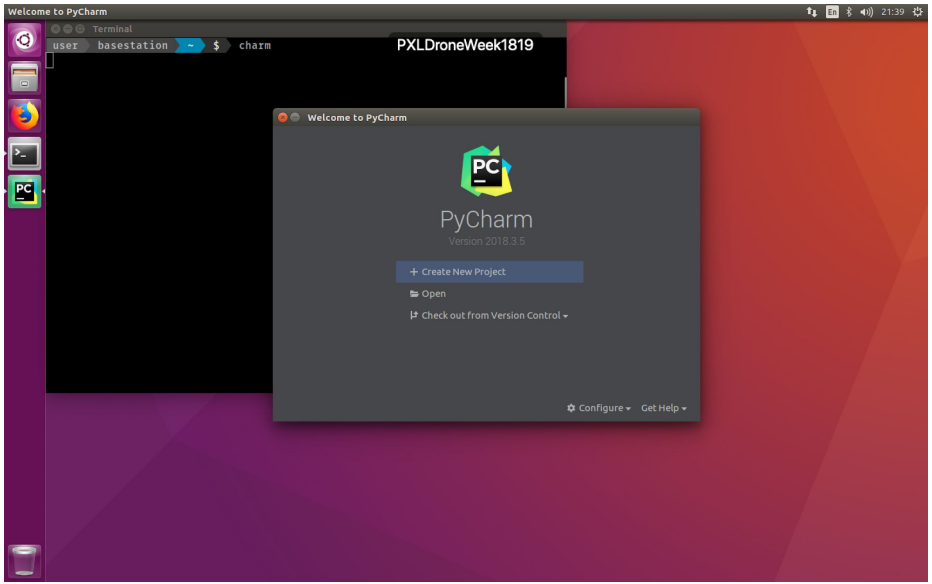
```
user@basestation:~$ ls Projects/catkin_ws/src/
CMakeLists.txt  own_package
user@basestation:~$ cd Projects/catkin_ws/src/
user@basestation:~/Projects/catkin_ws/src$ ls
CMakeLists.txt
user@basestation:~/Projects/catkin_ws/src$ cd
user@basestation:~$
user@basestation:~$ tail -20 .bashrc | grep source
source /opt/ros/melodic/setup.bash
source /home/user/Projects/catkin_ws/devel/setup.bash
user@basestation:~$
```

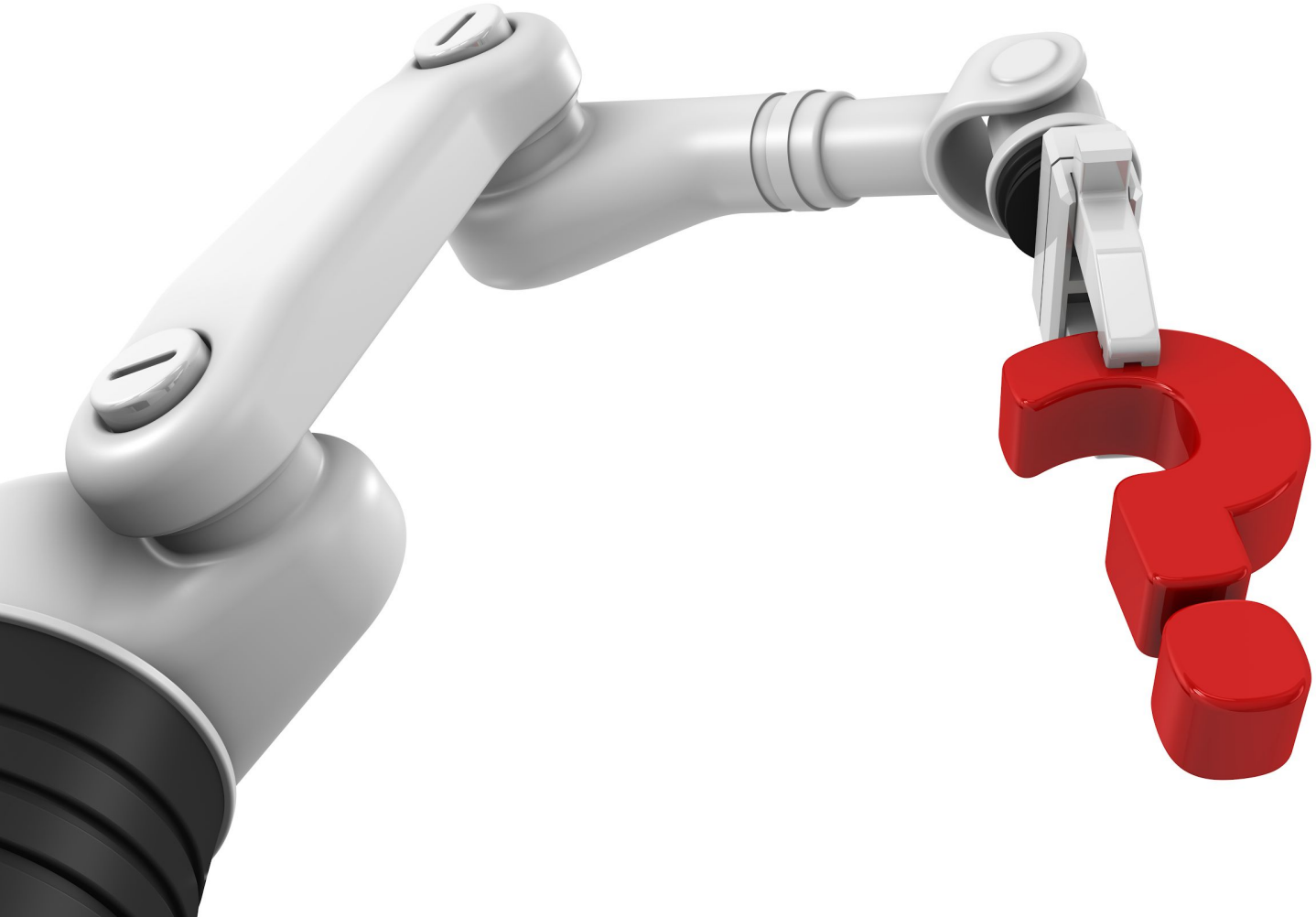
These set environment variables. That's way you need to run PyCharm from the command line.

[INFO]

A Linux command cheat sheet will be supplied.

PyCharm IDE



- Community Edition
- Version 2018.3.5
- `$ charm {dir/file}`
- `Python 2.7.15rc1`
- `Python 3.6.7`

```
user@basestation:~$ cd Projects/catkin_ws/src/
user@basestation:~/Projects/catkin_ws/src$ pycharm own_package/ # if own_package exists!
user@basestation:~/Projects/catkin_ws/src$ # We learn how to make packages in a few moments . . .
```