WEEK-1
Arduino Installation

1. **Aim:** Install necessary software for Arduino and Raspberry Pi.

Arduino:

- Arduino is a platform that makes it easy for you to build projects using electronics.
- IoT is a way of using electronics - to make electronic modules talk to each other remotely and wirelessly (often using a Cloud) to solve problems.
- Now, Arduino can also help you easily build IoT projects in two ways: Using traditional Arduino boards and attaching communication breakout modules (like nRF Bluetooth, WiFi, LoRA, GSM, etc) to them.

- Arduino is a micro controller that can be connected to one or more sensors and help you capture the data or information and then pass it on to processor. If you know the full stack of IoT then you should also look at Raspberry.

- RaspPi is a microprocessor so the basic difference between Arduino and RasPi is that RaspPi is controller plus processor and Arduino is just a micro controller.

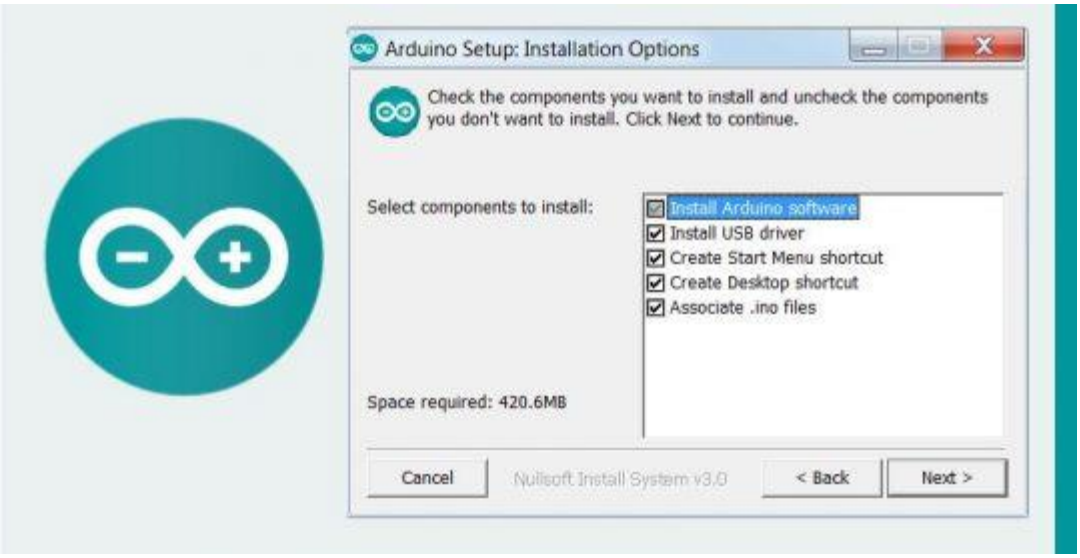
- They suit the need for different use cases. You can easily read online about this

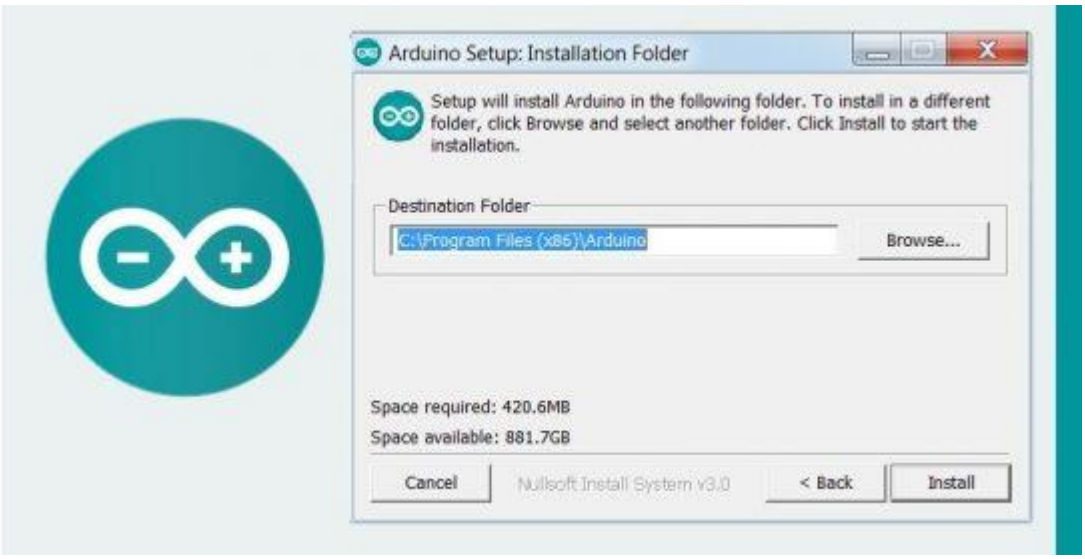
  both.

Download and install the Arduino software (Arduino IDE 1.8.5)

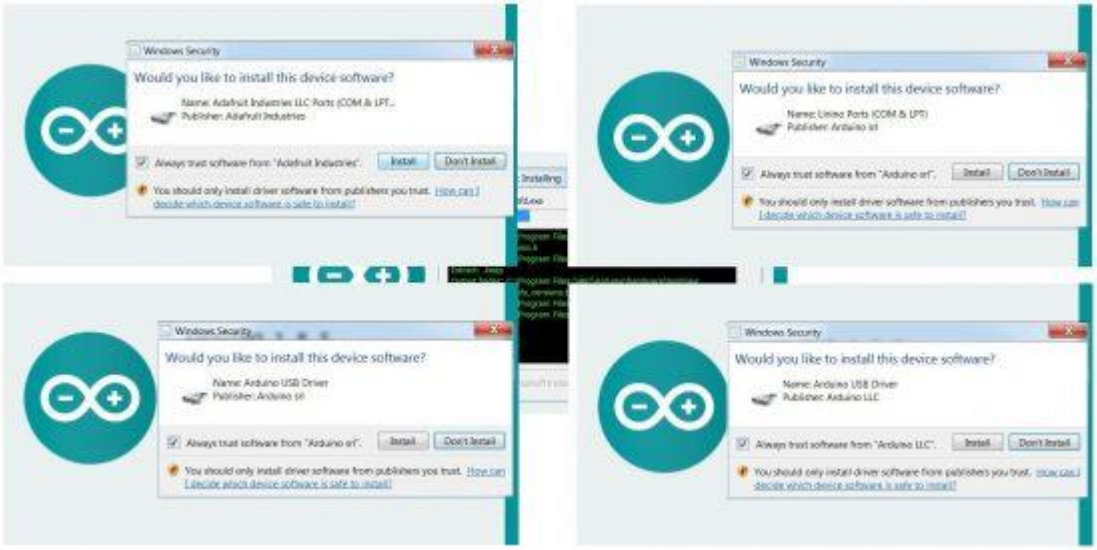
- Go to the Arduino website and click the download link to go to the download page.
- After downloading, locate the downloaded file on the computer and extract the folder from the downloaded zipped file. Copy the folder to a suitable place such as your desktop.

Read the Arduino License agreement and click the “I Agree” button.



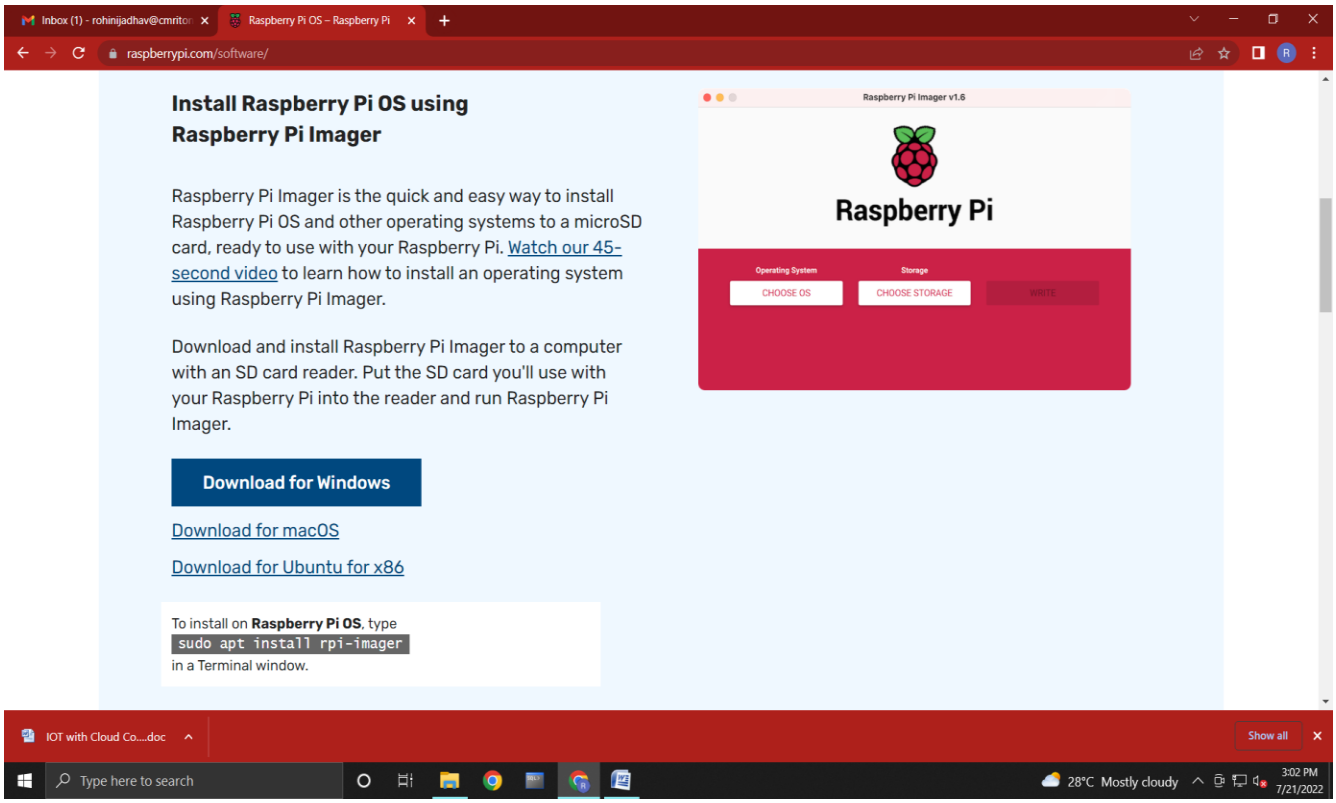


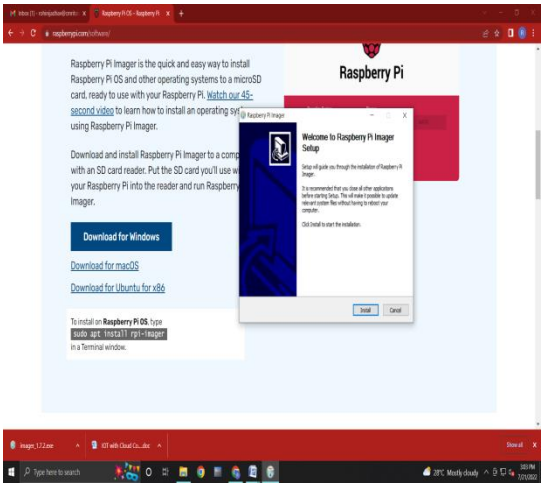
The Arduino software will start to install.

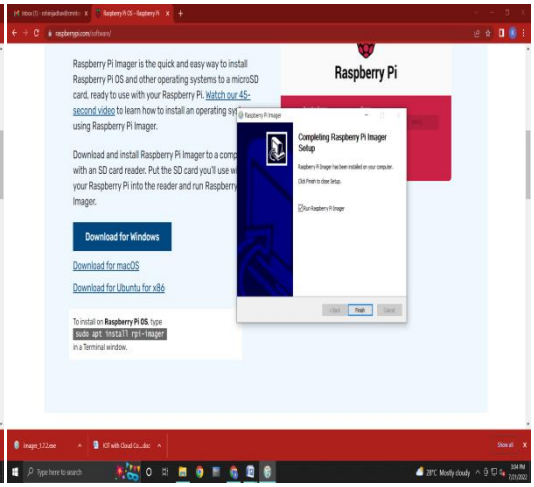


Running the Arduino IDE Software

Raspberry Pi




Raspberry Pi
Raspberry Pi Imager is the quick and easy way to install Raspberry Pi OS and other operating systems to a microSD card, ready to use with your Raspberry Pi. Watch our 45-second video to learn how to install an operating system using Raspberry Pi Imager.
Download and install Raspberry Pi Imager to a computer with an SD card reader. Put the SD card you'll use with your Raspberry Pi into the reader and run Raspberry Pi Imager.
Download for Windows
Download for macOS
Download for Ubuntu for x86
To install on Raspberry Pi OS, type
sudo apt install rpi-imager
in a Terminal window.
Welcome to Raspberry Pi Imager Setup
Install
Cancel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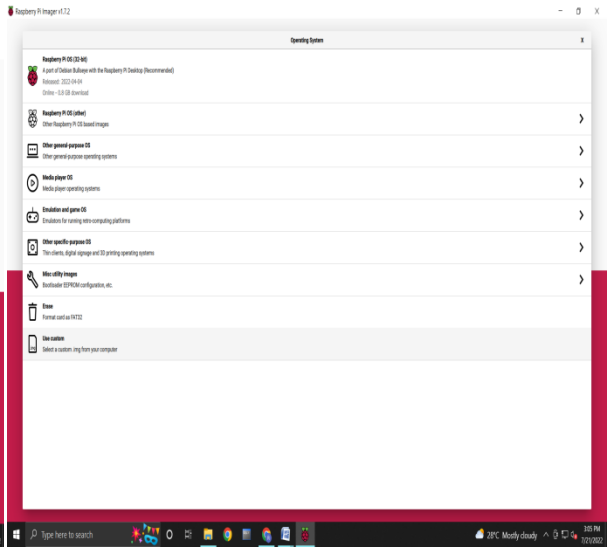
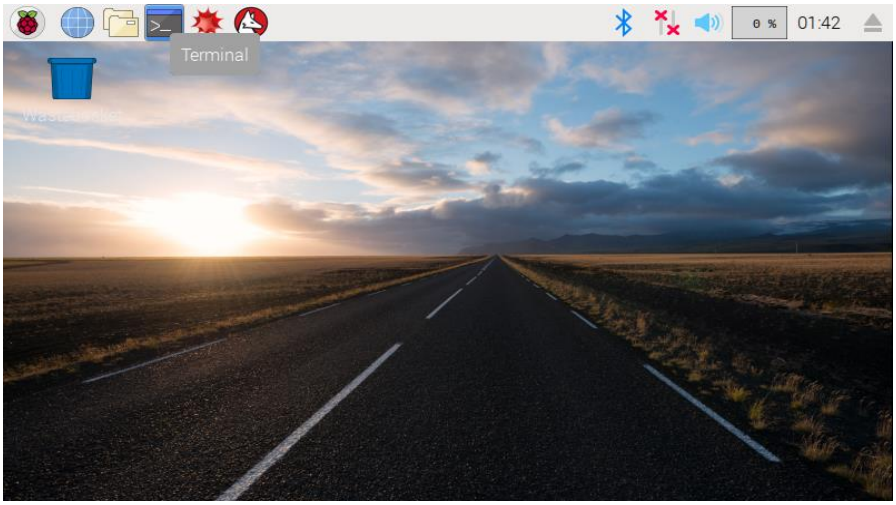
in a Terminal window.
Completing Raspberry Pi Imager Setup
Finish


Raspberry Pi
CHOOSE OS
CHOOSE STORAGE


Operating System
Raspberry Pi OS (32-bit)
A port of Debian Bullseye with the Raspberry Pi Desktop (Recommended)
Raspberry Pi OS (other)
Other Raspberry Pi OS based images
Other general-purpose OS
Other general-purpose operating systems
Media player OS
Media player operating systems
Emulation and game OS
Emulators for running retro-computing platforms
Other specific-purpose OS
Thin clients, digital signage and 3D printing operating systems
Misc utility images
Bootloader EEPROM configuration, etc.
Erase
Format card as FAT32
Use custom
Select a custom .img from your computer


Terminal
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