

## Practical No. 2

### **Aim: Preparing Raspberry Pi: Hardware preparation and Installation**

An OS on a microSD Card. The Raspberry Pi has no internal storage, but instead boots off of a microSD memory card that you provide. Be sure to get a card that's at least 8GB, preferably 32GB or higher, and has class 10 speed (see our list of best Raspberry Pi microSD cards). It almost goes without saying, but you'll need some kind of card reader to write the OS to it from your PC. Downloading and Installing Raspberry Pi OS .Once you have all the components you need, use the following steps to create the boot disk you will need to set up your Raspberry Pi.

1. Insert a microSD card / reader into your computer.
2. Download and install the official Raspberry Pi Imager.
- 3-Available for Windows, macOS or Linux, this app will both download and install the latest Raspberry Pi OS. There are other ways to do this, namely by downloading a Raspberry Pi OS image file and then using a third-party app to “burn it,” but the Imager makes it easier

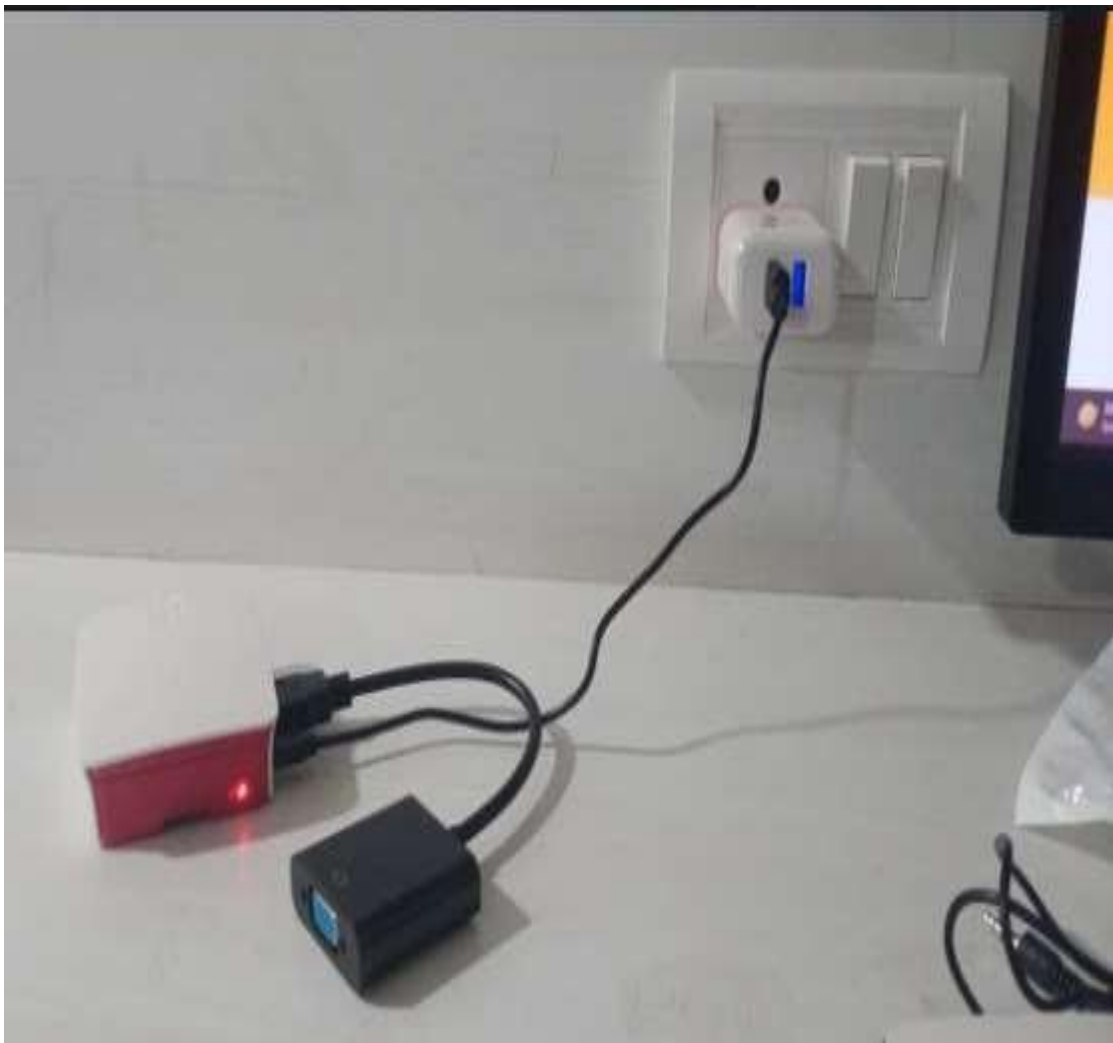
### **Booting Your Raspberry Pi for the First Time**

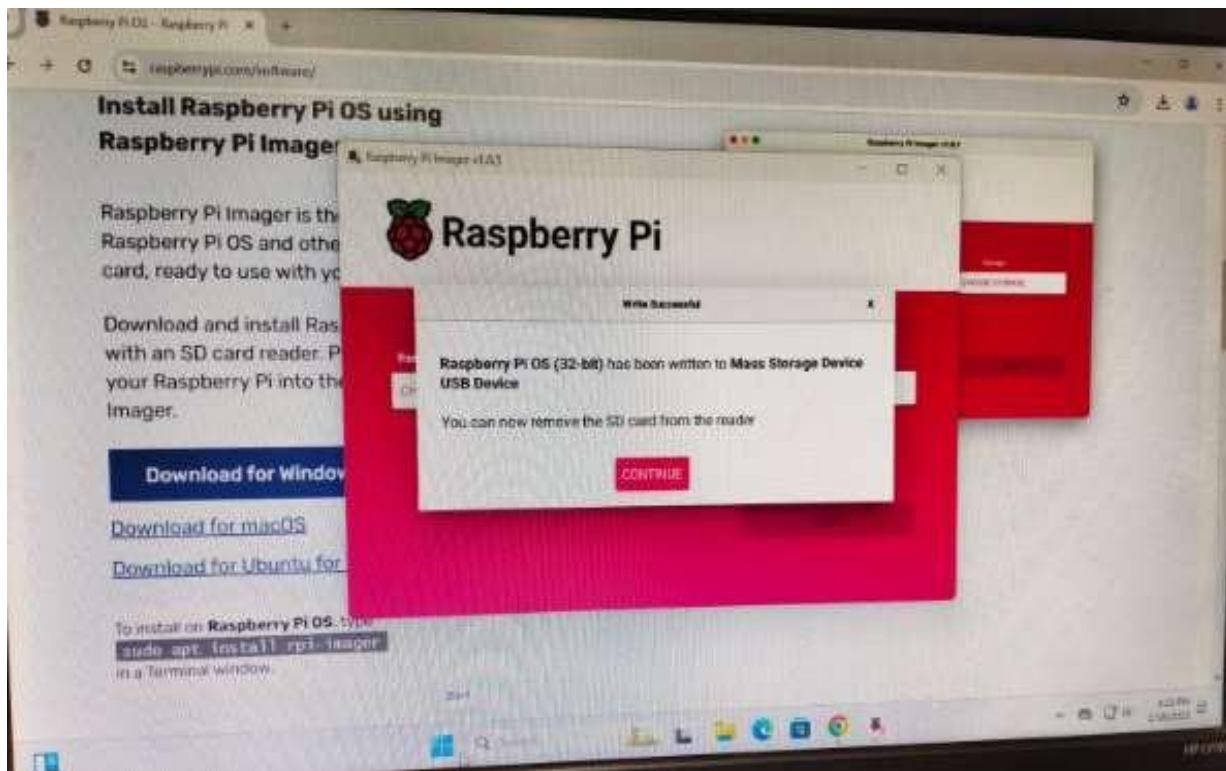
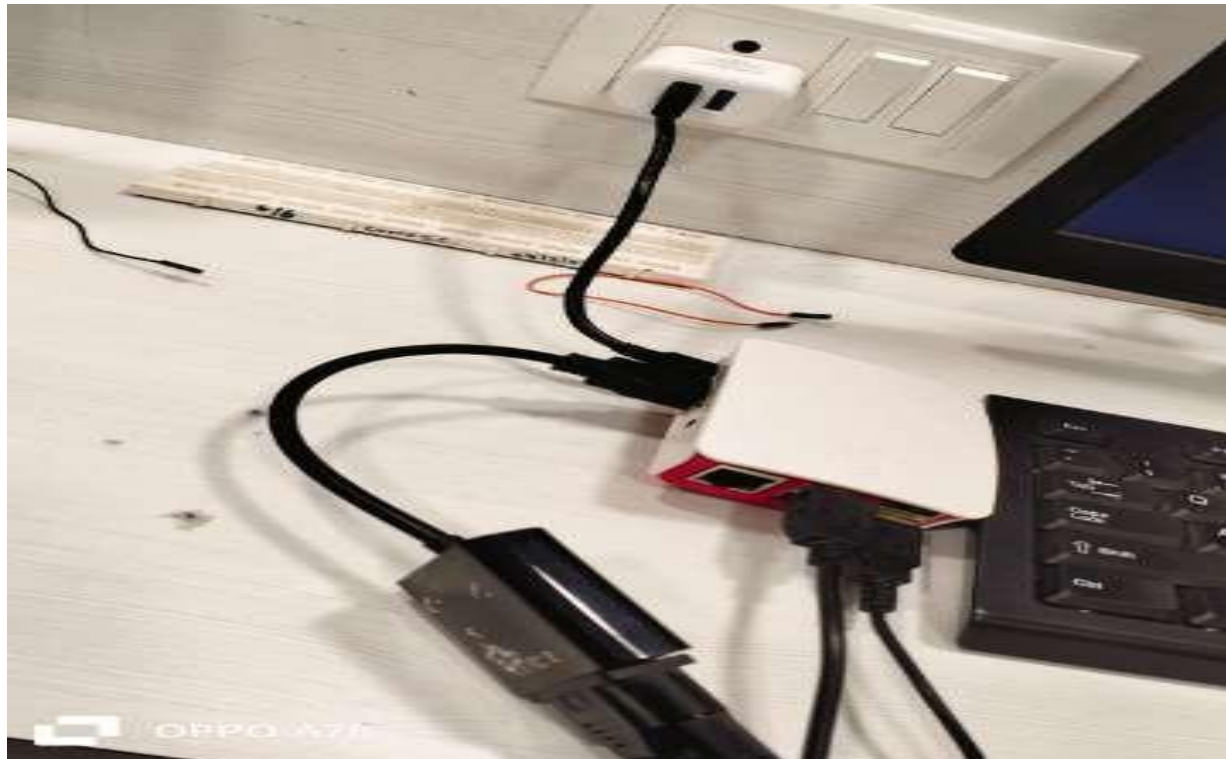
After you're done writing the Raspberry Pi OS to a microSD card, it's time for the moment of truth.

1. Insert the microSD card into the Raspberry Pi.
2. Connect the Raspberry Pi to a monitor, keyboard and mouse.
3. Connect an Ethernet cable if you plan to use wired Internet.
4. Plug the Pi in to power it on.

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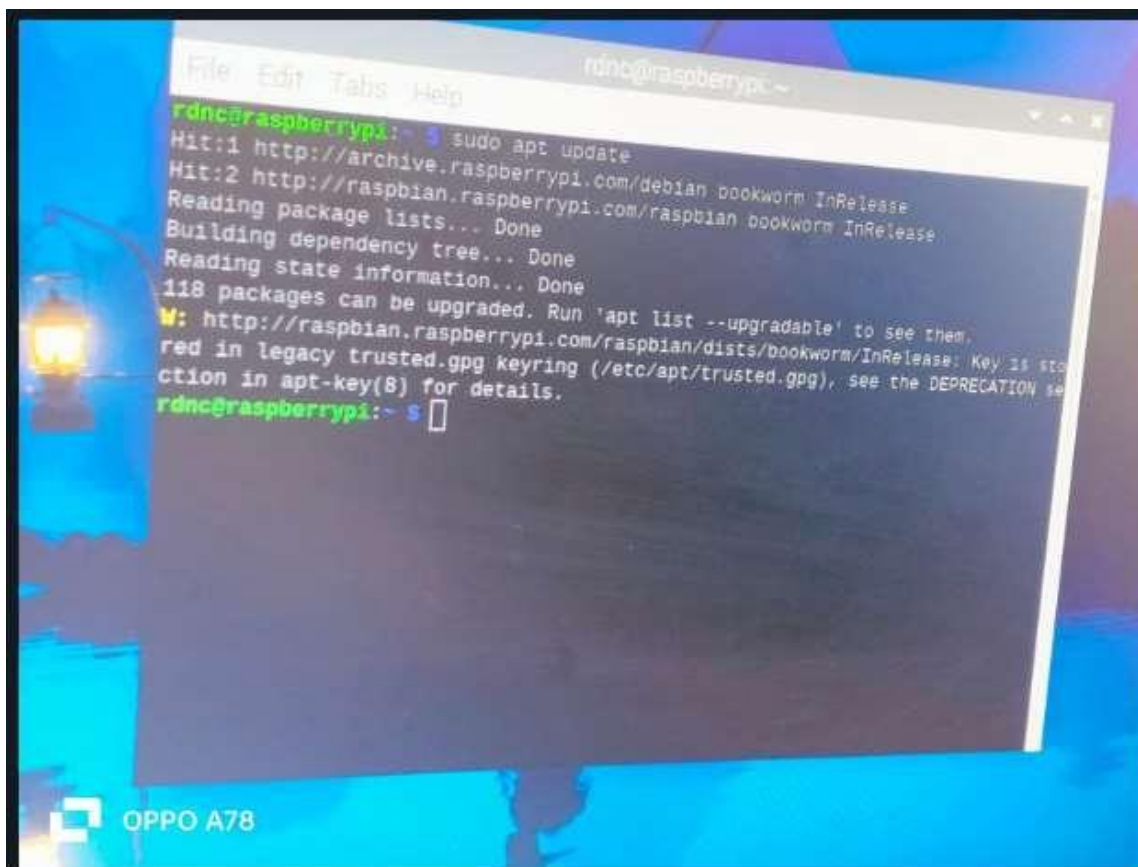
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If you had used the Raspberry Pi Imager settings to create a username and password, you'll be able to go straight into the desktop environment, but if not, you will get a setup wizard. Using the Raspberry Pi First-Time Setup Wizard If you chose a username and password in Raspberry Pi Imager settings, before writing the microSD card, you will get the desktop on first boot. But, if you did not, you'll be prompted to create a username and password and enter all the network credentials by a setup wizard on first boot. If that happens, follow these steps to finish setting up your Raspberry Pi.

1. Click Next on the dialog box.
2. Set your country and language and click Next. The default choices may already be the correct ones.
3. Enter a username and password you wish to use for your primary login. Click Next.
4. Toggle "Reduce the size of the desktop" to on if the borders of the desktop are cut off. Otherwise, just click Next.
5. Select the appropriate Wi-Fi network on the screen after, provided that you are connecting via Wi-Fi. If you don't have Wi-Fi or are using Ethernet, you can skip this.
6. Enter your Wi-Fi password (unless you were using Ethernet and skipped)
7. Click Next when prompted to Update Software. This will only work when you are connected to the Internet, and it can take several minutes. If you are not connected to the Internet, click Skip.
8. Click Restart.



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