

Intel® Easy Steps

Using external storage devices like Pen Drive, CDs and DVDs

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Since the advent of computers, there has been a need to transfer data between devices and/or store them permanently. You may want to look at a file that you have created or an image that you have taken today one year later. For this it has to be stored somewhere securely. Similarly, you may want to give a document you have created or a digital picture you have taken to someone you know. There are many ways of doing this – online and offline. While online data transfer or storage requires the use of Internet, offline storage can be managed with minimum resources. The only requirement in this case would be a storage device.

Earlier data storage devices used to mainly be Floppy drives which had a small storage space. However, with the development of computer technology, we today have pen drives, CD/DVD devices and other removable media to store and transfer data. With these, you store/save/copy files and folders containing data, pictures, videos, audios etc. from your computer and even transfer them to another computer. There are called secondary storage devices. To access the data stored in these devices, you have to attach them with a computer and access the stored data. Some of the examples of external storage devices are- Pen drives, CDs and DVDs.



Introduction to Pen Drive/CD/DVD

A pen drive is a small self-powered drive that connects to a computer directly through a USB port. This device enables you to read, write, copy, delete and move data from USB flash drives (Pen drives) to the hard disk drive of your computer and back again. It is a Re-writable media (which means data stored can be deleted or replaced as and when necessary). They generally store anywhere from 1 GB to 64 GB of data.

CD/ DVD is another alternative for carrying data, however it cannot store as much data as is stored in a pen drive. CD (Compact Disc) is a storage medium that has a storage capacity of 650 MB or 700 MB. DVD (Digital Versatile/Video Disc) is storage medium with a greater audio-visual data storage capacity than that of the CD of the same dimensions. (A single layered DVD holds a little more than 4 GBs of data). In this activity we will look at how to use these storage devices.

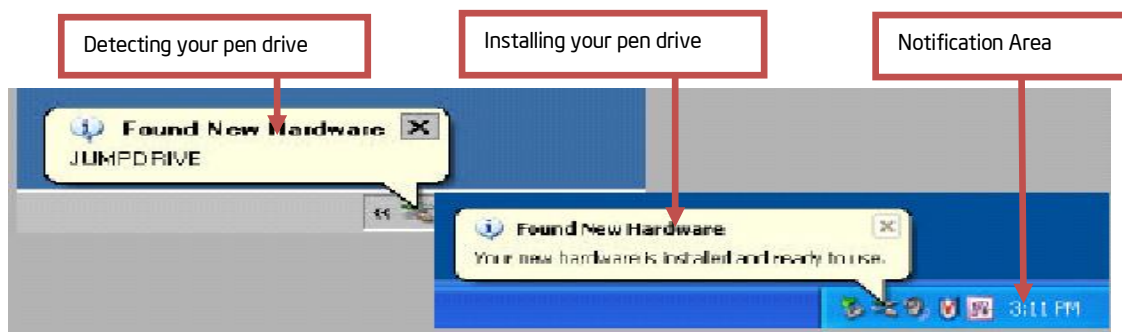
A. Location of USB ports for Pen Drives and drives for CD/DVD.

A pen drive has to be inserted into the space called USB port of your computer whereas a CD/DVD is inserted into the CD/DVD drive as shown in the pictures below.

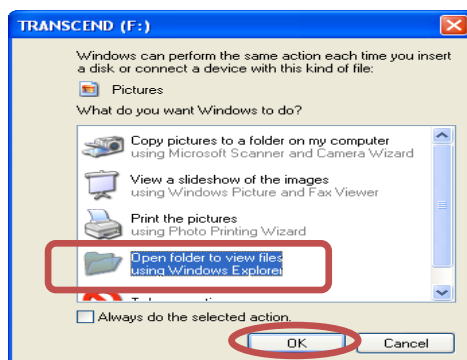


B. Viewing files on your Your Pen Drive

1. The hardware of your computer will automatically start detecting the inserted 'pen drive'. After detecting the hardware will automatically install the pen drive on your computer. You will keep getting appropriate messages in the notification area of the taskbar as is evident from the images below. After a few seconds, your pen drive will be ready to use.



2. In most cases, an Options Window will automatically open when you insert the pen drive. To see the files already present in the device, select "Open folder to view files" and Click "OK."



Note: Alternatively, you can go to **My Computer** and select the drive corresponding to the pen drive. Right click on the drive and select 'Open' from the menu to view the files. Most computers have a hard disk drives (e.g. C: and D:) and a few removable storage devices such as a floppy drive, a CD-ROM drive (F:) etc.

Name	Type	Total Size	Free Space
Local Disk (C:)	Local Disk	39.0 GB	19.4 GB
New Volume (D:)	Local Disk	48.8 GB	12.8 GB
New Volume (E:)	Local Disk	61.1 GB	19.2 GB
DVD-RAM Drive (F:)	CD Drive		
Transcend (G:)	Removable Disk		
DVD Drive (H:)	CD Drive		
My Bluetooth Places	System Folder		
USB Video Device	Digital camera		

Here, in the example the pen drive is G: drive

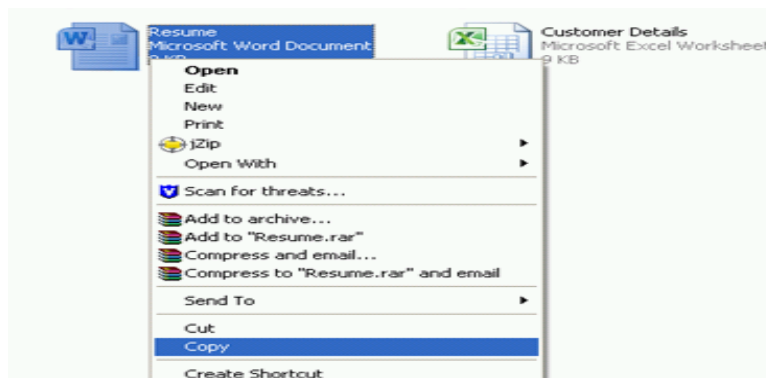


Select 'Open' option from the menu to view the files in the pen drive

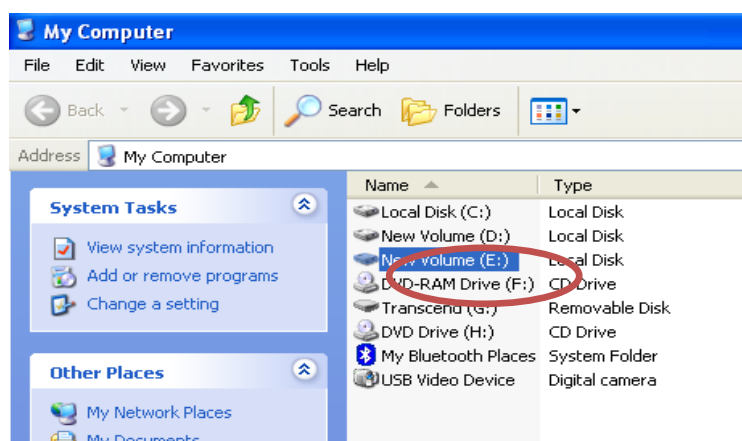
3. After selecting the option to open the pen drive/CD/DVD, you will see the files present within
4. Select the file that you would like to open. Right Click your mouse and select 'open' to view the files.

C. Copying files from a pen drive to the computer

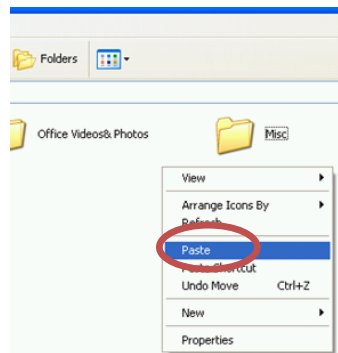
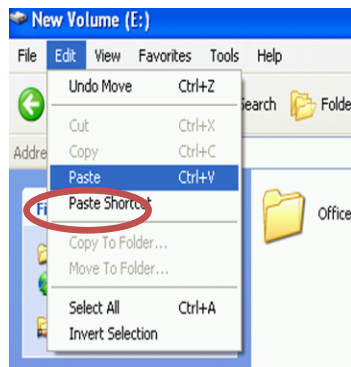
1. Once you have opened the storage device as shown in the previous steps, you can see all files and folders stored within the device. Select the **files** or **folders** you want to copy by clicking on them.
2. To select more than one file/folder, keep the **CTRL key** pressed while you select all the files you wish to copy in the computer.
3. **Right-click** on the files or folders you have selected and select **Copy**. Alternatively, you may open 'Edit' menu in the menu bar and select 'Copy'.



4. Open **My Documents** or the **location** to which you want to transfer the files and folder from the device. For example, we will select E: Drive.

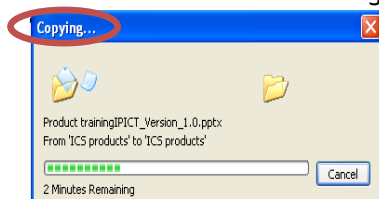


- Click on the **Edit** menu in the tool bar and then select **Paste**.



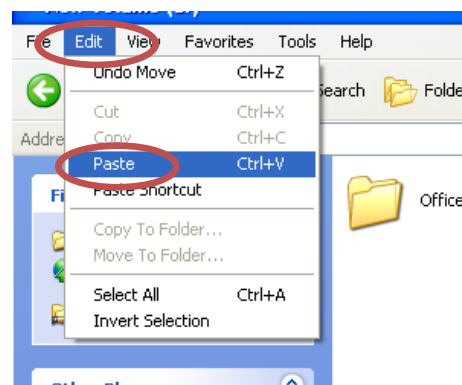
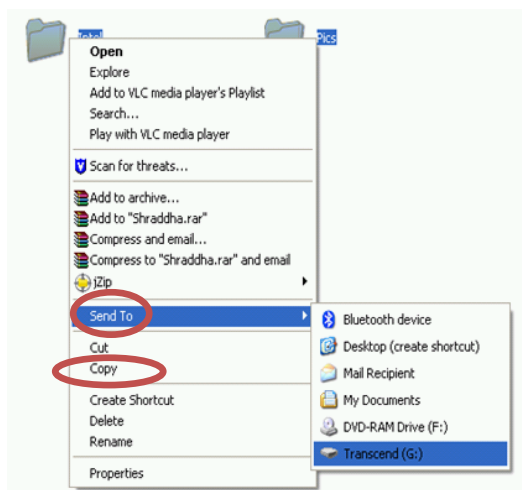
Note: Alternatively, you can Right Click in the blank area and select 'Paste' from the menu.

- The selected files and folders gets copied to the computer in a few moments.



D. Copying files from the computer to the pen drive

- Note the drive which refers to your pen drive (e.g. Removable Disk G:).
- Open the **location** from where you want to transfer files to the pen drive.
- Select the **files** or **folders** you want to copy by clicking on them from the mouse.
- To select more than one file and folder, keep pressing the **CTRL** key while you select all the files you wish to save in the pen drive.
- Right-click** on any one of the files/folder you selected, then select **Send To**, then select the drive (name) appearing in 'My Computer' for the pen drive ("Removable Disk (F:)," for example). Alternatively, you can select 'Copy' (or Ctrl +C key) from the 'Edit' menu in the tool bar or the menu appearing on right click. Open the pen drive and select 'Paste' option (or Ctrl +V key) from the 'Edit' menu or the menu appearing on right click.
- All the files and folder that you have selected will be copied in the pen drive.
(See the pictures below)



E. Safely removing a pen drive from the USB port

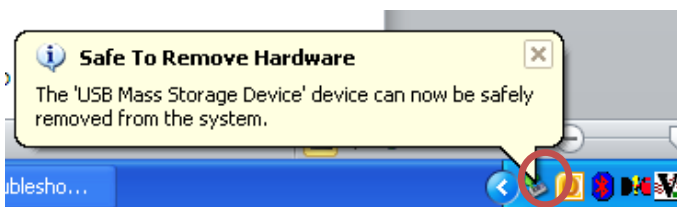
1. To safely remove your USB pen drive from the computer, look for the 'Safely Remove Hardware' icon in the notification area on the taskbar at the lower right corner of your desktop and click on it once.



2. On clicking, you will get the menu reading "Safely remove USB Mass Storage Device".



3. On clicking on the option in the menu, a new message will be displayed "Safe to Remove Hardware". After clicking, it will give you a message to safely remove the pen drive.



4. You may now safely remove the pen drive from the computer.

F. Viewing files on your CD/DVD

1. When you insert the CD/DVD into the drive, you will get the options screen to select the activity you may want to do. If the CD/DVD has audio/video content then it is played automatically in the default audio/video player of your computer.

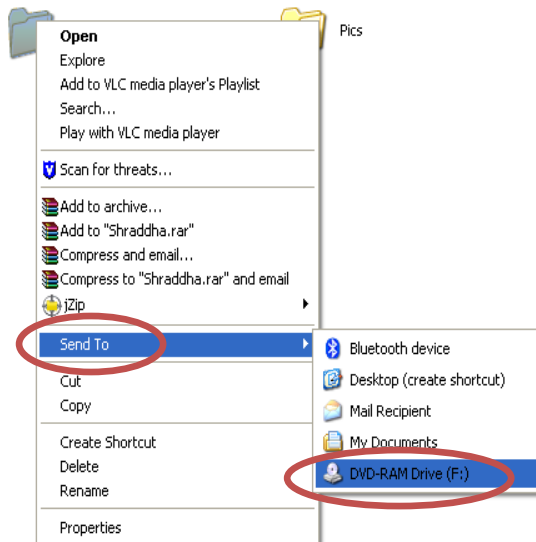


2. If you want to view the files on the CD/DVD, select 'Open folder to view files' from the options dialog that appears.
3. If you want to copy files from the CD/DVD to the computer you should follow the same steps as in section 'C. Copying files from a pen drive to the computer' after selecting the files from the CD/DVD.

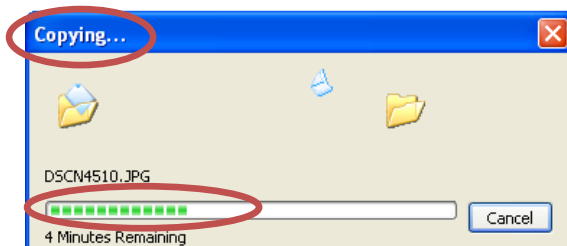
G. Copying files from a computer to a CD/DVD – 'Writing/burning a CD/DVD'

There is a difference between Pen drives and CDs/DVDs in terms of the method of storing data on them. Though pen drive acts in all respects like a hard disk, CDs and DVDs are generally non-rewritable. This means that unless otherwise specified, space occupied by files on a CD/DVD is non-recoverable. Storing data into a CD/DVD is known as writing or burning a CD/DVD. Let us see how it is done.

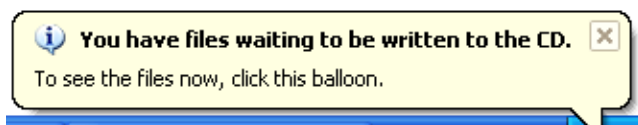
1. Open the **location** in your computer where the files and folders to be written are saved.
2. Select the files and folders.
3. **'Right Click'** on the selected files and folders to get the menu. Select **'Send To'** and choose CD/DVD drive that appears in the menu.



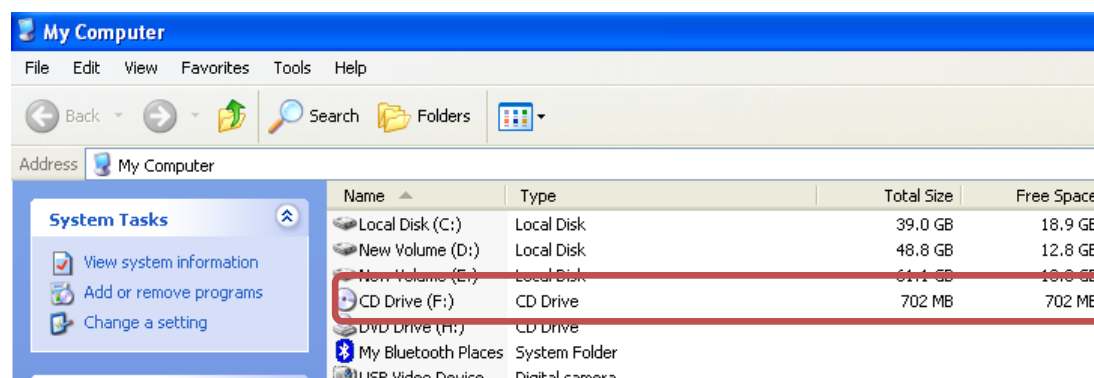
4. The contents to be written in CD/DVD will be now copied in the virtual memory of the DVD-RAM drive. You will be able to see the estimated time remaining for copying the selected files and folders in the window that shows the progress of the copying process



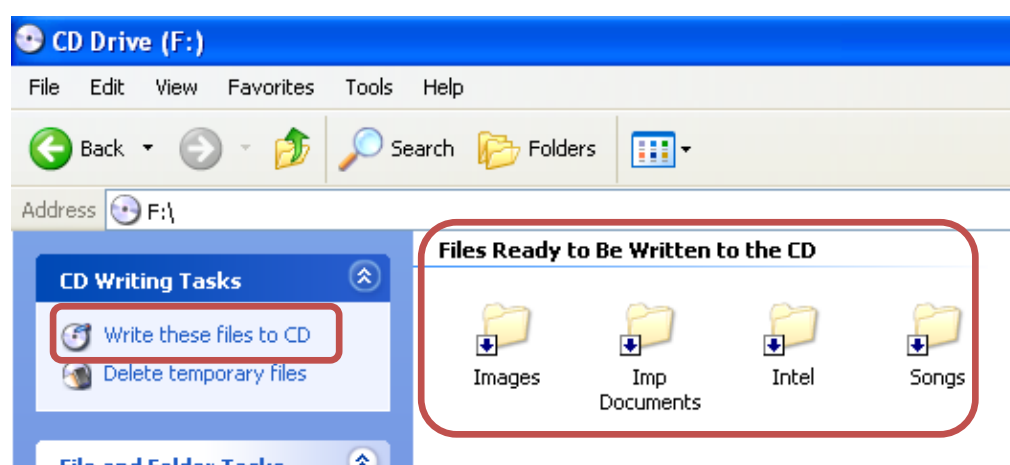
5. After the files are copied into the virtual memory of the DVD-RAM drive, a small message window will pop up in the bottom right hand corner of the desktop saying 'You have files waiting to be written on CD/DVD' as shown below.



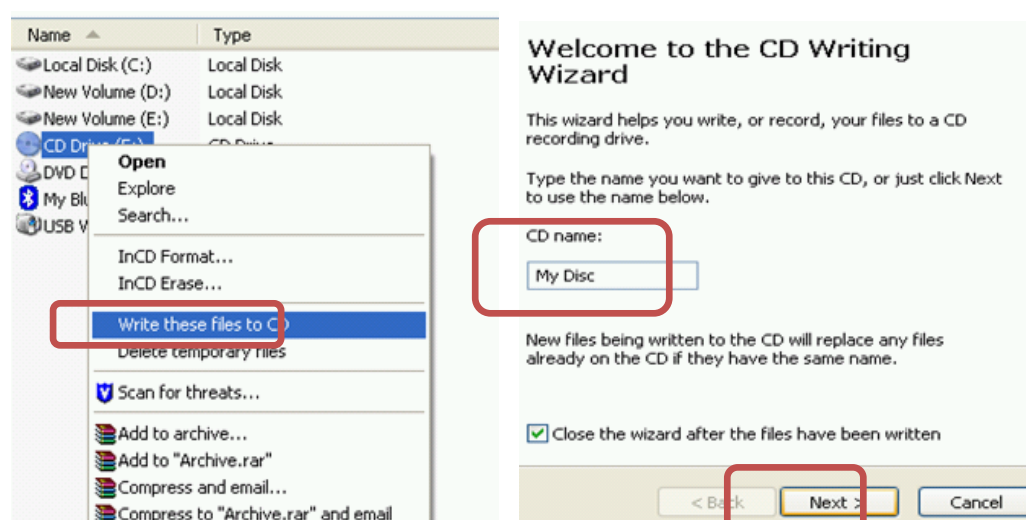
6. Now insert the blank CD/DVD in the CD/DVD Drive of your computer. Open 'My Computer' and check the CD/DVD Drive, it will display the blank CD/DVD.



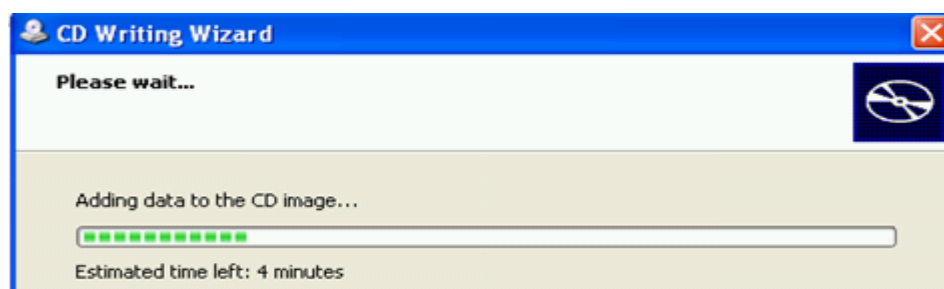
- Open the CD/DVD and you will be able to see the files and folders copied in the virtual memory of DVD-RAM drive for 'writing' into the blank CD/DVD.



- Select 'Write these files to CD' (or DVD) from the left hand side menu 'CD Writing Tasks'. Alternatively, you can right click on the CD/DVD to get the Quick menu and select 'Write these files for CD' (or DVD) from it.



- A CD writing window will pop up asking to give a 'name' to your CD/DVD. If you do not want to write any other disc, then you can check the box in front of 'Close the wizard after the files have been written'. And then click on 'Next' option.
- The contents start copying in the blank CD/DVD. First, it will add the contents from virtual memory of DVD-RAM drive to the CD/DVD image.



11. After adding the contents to CD/DVD image, the contents starts writing (copying) into the blank CD/DVD. Estimated time left to complete the writing process is also displayed in this window. Wait for a few seconds and when writing process is completed, select the 'Finish' option to complete the writing process. (As shown below).



12. On selecting 'Finish', the written CD/DVD will automatically eject from the CD/DVD drive of your computer. Alternatively, you can also eject by opening 'My Computer'. Right click on the CD/DVD (for example, 'My Disc') and select 'Eject' option from the menu. (As shown above)
13. Copying (Writing) contents into the CD/DVD from the computer is complete.

H. Review your work

1. Use your pen drive and view files on it.
2. Copy few files from the Pen Drive to the Computer.
3. Copy few files from your computer to the Pen Drive.
4. Safely remove your Pen Drive.
5. Play an audio CD on your computer.
6. Play a video CD/DVD on your computer.
7. Use a data CD/DVD to view files on them.
8. Copy few files from the CD/DVD to the computer.
9. Write a CD/DVD by copying few files from the computer.