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Ishare

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Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various institutions.

We would be very pleased to receive your feedbacks. Please send your feed backs to ksrcas.ishare@gmail.com

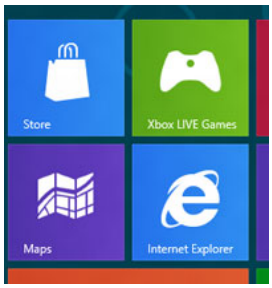
By,
Editorial Board

Content

1. Top 10 Windows 8 tips and tricks

T.Vinoth Kumar
III-B.sc-(CS)-"A"

Customize your tiles



Make the most of your Windows Start screen tiles by adjusting the sizes, where they are located, and what is listed.

- Move any tile by clicking and dragging the tile. While moving a tile, if you need a larger view of the Start screen move the tile towards the top or bottom of the screen to zoom out.
- Use your mouse wheel to scroll left-to-right through your tiles.
- Any Desktop shortcut or program can be pinned to the Start screen by right-clicking the icon and choosing **Pin to Start**.
- In the bottom right-hand corner of the start screen is a magnifying glass with tiles, click this icon to get a zoomed out view of your Start screen. In this view, if you right-click on a group of tiles you'll be given the option to **name group**, which can be useful if you have a group of related tiles (e.g. games). In this view, you can also click and drag a group to organize your tile groups.

- Create a new speed bump between tile groups by moving a tile to a speed bump.
- Resize any User tile or Live tile by right-clicking the tile and choosing resize.
- If there is a tile you want on your Taskbar, right-click the tile and choose **Pin to taskbar**.
- Show admin applications on the Start screen by clicking Settings in Charms, click Settings, and change the Show administrative tools from No to Yes.
- In Internet Explorer 10, you can also pin any of your favorite web pages to your Start Screen.

Windows 8 keyboard shortcuts

Knowing at least some of the Windows 8 keyboard shortcuts will make your Windows 8 experience much more enjoyable. Try to memorize these top Windows 8 shortcut keys.

- Press the **Windows key** to open the Start screen or switch to the Desktop (if open).
- Press the **Windows key + D** will open the Windows Desktop.
- Press the **Windows key + .** to pin and unpin Windows apps on the side of the screen.
- Press the **Windows key + X** to open the power user menu, which gives you access to many of the features most power users would want (e.g. Device Manager and Command Prompt).

- Press the **Windows key + C** to open the Charms.
- Press the **Windows key + I** to open the Settings, which is the same Settings found in Charms.
- Press and hold the **Windows key + Tab** to show open apps.
- Press the **Windows key + Print screen** to create a screen shot, which is automatically saved into your My Pictures folder.

Know your hot corners

The corners on your screen are hot corners and give you access to different Windows features. Below, is a brief explanation of each of these corners:

Bottom Left-hand corner

The bottom left-hand hot corner of the screen will allow you to access the Start screen, if you're in the Start screen and have the Desktop open, this corner will open the Desktop from the Start screen.

Tip: Right-clicking in the left hand corner will open the power user menu.

Top-left corner of the screen

Moving the mouse to the top-left corner and then down will display all the apps running on the computer. Clicking and dragging any of these apps to the left or right-hand side of the screen will snap that app to that side of the screen. Each of these open app icons can also be right-clicked to close or snap.

Right-hand side of the screen

On the full right-hand side of the screen will be given access to the Windows Charms.

Taking advantage of search

The Search in Windows 8 has been significantly improved when compared to all previous versions of Windows. To search for a file or run a program in Windows 8 from the Start screen just start typing what you're trying to find or want to run.

As you begin typing, the results will start appearing on the left-hand side. In addition to being able to search for files and run programs, the Search also supports limiting the search to apps such as Finance, People, Maps, Photos, Mail, Music, Videos, Weather, and much more. If what you are searching for is not a file or program, click on the app you wish to use as the search. For example, if you were searching for "New York" and selected the Weather App you would be shown the weather in New York, NY.

By default, Search organizes the available Apps by how frequently they are used and then in alphabetical order. If you want to keep your favorite app at the top of the Search list, right-click the app and choose Pin. Pinning the app will lock it in place regardless of how often it is used. If there is an app you don't want (e.g. Finance) you can turn on and off any of the search apps through the PC settings, which is found under the Settings in the Charms.

Bonus tip: The Search is also found through Charms and can also be opened by pressing **Windows key + F**.

Running two apps side by side

Any app can be pinned to the left or right-hand side of the screen. For example, open the People app and then press the **Windows Key + . (period)** to move that app to the right-hand side of the screen, pressing the same keys again will move it to the left-hand side, and pressing the same keys again will make it full screen. While an app is pinned, any other app or program can be opened and loaded into the available space on the screen. For example, in the below picture, we've opened a browser window and have the People app running to monitor our social networks.

Any open app can also be pinned using your mouse by clicking at the top of the tile and dragging it to the left or right-hand side of the screen.

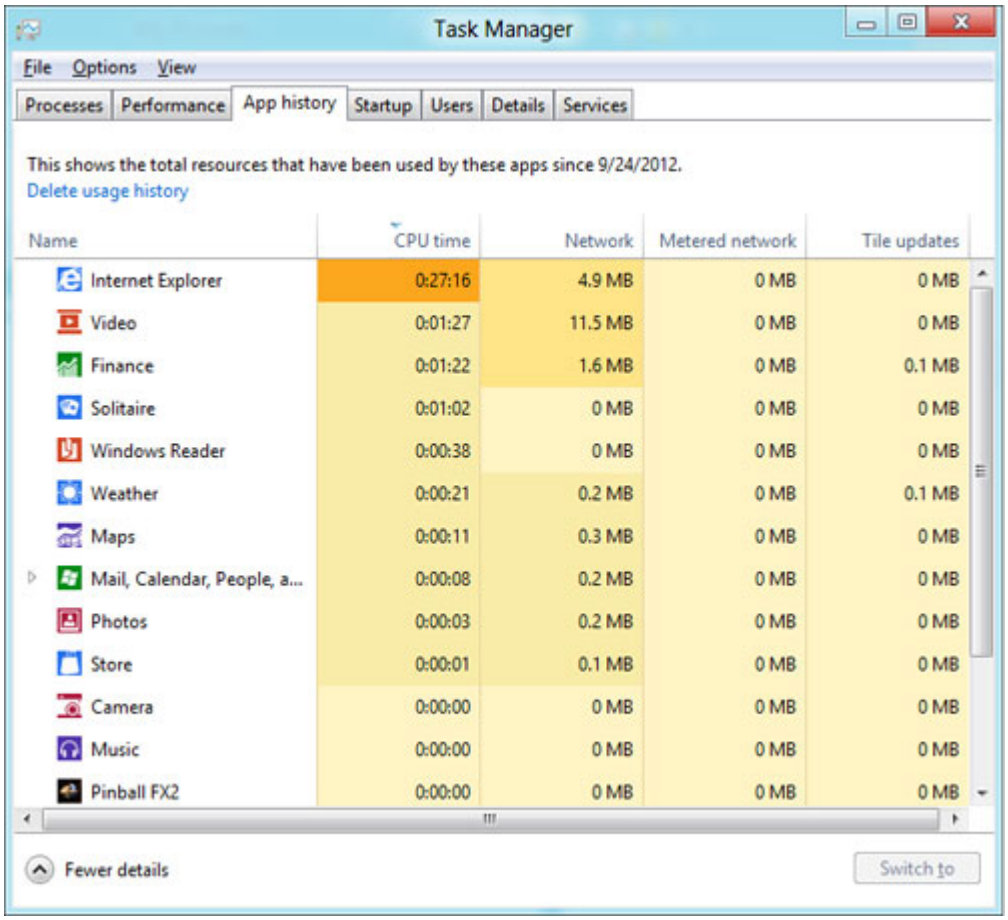
Bonus tip: The Desktop can also be pinned to the left or right-hand side of the screen.

Note: In order for snap to work properly your resolution must be at least 1,366 x 768.

Windows 8 Task Manager

The Windows 8 Task Manager has been significantly improved over previous versions of Windows. Some of the new changes include showing a total percent usage at the top of your Processes, which makes

it easier to determine total memory and CPU usage, improved Performance graphs, a Startup tab to see startup processes and their impact to system performance, and the App history tab (as shown below) that gives you the total resources an app has used over a period of time. Press **Ctrl + Shift + Esc** to start exploring the new Task Manager.



Use a picture password to log into your computer

Windows 8 includes a new feature called Picture password, which allows you to authenticate with the computer using a series of gestures that include circles, straight lines, and taps. Enable this feature if you want a new way to access your computer or have a hard time with passwords.

1. Open the Windows Charms.
2. Click **Settings** and then **More PC settings**
3. In the PC settings window click **Users** and then select **Create a picture password**

Bonus tip: A four digit pin password can also be created and used to access your computer.

Take advantage of Windows 8 apps

Windows 8 comes included with several apps to help you get the most from your computer. Below are just a few of the included apps.

People

Microsoft touts the People feature in Windows 8 because they understand how many people are using social networks today. In the People feature you'll be able to connect your Windows computer to all the major social networks including Facebook, LinkedIn, and Twitter. Once connected, you can pin the people app and monitor your social network (as shown below), use People in Search to find people, and get an overview of what is happening in all your social networks.

Reader

The Reader app will give you PDF support right out of the box.

SkyDrive

The SkyDrive app will give you access to the Microsoft cloud service SkyDrive, which allows you to store your photos, documents, and other files in the cloud and access or share those files with any computer with Internet access.

Store

Take advantage of the Windows Store and install one or more of the thousands of available apps designed for Windows 8. The Store is found in the Start screen, or use Search to search the Store app for any apps that you are trying to find.

2. Computer Number System

K.S.Naveena
III B.Sc(CS) “A”

The reason that "hex" and octal are popular in computing is that it's easy to translate to and from the binary system that computers *really* use. People use decimal primarily because they have ten fingers, but it's just not that convenient to switch back and forth from 10011010010 to 1234. It IS convenient to convert to 4D2 (hex) or 2322 (octal), however. Let's see how this is done.

These are all called radix numbers because the method for figuring out how to represent the value (remember the rocks in a bag) is the same. The only real difference between them is the base that they use.

binary - base 2
octal - base 8
decimal - base 10
hexadecimal - base 16

One thing that should be kept in mind is that the number system used to represent the value of the base above is actually expressed as a decimal, or base 10 number. That is, we don't normally say hexadecimal is base 10 in hex. We say it's base 16 in decimal.

Any radix number is a sum of a series of powers of the base times a number from 0 to 1 less than the base. This is what it looks like as a formula:

$$\text{Number} == \text{Num}(n) * \text{Base}^{n} + \text{Num}(n-1) * \text{Base}^{n-1} + \ldots + \text{Num}(0) * \text{Base}^{0}$$

- Each position has a value (10 to the power 3, or 1000 is the value of a position).
- Each symbol has a value.
- Multiply the value of the symbol by the value of the position, then add.

Let's see how this works with a real number ... say, decimal 7382. In decimal, 7382 means:

7 times 1,000
plus 3 times 100
plus 8 times 10
plus 2 times 1

It's the same in binary, octal, or hex. The only thing that changes is the base. For example, in binary, the same number (expressed as 1110011010110 in binary) is:

1 times 1,000,000,000,000 (decimal 4,096)
plus 1 times 100,000,000,000 (decimal 2,048)
plus 1 times 10,000,000,000 (decimal 1,024)
plus 0 times 1,000,000,000 (decimal 512)
plus 0 times 100,000,000 (decimal 256)
plus 1 times 10,000,000 (decimal 128)

plus 1 times 1,000,000 (decimal 64)
plus 0 times 100,000 (decimal 32)
plus 1 times 10,000 (decimal 16)
plus 0 times 1,000 (decimal 8)
plus 1 times 100 (decimal 4)
plus 1 times 10 (decimal 2)
plus 0 times 1 (decimal 1)

Decimal is easier for humans to handle. Binary is the only thing that computers use. Octal and hex are a kind of a compromise between the two. Here's the number (1CD6) in hex.

1 times 1,000 (decimal 4,096)
plus C times 100 (decimal 256)
plus D times 10 (decimal 16)
plus 6 times 1 (decimal 1)

Not as many numbers to deal with, but what does C and D mean? Simple. Hex needs to have six more symbols in addition to the symbols 0 through 9. IBM invented the term hexadecimal and they decided that since this system needed six extra symbols, why not just use the first six letters of the alphabet.Octal and hex are used to represent numbers instead of decimal because there is a very easy and direct way to convert from the "real" way that computers store numbers (binary) to something easier for humans to handle (fewer symbols). To translate a binary number to octal, simply group the binary digits three at a time and convert each group. For hex, group the binary digits four at a time. Here's how to convert to hex using our example number, 7382 (decimal) == 1110011010110 (binary).

First, group the binary digits four at a time (start with the least significant digits):

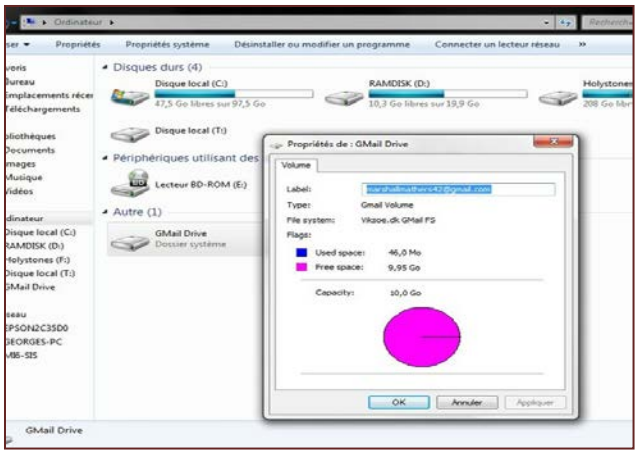
1 1100 1101 0110

1 == 1
1100 == C
1101 == D
0110 == 6

3. **Get 10GB More Space in your PC / Laptop**

S.Dhivyaraj
III-BCA-B

It shows you how to convert your Gmail space into extra HDD space 10GB.



1) Download Gmail drive-->DOWNLOAD

2) Run it;

3) Restart your computer and then go to "My Computer" and there are another disk;

4) Click on it and it asks for an username/password;

5) Place there all your stuff...

You can create 1 disk, but you can login with 2 different Gmail accounts. That means you can get 30GB if you have 3 Gmail accounts.

4. Google Planning To Publicly Test Its Self-Driving Car

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The autonomous car which Google revealed in this year's May has completed its closed-door tests and may now hit the public roads in the first month of the coming year. The prototype revealed was a small two-seater car that had no accelerator, brakes or steering wheel. All you could find inside are two seats, a small space for passenger luggage, start-stop buttons and a screen that showed the route. The top speed of the car however was limited to 25mph (40 kmph).

Prototype Car in May

The addition of real headlights and the design upgrade in the roof-mounted LIDAR is a major noticeable change from the earlier prototype. The sensor on the car is able to detect objects out to a distance of two football fields and is able to get rid of blind spots. The company has been testing different aspects of the car's design, from steering and braking to the sensors and software that controls all of them with the

help of 'Safety Drivers' from the past seven months.Final prototype which will hit the roads in 2015

The final prototype has also allowed 'temporary manual controls' to the operators in case something goes wrong. But it in the next five to ten years, Google plans to introduce self-driving cars without pedals or steering wheel. This prototype model is a step in that direction.

5. Basic PC shortcut keys

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The below basic shortcut keys are a listing of shortcut keys that will work with almost all IBM compatible computers and software programs. It is highly recommended that all users keep a good reference of the below shortcut keys or try to memorize the below keys. Doing so will dramatically increase your productivity.

Shortcut Keys	Description
Alt + F	File menu options in current program.
Alt + E	Edit options in current program
F1	Universal Help in almost every Windows program.
Ctrl + A	Select all text.
Ctrl + X	Cut selected item.
Shift + Del	Cut selected item.
Ctrl + C	Copy selected item.
Ctrl + Ins	Copy selected item

Ctrl + V	Paste
Shift + Ins	Paste
Ctrl + P	Print the current page or document.
Home	Goes to beginning of current line.
Ctrl + Home	Goes to beginning of document.
End	Goes to end of current line.
Ctrl + End	Goes to end of document.
Shift + Home	Highlights from current position to beginning of line.
Shift + End	Highlights from current position to end of line.
Ctrl + Left arrow	Moves one word to the left at a time.
Ctrl + Right arrow	Moves one word to the right at a time.

6. General scanner troubleshooting

V.Priyadharshini
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Issue

General scanner troubleshooting.

Cause

It may be necessary to do general scanner troubleshooting to help determine the cause or to help resolve a scanner related issue.

Solution

Verify cables connected properly to the back of the scanner

If the scanner is a parallel port scanner it is likely it has two available connections on the back of the scanner. Verify that the cable coming from the computer is connecting to the IN, Computer IN, computer, or similar connection.

Ensure that the scanner is getting power

If your scanner is not getting power it is recommended that you check the connections ensuring that they are connected properly to the back of the computer and from the scanner to the wall. If you have the scanner connected to a power strip or surge protector it is temporarily recommended that you connect the scanner directly to the wall.

If the computer scanner is getting power, you should notice the inside light come on when the power is first received by the scanner.

After checking the connections you still get no power to the scanner, it is recommended you contact the manufacturer of the scanner.

Additional parallel port scanner troubleshooting

If you have another device connected in between the scanner and the computer, turn off the computer and temporally disconnect the devices connected to or from the scanner. If, after disconnecting these devices, the scanner works, it is likely that another device may have issues or may be unable to work with other parallel devices.

PC Windows users verify no TSRs are running in the background

Press CTRL + ALT + DEL and end task all currently running software except explorer and Systray and scan again. If this resolves your issue it's a possibility that an application in the background such as a virus utility is preventing your scanner from scanning.

Verify the LPT port mode

PC users ensure that the LPT port mode within the computer BIOS is set to either EPP or bi-directional mode or try alternating between these two modes.

Update the drivers

Verify that the latest drivers are installed for the operating system being used on your computer. A listing of computer scanner manufacturers and links to the drivers pages can be found on our scanner drivers page.

7. The Computer Facts

R.Nirmala
Lecturer, Dept of CS
KSRCAS

- The domain name **www.youtube.com** was registered on February 14, 2005.
- **Hewlett Packard** was started at a garage in Palo Alto in 1939.
- **Computer programming** is currently one of the fastest growing occupations.
- On an average work day, **a typist's fingers** travel 12.6 miles.
- The **Dvorak** keyboard is more efficient than **QWERTY**. 20 times faster, in fact.
- **TYPEWRITER** is the **longest word** that can be made using the letters only on one row of the keyboard.
- **On eBay**, there are averages of $680 worth of transactions each second.

- **"Stewardesses"** is the longest word that is typed with only the left hand.
- In the 1980s, an IBM computer wasn't considered 100 percent compatible unless it could run **Microsoft Flight Simulator***.
- The world's first computer, called the **Z1**, was invented by Konrad Zuse in 1936. His next invention, the **Z2** was finished in 1939 and was the first fully functioning electro-mechanical computer.
- The first computer mouse was invented by **Doug Engelbart** in around 1964 and was made of wood.
- **Domain names** are being registered at a rate of more than one million names every month.
- There are approximately **1.06 billion instant messaging** accounts worldwide.
- The **first banner advertising** was used in 1994.
- **E-mail** has been around longer than the World Wide Web.
- The average computer **user blinks 7 times a minute,** less than half the normal rate of 20.
- One of **every 8 married couples** in the US last year met online.
- The average 21 year old has spent **5,000 hours** playing video games, has exchanged **250,000 e-mails**, instant and text messages and has spent **10,000 hours** on the mobile phone.
- By the year 2012 there will be approximately **17 billion devices** connected to the Internet.
- While it took the **radio 38 years**, and the **television a short 13 years**, it took the **World Wide Web only 4 years to reach 50 million** users.
- There are approximately **1,319,872,109 people on the Internet.**
- For every 'normal' webpage, there are **five porn pages**.
- **Bill Gates' house** was designed using a **Macintosh computer**.

- The **first domain name** ever registered was **Symbolics.com**.
- Another name for a **Microsoft Windows** tutorial is **'Crash Course'**!

8. 10 Tips to Tighten Network Security
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1. Get a Firewall

The first step for any attacker is to find network vulnerabilities by scanning for open ports. Ports are the mechanisms by which your small business network opens up and connects to the wider world of the Internet. A hacker sees an open port to as an irresistible invitation for access and exploitation. A network firewall locks down ports that don't need to be open.

A properly configured firewall acts as the first line of defense on any network. The network firewall sets the rules for which ports should be open and which ones should be closed. The only ports that should be open are ports for services that you need to run.

If you're running a Web or mail server on your network, the proper ports for those services need to be open. If you're *not* running those services directly on your own network, say for example you're hosting your website and email with a service provider, you shouldn't have your Web server and email ports open.

Typically, most small business routers include some kind of firewall functionality, so chances are if you have a router sitting behind your service provider or DSL/cable modem, you likely have a firewall already.

To check to see if you already have firewall capabilities at the router level in your network, log into your router and see if there are any settings for Firewall or Security. If you don't know how to log into your router on a Windows PC, find your Network Connection information. The item identified as **Default Gateway** is likely the IP address for your router.

There are many desktop firewall applications available today as well, but don't mistake those for a substitute for firewall that sits at the primary entry point to your small business network. You should have a firewall sitting right behind where your network connectivity comes into your business to filter out bad traffic before it can reach any desktop or any other network assets.

2. Password Protect your Firewall

Great you've got a firewall, but it's never enough to simply drop it into your network and turn it on. One of the most common mistakes in configuring network equipment is keeping the default password.

It's a trivial matter in many cases for an attacker to identify the brand and model number of a device on a network. It's equally trivial to simply use Google to obtain the user manual to find the default username and password.

Take the time to make this easy fix. Log into your router/firewall, and you'll get the option to set a password; typically you'll find it under the **Administration** menu item.

3. Update Router Firmware

Outdated router or firewall firmware is another common issue. Small business network equipment, just like applications and operating systems, needs to be updated for security and bug fixes. The firmware that your small business router and/or firewall shipped with is likely out-of-date within a year, so it's critical to make sure you update it.

Some router vendors have a simple dialogue box that lets you check for new firmware versions from within the router's administration menu. For routers that don't have automated firmware version checking, find the version number in your router admin screen, and then go to the vendor's support site to see if you have the latest version.

4. Block Pings

Most router and firewalls include multiple settings that help to determine how visible your router and/or firewall will be to the outside world. One of the simplest methods that a hacker uses to find a network is by sending a ping request, which is just a network request to see if something

will respond. The idea being if a network device responds, there is something there that the hacker can then explore further and potentially exploit.

You can make it harder for attackers by simply setting your network router or firewall so that it won't respond to network pings. Typically the option to block network pings can be found on the administration menu for a firewall and/or router as a configuration option.

5. Scan Yourself

One of the best ways to see if you have open ports or visible network vulnerabilities is to do the same thing that an attacker would do -- scan your network.

By scanning your network with the same tools that security researchers (and attackers) use, you'll see what they see. Among the most popular network scanning tools is the open source nmap tool). For Windows users, the Nmap download now includes a graphical user interface, so it's now easier than ever to scan your network with industry standard tools, for free.

Scan your network to see what ports are open (that shouldn't be), and then go back to your firewall to make the necessary changes.

6. Lock Down IP Addresses

By default, most small business routers use something called DHCP, which automatically allocates IP addresses to computers that connect to the network.

DHCP makes it easy for you to let users connect to you network, but if your network is exploited it also makes it easy for attackers to connect to your network. If your small business only has a set number of users, and you don't routinely have guest users plugging into your network, you might want to consider locking down IP addresses.

On your router/firewall admin page, there is likely a menu item under network administration that will let you specify IP addresses for DHCP users. You'll need to identify the MAC address to which you can then assign an IP.

The benefit of assigning an IP is that when you check your router logs, you'll know which IP is associated with a specific PC and/or user. With DHCP, the same PC could potentially have different IPs over a period of time

as machines are turned on or off. By knowing what's on your network, you'll know where problems are coming from when they do arise.

7. Use VLANs

Not everyone in your small business necessarily needs access to the same network assets. While you can determine and set access with passwords and permissions on applications, you can also segment your network with VLAN or virtual LANs.

VLANs are almost always part of any business class router and let you segment a network based on needs and risks as well as quality of service requirements. For example, with a VLAN setup you could have the finance department on one VLAN, while sales is on another. In another scenario, you could have a VLAN for your employees and then setup another one for contract or guest workers.

Mitigating risk is all about providing access to network resources to the people who are authorized and restricting access to those who aren't.

8. Get an IPS

A firewall isn't always enough to protect a small business network. Today's reality is that the bulk of all network traffic goes over Port 80 for HTTP or Web traffic. So if you leave that port open, you're still at risk from attacks that target port 80.

In addition to the firewall, Intrusion Prevention System (IPS) technology can play a key network security role. An IPS does more than simply monitor ports; it monitors the traffic flow for anomalies that could indicate malicious activity.

IPS technology can sometimes be bundled in on a router as part of a Unified Threat Management (UTM) device. Depending on the size of your small business network, you might want to consider a separate physical box.

Another option is to leverage open source technologies running on your own servers (or as virtual instances if you are virtualized). On the IPS side, one of the leading open source technologies is called SNORT (which is backed by commercial vendor Sourcefire.

9. Get a WAF

A Web Application Firewall (WAF) is specifically tasked with helping to protect against attacks that are specifically targeted against applications. If you're not hosting applications within your small business network, the risks that a WAF helps to mitigate are not as pronounced.

If you are hosting applications, WAF in front of (or as part of) your Web server is a key technology that you need to look at. Multiple vendors including Barracuda have network WAF boxes. Another option is the open source ModSecurity project, which is backed by security vendor Trustwave.

10. Use VPN

If you've gone through all the trouble of protecting your small business network, it makes sense to extend that protection to your mobile and remotely connected employees as well.

A VPN or Virtual Private Network lets your remote workers log into your network with an encrypted tunnel. That tunnel can then be used to effectively shield your remote employees with the same firewall, IPS and WAF technologies that local users benefit from.

A VPN also protects your network by not letting users who may be coming in from risky mobile environments connect in an insecure fashion.

9. How to Recover Deleted Files from Windows and MAC

M.Sarath kumar

III-B.sc (Biotech)

If we accidentally deleted our files from the Hard disk, it can be recovered easily by using the following ways.

It is possible to recover the deleted files back from the hard disk (even after you have Shift+Deleted) provided you act as soon as you realize that the files are deleted and use the best deleted files recovery software.

Working process of File Recovery

When we delete a file from your computer, (or even from the recycle bin) the file is not actually deleted. Unlike what most people think, the file is not permanently deleted or dropped from your hard disk even if you have deleted them from the recycle bin.

Let's take up a small example of a book containing 50 pages. Suppose when you delete the page 25, assume that only the entry in the index which points to the page 25 is deleted and not actually the page 25 itself. Likewise, when you delete a file from your hard disk, only the pointer which points to this file is removed and not actually the file itself. This file still exists intact and is 100% possible to recover it back in the original condition. In this condition, the file becomes invisible and hence appears to have been deleted.

Recovering the deleted files 100% back in the original condition is very much dependent on the efficiency of the Data Recovery software you use. So, it is necessary to make a right choice when it comes to the selection of file recovery software.

Today, there exist hundreds of data recovery tools and software's on the market which boast to recover 100% of all the deleted files back in the original condition. But in reality, most of these software's are neither effective nor capable of recovering your files back. So, when it comes to Data Recovery, two important following software have been recommend

1. Stellar Phoenix Data Recovery (for Windows)

2. Stellar Phoenix Mac Data Recovery (for Mac)

Stellar Phoenix is one of the best company specializing in deleted files recovery services and solutions since 1993. Stellar's **Data Recovery Solutions** encompasses a wide range of software for almost any data loss situation ranging from accidental formats to virus attacks to software malfunctions. Hence Stellar provides the best tools to recover deleted files with over 1,000,000 satisfied customers across 137 countries.

Chances of Recovering the Files Back

Since the operating system doesn't immediately re-use the space from the deleted files, it is most certainly possible to recover the deleted files back in 100% original condition. It may take up a very long time for those files to be completely deleted since the modern hard disks have ample capacity. Hence the chances are too less that the space from the deleted files are re-used immediately.

So, it is really worth to try out the file recovery softwares like **Stellar Data Recovery for Windows** or **Stellar Data Recover for Mac**. Some files are reported to have been recovered even after years of its deletion. However, for the best results, it is recommended that you use the file recovery software as immediately as possible to recover your deleted files.

Recovering the Deleted Files

In order to recover the deleted files all you need to do is perform a scan (search) for the deleted files using a File Recovery Software. There is no manual way to recover the deleted files.

The Phoenix Data Recovery software performs a thorough scanning of the hard disk sector by sector and will locate the existence of deleted files to restore them back in the original condition. It is the only software that supports 185 popular file types including Windows NT Registry, JPEG, MP4, GIF, BMP and MS Word files. The software offers rich graphical support and incorporates advanced scanning methods to completely scan and recover deleted files from your hard drive. With this recovery software, it is possible to

- Recover FAT16, FAT32, VFAT, NTFS, and NTFS5 file system partitions
- Recover deleted emails
- Recover deleted documents
- Recover deleted photos
- Recover deleted music
- Formatted Hard-Drive recovery
- Recover files from USB Drives, CDs, DVDs and memory cards.

10. Learn How to Code: 22 Free Online Resources

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"Employment of software developers is projected to grow 30 percent from 2010 to 2020, much faster than the average for all occupations. Employment of applications developers is projected to grow 28 percent, and employment of systems developers is projected to grow 32 percent..... Job prospects will be best for applicants with knowledge of the most up-to-date programming tools and languages. Consulting opportunities for software developers also should be good as businesses seek help to manage, upgrade, and customize their increasingly complicated computer systems." -Software Developers, Occupational Outlook Handbook

In this article, we’re going to look at a few different resources online you can tap into for coding know-how; some of these are email-based, some are in a game format (always my favorite!), and some are instructor-led via video. Just pick and choose the one that works best for you.

Code Academy

Code Academy aims to make learning how to code fun, and they do this by making all of their courses game-based in nature. The site offers “tracks”, which are series of courses grouped around a particular topic or language. Course offerings include JavaScript, HTML, CSS, Python, Ruby, and JQuery. Registration is free, and once you get going in a class, you start to earn points and badges as a way to keep you motivated. No certificate or credits are offered here, however, the interactive classes make complicated concepts seem not as intimidating. Code Academy also runs Code Year, a year-long collaborative effort to get as many people learning how to code (one lesson per week) as possible. More than 400,000 people have signed up at the time of this writing.

Google Code University

Learning how to code from the team behind the most popular search engine in the world? Seems like a pretty good deal. Course content here includes information on Computer Science, Programming Languages, Web Programming, Web Security, even Google APIs and Tools. Google Code University is free and

does not require registration; classes are offered via recorded video lectures, talks, problem sets, exercises, documents, and slides. Computer programming language courses are mostly introductory in nature, and include languages such as Python, C++, Go, and JavaScript. No certificates or credits are awarded with the completion of these classes.

P2PU

Peer to Peer University (P2PU) is a collaborative experience where you're meant to learn in community with others. Registration and courses are totally free. There are several "schools" within the P2PU organizational framework, including one for Web-based programming backed by Mozilla, creator of the Firefox web browser. As you complete courses, you can display badges on your website or social profiles. Courses include Web Making 101 and Programming with the Twitter API; no developer certifications are offered here, but the courses are well executed and worth taking a look.

HTML5 Rocks

HTML5 is quickly becoming the language to know for cutting edge developers. HTML5 Rocks is not necessarily a coursework platform; rather, it's a massive database of informational resources on anything and everything to do with HTML5, from nuts and bolts to semantics to storage. Pick what kind of HTML development you'd like to focus on from three different groupings: mobile, gaming, or business, and you'll get a comprehensive hub of tutorials, articles, and in-browser simulators to get going on HTML5. No credits or certifications are awarded here; registration and use of the site is totally free. Examples of information offered here include web application frameworks, debugging tools, and compatibility resources.

The Code Player

If you've ever wanted to be a fly on the wall and watch over the shoulder of someone who really knows what they're doing with HTML5, CSS3, or JavaScript, then The Code Player is for you. Click on any of the video offerings, and you'll first see the proposed code snippet in action; for example, a gauge chart written with Canvas and JavaScript. Click on "play walkthrough", and here's where it gets really interesting: a screencast of how the code was written, along with background information and comments. The end result of the code is also included if you just want to copy and paste for your own project.

RubyKoans

Want to learn Ruby in a very Zen-like fashion? You'll want to check out RubyZoans, a simply arranged series of Ruby tutorials that aim to teach the Ruby language, syntax, structure, and common functions and libraries. A (free) download of the Ruby framework is required in order to get the most out of these classes, which are all completely free.

Stack Overflow

Stack Overflow isn't a place for free classes, but if you're looking for advice/help/shoulder to cry on for nearly any coding issue you might run into, than this is the right place. Thousands of developers use Stack Overflow to trade ideas, collaborate on common problems, or simply help each other out in a snag. Coding languages discussed here are plentiful, ranging from C# to jQuery to Python to CSS. Stack Overflow isn't just a programming forum, however; it's also a collaborative website built and maintained by those who use it (much like Wikipedia) with the goal of being an authoritative resource on all things code.

Scratch

While Scratch, a project of the MIT Media Lab, is aimed for kids, anyone who wants to dive right into the basics of programming will find this site enjoyable. Scratch is a programming language meant for creative Web projects: games, music, art, stories, animations, etc. Learning how to use Scratch is an exercise in logic, which is a foundational building block for any code language out there. Scratch is free to download and fun to learn; once you've made something with this platform, you can upload it to the Scratch gallery and share it with the world.

Apple Developer Center

As one of the most popular companies in the world, Apple offers a huge hub of resources specifically for developers who might (or might not) be familiar with their apps, devices, or web browser. From this core of information, anyone can access basic coding tutorials as well as much more advanced information, all for free.

Android Developer Center

If you've ever thought about developing for Android, a mobile platform with millions of users in nearly 200 countries all over the world, than this nucleus of

everything you ever wanted to know (and more) is what you've been looking for. There's something for everyone here, including the absolute beginner who has never coded in his or her life. SDKs, API documentation, design guidelines, etc. are also available, as well as training modules offered for novices to advanced users.

MobileTuts+

Mobile development is where it's at on the MobileTuts+ site. There are a vast variety of high quality tutorials and articles here for mobile developers, ranging from Windows Phone SDK to cross-platform development to HTML5. There's also the occasional insight with working mobile developers who give you a glimpse at what successful development technologies and strategies they themselves are using. The site is nicely organized into sections, so you can find tutorials, articles, tips, or videos quite easily.

Programr

Learn and practice your coding right in your web browser with this interactive site. There are several ways you can use Programmer to learn something new or brush up on coding you already know and love: visit the Training Labs, where you can practice programming by solving real world exercises, take on one of the coding Challenges, check out one of the 2000+ apps that have been made by other Programmer users for inspiration, or enter one of the ongoing Contests. All of the information here is free, and a wide variety of coding languages from Java to SQL are offered.

edX

edX is a collaborative effort between Harvard University and MIT to bring free online courses from both institutions to the Web for anyone to take advantage of. Classes from Harvard, MIT, and Berkeley are offered here for free, with more universities joining in the near future. Certificates of completion are awarded at the time of this writing for free; however, a "modest fee" for these certificates is planned for future students. Classes are somewhat sparse right now, but the origin of the classes as well as the informational content is well worth a look; for example, you could try Software as a Service from Berkeley, Introduction to Computer Science from Harvard, or Introduction to Computer Science and Programming from MIT – all for free.

YouTube EDU

YouTube, along with millions of cats-doing-stuff videos, offers a hub of educational content with offerings from organizations such as NASA, the BBC, TED, and many more. If you're a visually oriented person who learns by watching someone else do something, than this is the place for you. You'll find coding-related videos under the Engineering category; course offerings range from Intro to Computer Science to Web Development to Database Management. These are meant to be standalone informational offerings rather than part of a cohesive course; however, if you would like to dip your toes in a subject and want to get a quick video introduction from leaders in the field, this is a good solution.

Processing

Processing.org is a central place for Processing, "is a programming language, development environment, and online community that since 2001 has promoted software literacy within the visual arts." Everything you need to learn this language from the ground up is here, including a free download of the software platform, tutorials, example code, and a forum for when you really get stuck.

Eloquent JavaScript

Whether you'd like to learn JavaScript from the ground up, or merely brush up on a few fundamentals, then you'll want to check out this website. It's actually based around a full-length book, and is browser-based with game-based interactive tutorials that let you see what JavaScript can do in a fun and intuitive way.

Code Avengers

Get your inner superhero on with this fun, game-based site that offers comprehensive courses on HTML, CSS, and JavaScript. No registration is required, just click the "Get Started" button and you're off and running. For example, the JavaScript 1 course is 40 short lessons with five tasks that you must complete in each lesson before moving on to the next. Each module also offers

interactive challenges and a quiz to test your newfound skills. Cool features: a glossary that is instantly available for whatever node you're currently working on, a notepad application if you want to take notes, and a list of Code Avengers keyboard shortcuts so you can easily navigate within the website. Classes are free.

Code School

Not all the courses offered at Code School are free, but there are several good ones that are (and you might just be tempted to take a paid one once you run through one of the classes!). The first thing you'll notice about Code School is how well everything is designed – it's just a very aesthetically pleasing site. Code School delivers all classes within your web browser via video lectures, various coding challenges and quizzes, screencasts, and intuitive coding tutorials where you get hands on with what you just learned. Each class has at least five levels, and all challenges/quizzes must be solved before you can advance to the next level. Once you get to the end and unlock the final level, you'll receive a cool badge and potentially win some swag – like discounts off your next Code School course.

Hackety Hack

Hackety Hack is meant for people who have had zero previous programming experience; however, if you've been meaning to learn Ruby and you'd like to do it as painlessly as possible then this might be a good spot for you. You'll be using the Shoes cross-platform toolkit to go through the lessons and figure out how to use Ruby effectively; once you get going you can upload your project to the Gallery of programs that other users have shared and show off your expertise.

Learn Code the Hard Way

Okay, yes, the title of this website is a little bit less than inspirational. However, this is definitely one of the most useful sites on the Web for learning code: C, Python, Ruby, SQL, and Regex. All of these languages are meant to learn using in-depth instruction found in a book for each coding platform. The "hard way" is basically this: learning each exercise in depth, making the code run, and not moving on until you've mastered what you're currently looking at. The books are free online to read within your web browser; you can also choose to purchase them for a nominal fee if you'd like to keep them.

Alice

Just like MIT's Scratch (another entry on this list), Alice is primarily aimed at the younger set who want to try their hand at programming. However, anyone who

wants to give coding a go or simply flex their skills in another kind of environment will enjoy this particular platform. Alice is educational software that teaches students how to program in a 3D environment. Animations or games are the focus here, with tools and materials intended to encourage logical thinking, problem solving, and of course, computer programming. Alice was developed and is maintained by Carnegie Mellon University. The downloads and teaching materials are free, and it's a great introduction to object-oriented programming, as well as fundamental coding concepts.

Google it

While all of the resources listed here are fantastic in their own right, there are still many more too numerous to list, for whatever coding language you might possibly be interested in learning. Here are a few Google queries you can use to narrow down what you're looking for (hat tip toTech Recipes for the more complicated search strings here):

"learn (insert coding language here)"

Believe it or not, this is an incredibly powerful search string, and will bring up a solid first page of results.

inurl:edu "python"

This tells Google to search within the URL keeping the search parameters to only .edu sites, looking for the coding language Python.

-inurl:htm -inurl:html intitle:"index of" +("/ebooks"|"/book") +(chm|pdf|zip) "python"

Now we're getting fancy. Basically, this tells Google to find book or e-book directories with Python books in them, in several different formats. You can also look for specific publishers, like this:

-inurl:htm -inurl:html intitle:"index of" +("/ebooks"|"/book") +(chm|pdf|zip) +"o'reilly"

Or specific disciplines of study:

-inurl:htm -inurl:html intitle:"index of" +("/ebooks"|"/book") +(chm|pdf|zip) +"software development"

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