

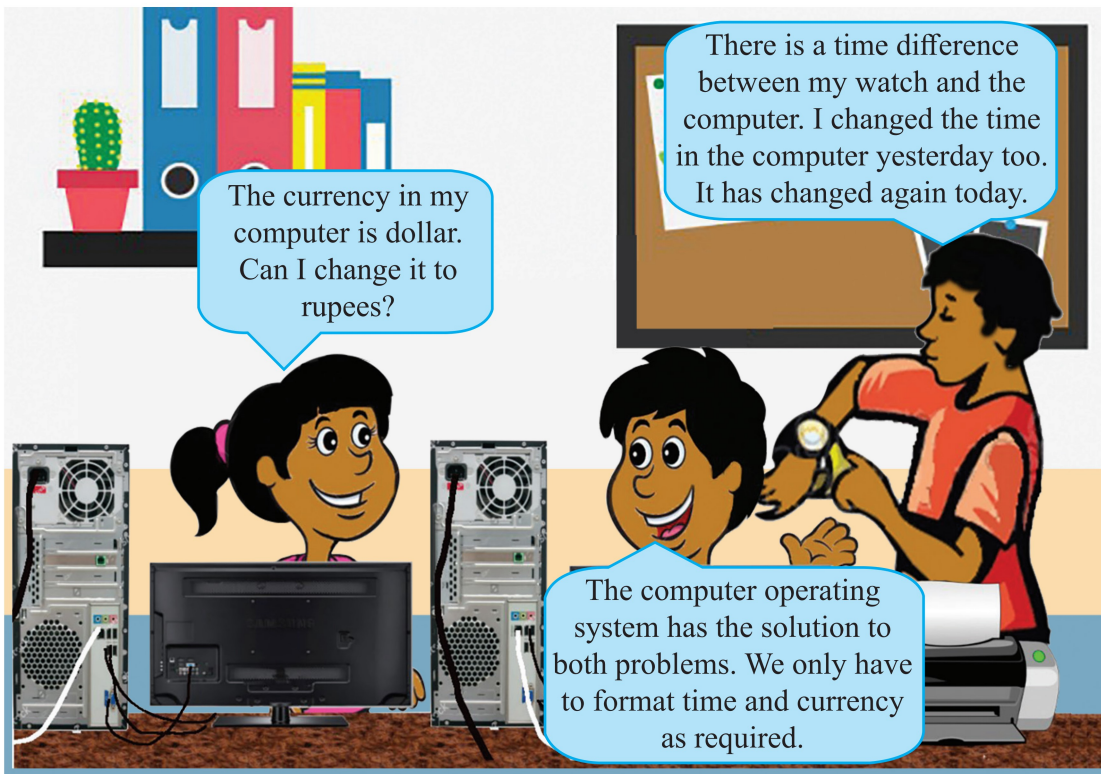
2

Configuring and Formatting a Computer

This chapter will cover the following:

- Format date, the time zone, the time and currency
- File attribute configuration
- File searching
- Hardware troubleshooting
- Software troubleshooting

2.1 Formatting date, time zone, currency and numbers



It is important to format the date, time zone, time, currency and number to suit the country where the computer is used.

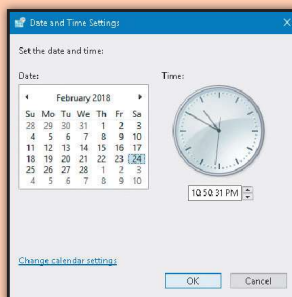
2.1.1

The date, the time zone and time in a computer

The importance of setting up the date, the time zone and time in a computer

Format is useful in :

- Installing and updating software
- Working with application software, in scheduling to activate, shut down and updating.
- Updating the operating system software
- Activating software licenses



Date and time of a computer

It is important to have the correct date and time in a computer and maintain them, because file saving, searching, sending reminders, preparation of business letters, etc. use date and time of the computer.

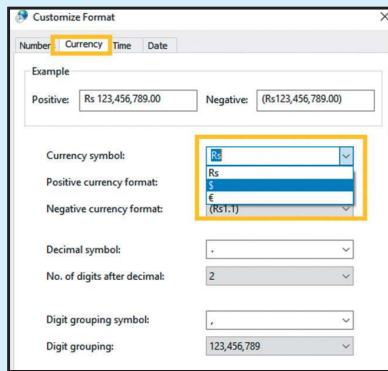
Time zone of a computer



The countries in the world are divided into different time zones and they maintain a unique time according to an international standard. These time zones are used for legal, commercial and social purposes.

e.g. - 6.00 am in Sri Lanka will be 1.30 am in United Kingdom

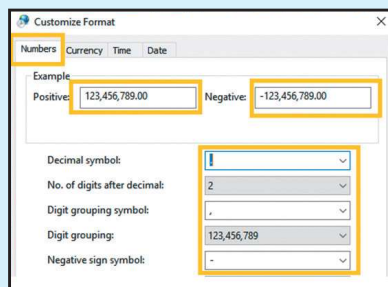
Currency and its formats



The default currency setting of a computer is the currency of the country of which the operating system is produced.

Therefore, we need to modify the currency to suit our country.

Number formats



Absence of a currency and number formats to suit international acceptance, could be a drawback when working with the Internet.



Refer to workbook for Activity 2.1.

2.1.2

File attributes

Figure 2.1 given below shows most of the attributes of a file stored in the computer.

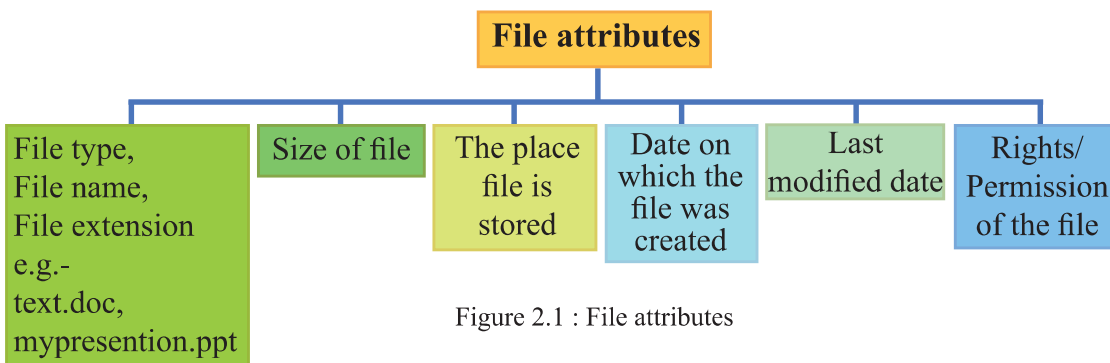


Figure 2.1 : File attributes



Note - File extension shows the file type
e.g. - executable file in the computer (.exe)

Advantages of file permission attributes

- File permission attributes provide important details regarding the file. Changing file rights can also help with the following;
 - The file can be made hidden.
 - As a file protection strategy, others may see the file, but it can be converted to a read only file which does not allow for modification.



Refer to workbook for Activity 2.2.

2.1.3

Searching files



Files are searched when the name of file or the place stored in, is unknown.

Several search methods are provided by an operating system. Files can be search by file name, file extension or date saved.

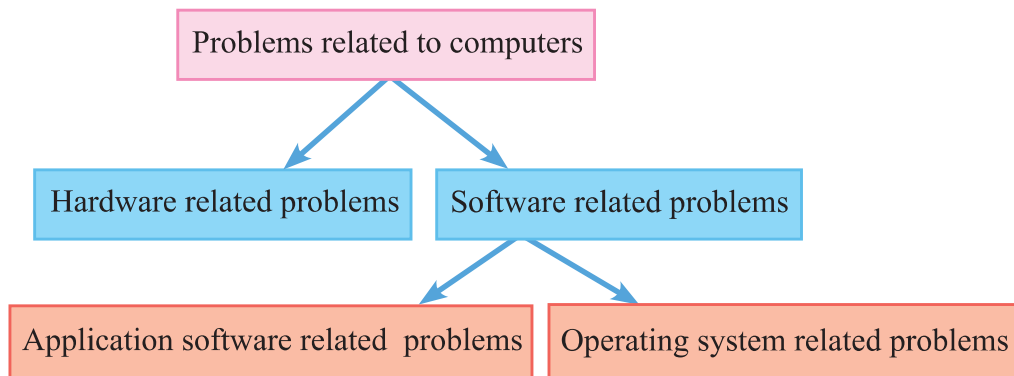
File extension can be used to search files by type. Using this, let us search for a file.



Refer to workbook for Activity 2.3.

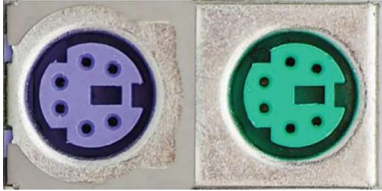

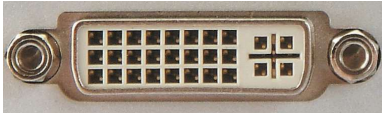
2.2 Troubleshooting and maintenance of computer

There are two basic types of troubles we experience when we work with the computer.



First, let us study what hardware problems are.

To identify problems related to hardware, it is essential to identify ports used for connections.

1	PS/2 port 	For keyboard/ mouse
2	VGA port 	For monitor with VGA connection
3	DVI port 	For monitor with DVI connection

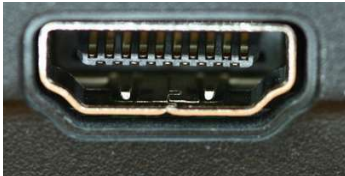

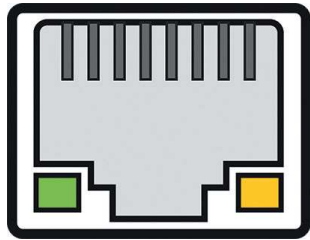
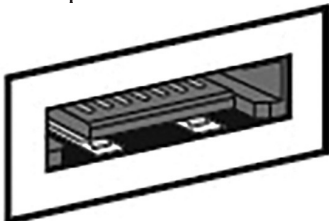
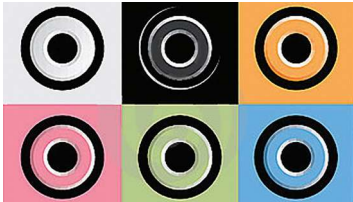
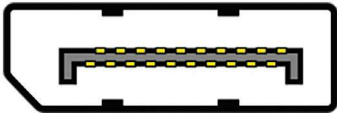
4	HDMI port 	HDMI is used to connect a television set instead of the monitor. Cables that are connected to this port can input and output both audio and video.
5	USB port 	For all devices with USB type connections
6	RJ45 Ethernet port 	For networking
7	eSata port 	For external storage devices
8	HD Audio port 	For high quality sound
9	Display port 	To provide higher performance in connecting digital display devices when compared to VGA and DVI ports

Figure 2.2 : Ports in a computer

In addition to the ports in figure 2.2, there are other ports in desktop, laptop, tab computers and mobile telephones. Let us identify those ports which are shown in figure 2.3.




<p>Parallel port</p> 	<p>This was mostly used for printer connection. However, the modern printers use USB cables. Therefore, modern computers do not come with this port.</p>
<p>Micro USB port</p> 	<p>Connects smart devices such as mobile phones, MP players, photo printers and digital cameras.</p>
<p>SD card reader</p> 	<p>For SD cards. Usually found in laptop and tab computers.</p>

Figure 2.3 : Ports in a computer

We learnt about several ports used to connect devices to the computer. This knowledge is essential for troubleshooting of computers. Let us now explore troubleshooting and possible solutions.


2.2.1

Troubleshooting hardware problems

Examples for hardware problems

- The computer does not function.
- The keyboard does not work.
- The mouse does not work.
- The monitor does not display.
- The speakers do not function.
- Network connections does not work.

Problem 01: The computer does not function when the power button is pressed.



Danger!

For activities connected with this unit, electricity has to be used. Be cautious! Do the activities under the direct supervision of the teacher.

In checking the power supply, first disconnect the main power supply.

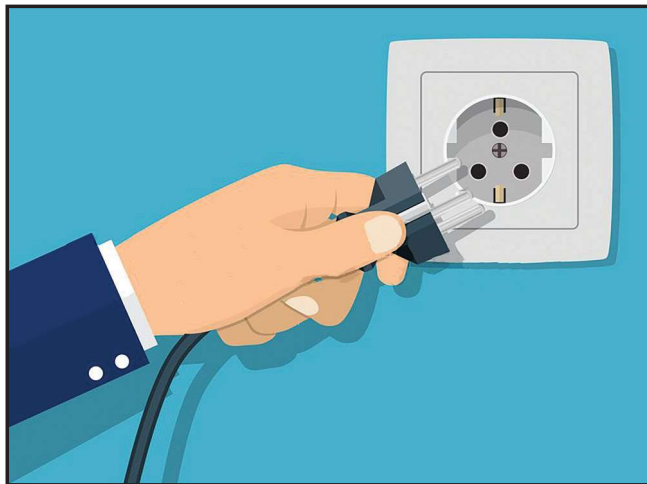
Let us look into the possible solutions;

Solution 01 :

Examine whether the cables connecting the computer and the main port supplying electricity are well connected.

Power supply to the computer may be direct from a wall socket or through a UPS.

Step 1 Disconnect power supply from the wall socket.

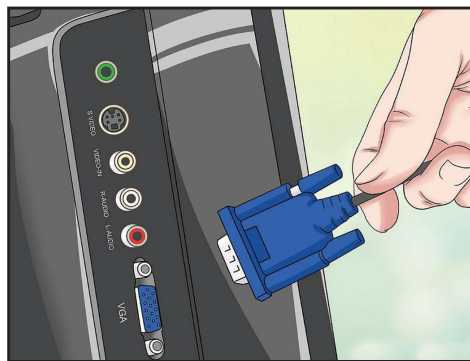
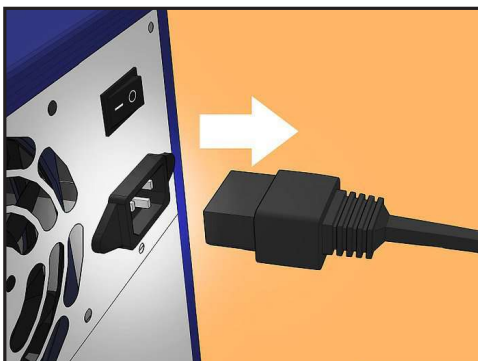


Step 2

Check whether the plug to the UPS is properly connected. Check whether the cable to the computer from the UPS is connected properly. If they are not connected, connect them properly.

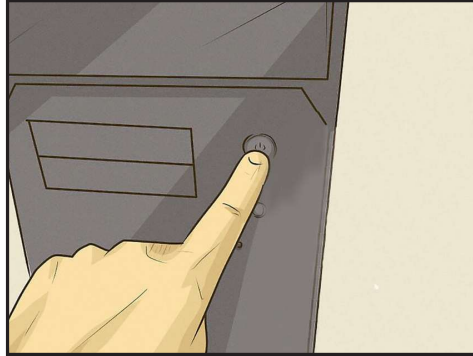
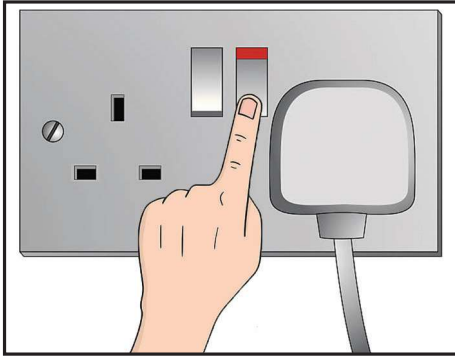
**Step 3**

Check whether the cables connecting the computer and the monitor to the UPS are connected properly. Sometimes, a system unit may be used to supply power for the screen. In such a situation, check both ends of the cables and fix properly if connection is loose.



Step 4

If all the above items are connected properly, power on the UPS from the main supply.

**Step 5**

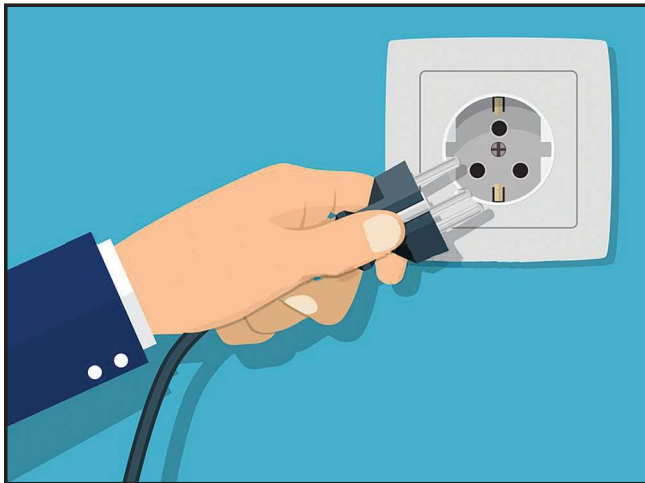
Next, switch on the computer. It is most likely to get started. If it does not, seek technical assistance.

Solution 02 :

If the power supply is direct from the main supply, follow the steps below;

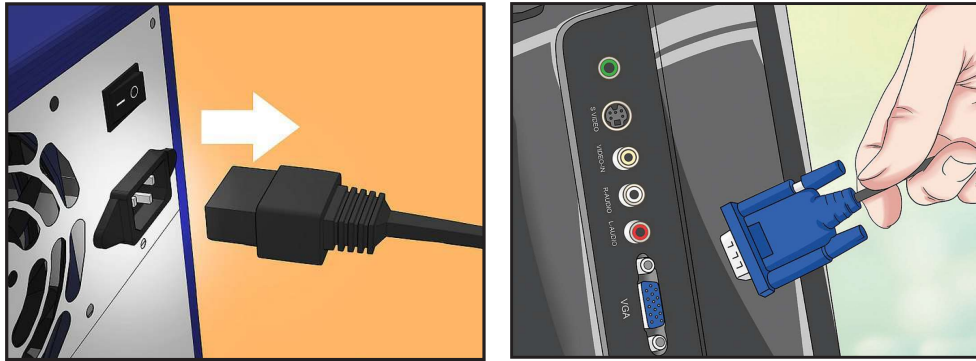
Step 1

Disconnect power supply from the connection on the wall socket.

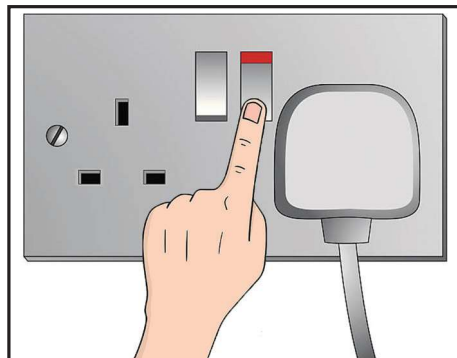


Step 2

Examine the power cables and the cables connecting the computer and the screen. If they are not properly connected, connect them correctly.

**Step 3**

Once all cables are connected, plug the power cable.

**Step 4**

After that, switch on the computer. Most likely, the computer will start. Otherwise seek technical assistance.

Problem 02 :

The keyboard or the mouse does not function.

Solution 01 :

Restart the computer. Check whether the keyboard or the mouse is activated. In most cases, they are likely to. If not, carry out the following.

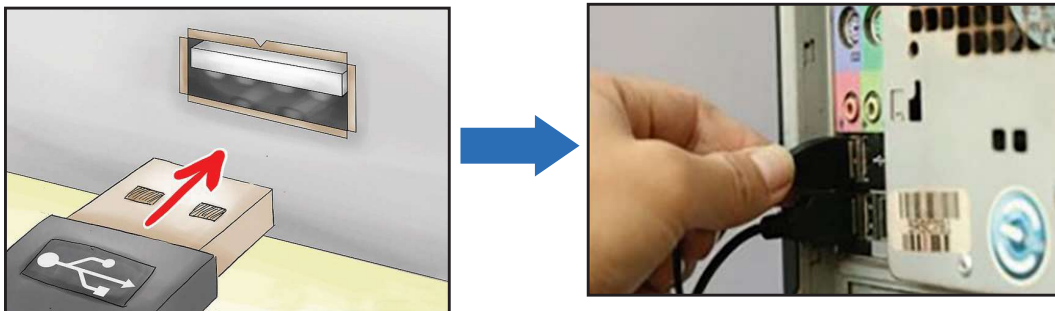
Solution 02 :

Step 1 Shut down the computer.

Step 2 Follow the steps below to connect the keyboard and the mouse with respective ports.

There are two types of mice. They are USB and PS/2. (old type)

- i. If the mouse has a USB port, connect it firmly to the port as shown in the illustration.



- ii. If the keyboard and the mouse have a PS/2 ports (old type), connect them with the PS/2 ports, properly.



Restart the computer after proper connection. The mouse and the keyboard most likely, would work. Otherwise connect another keyboard and mouse to test whether the fault is with the keyboard and mouse. If they too do not work, seek technical assistance.

Problem 03: The monitor does not function.

Solution :

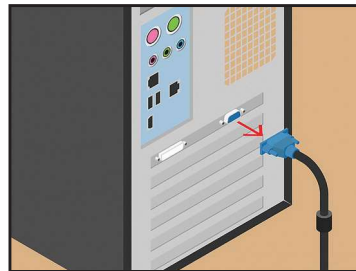
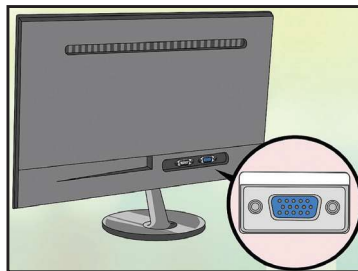
Step 1 Check whether the power button of the monitor is switched on. If not, switch on. If it does not work yet, perform the following steps.

Step 2 Restart the computer. The monitor should work upon restart. Otherwise, perform the following steps.

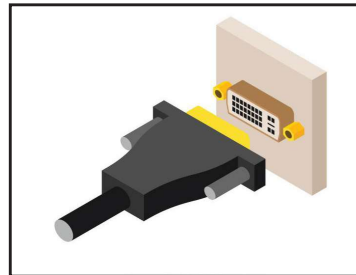
Step 3 The cables connecting the port may be VGA, DVI, HDMI or display port. They may not be connected properly. Check the connections as shown in the illustrations below;



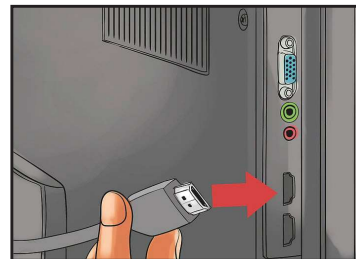
VGA



DVI

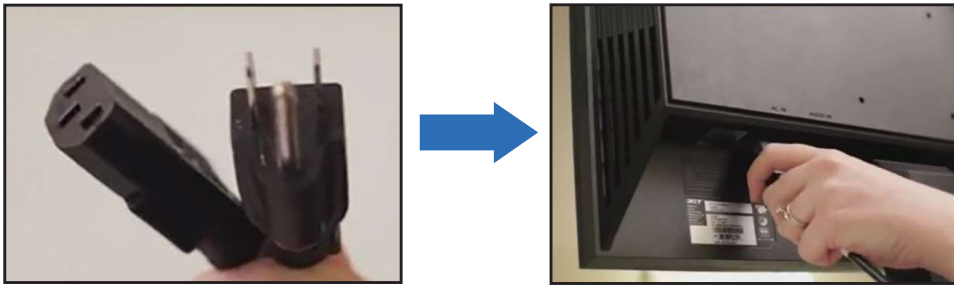


HDMI



Step 4

Check the connectivity of the power supply cable to the monitor as shown in the following picture. If not, connect them properly.

**Step 5**

If you follow the above mentioned steps correctly, the monitor will function properly when you restart the computer. Otherwise, test with another monitor to check whether the problem is with the monitor. If it still does not work, seek for technical assistance.

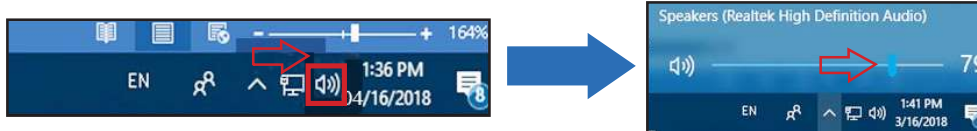
Problem 04: Faulty speakers**Solution :****Step 1**

Check the speakers by increasing the volume to a higher level. If there is no sound still, perform the following steps;



Step 2

To check whether the volume is minimized by the operating system, check the sound icon in the task bar at the bottom right hand of the computer. Check whether sound has been minimized or muted. Double click on the speaker icon and move the slider up and down to test sound. If it does not work, go to step 3.

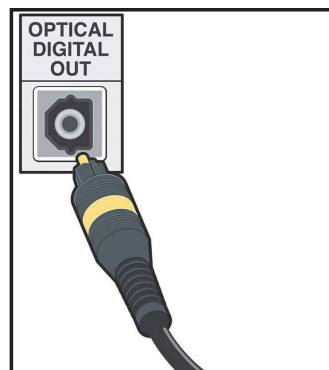


Step 3

The cables that connect the computer and the speakers vary according to the technology used in the speakers. If HD Audio technology is available in your computer, check whether the cables are connected as shown in the picture. If not, connect them as shown.



If your sound system has optical digital audio technology, you need only one cable to connect. Connect cables correctly to the port as shown below;



Step 4

Most sound systems require separate power supply. There is a cable attached to the speaker for this purpose. Check whether this cable is connected to a port for power. Otherwise, connect the cable for power supply.

**Step 5**

Follow all the steps specified above and restart the computer. Sound is most likely to work. Otherwise, check whether the fault is with speakers of your computer. Connect another set of speakers to the computer. If the trouble continues, proceed with the following steps;

Step 6

If the audio device driver is not properly installed, it has to be installed correctly. Seek assistance from your teacher for that.

Step 7

If all the steps described above fail to work, seek technical assistance.

Problem 05: Network connection failure.

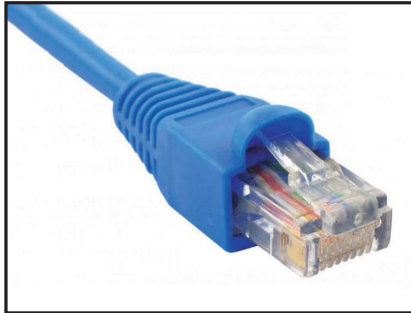


Note - A computer gets connected to a computer network with the RJ45 connector, via the network switch. There is an Ethernet port in the computer for this purpose.

Solution :

Step 1

Check with the illustrations below to see if the connection is proper. Otherwise, reconnect properly. If it is connected properly, the ethernet window flashes a small green light.



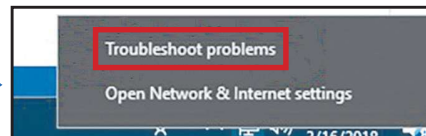
RJ45 Connector



Computer interface

Step 2

If the computer does not get connected to the network, right click on the computer icon at the bottom right of the task bar. This will give a menu for "Troubleshoot problems." Click on this. The operating system will fix the problem and connect to the network.



Note - In addition to network cables, there may be other settings to be set up. Permission for these settings has to be gained through a network administrator account. Therefore, you will need the assistance of your teacher to change such settings.

2.2.2 Software problems

There are two types of software problems as shown in the figure 2.4.

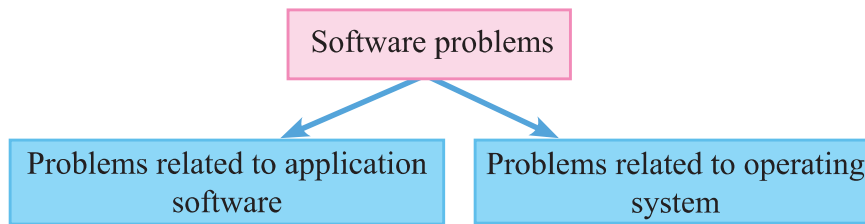


Figure 2.4 : Software problems

Application software

Application software is a computer program that is designed to perform specific tasks.

- e.g. - Word processing software (e.g. - MS Word)
Spreadsheet software (e.g. - MS Excel)
Web browser (e.g. - Firefox, Chrome)
Image editing software (e.g. - Paint)

Troubleshooting application software problems

The following some example for application software problems;

- Does not run
- No response, even though it is open
- Inability to see the interface
- Takes long time to load and is slow
- Does not respond to user commands
- Indicates incorrect functioning

Solution 01 :

The simplest solution is to close the application software and reopen. If this does not work, follow the below steps.

Solution 02 :

Find out if the software is compatible with the specification of the computer and with the installed operating system. Software compatibility is the feature of software components or systems which allows to function together. A software

which is compatible with one computer environment may not be compatible to another. For instance, some software that are compatible with Windows operating system do not work with Mac operating system. Therefore, check whether the software is compatible with the computer's operating system. If software is compatible go to the next step.

Solution 03 :

Check whether the software is licensed. Further, check whether the trial period of software is expired. Unlicensed software or software with expired trial period can cause problems. Otherwise, proceed to the next step.

Solution 04 :

Try 'Repair' option of the application software. Restart the computer and reopen the application software.

Solution 05 :

Uninstall the problematic software from the computer and reinstall the same software. You will need assistance from the teacher for the 4th and 5th solutions.

Problem :

The above problems of application software may be resolved easily. Sometimes, such problems can occur due of viruses. Let us see how to resolve such problems.

Solution :

Scan the computer using an antivirus software. Restart the computer and the application software.



Note - Computer virus is a malicious code which harms the computer system, destroys data and has the ability to replicate itself.

Problems in operating system

Some of the problems relating to operating system are;

- Slow in starting the computer
- Not being responsive to user commands due to slow processing
- Displaying a blank desktop screen

Problem 01: Slowness of computer



Note - A computer may slow down due to several starting up application programs or due to smaller space in the hard disk. To resolve this problem, logging from an administrator account is necessary. Your teacher will attend in solving these problems.

Solution :

Step 1 Close unnecessary application programs running at start up of the computer.

Step 2 Remove unnecessary files from hard disk. Use "Disk Cleanup" tool of the operating system for this purpose.

Step 3 If these solutions fail, use 'Repair' option of the operating system.

Step 4 If 'Repair' option too does not work, then reinstall the operating system.

Problem 02: Blank desktop



Note - Desktop icons may not be seen due to a problem of the operating system or operating system settings.


Solution 01 :

There are two modes to display the desktop in Windows 10 as;

- a. Tablet mode
- b. PC mode

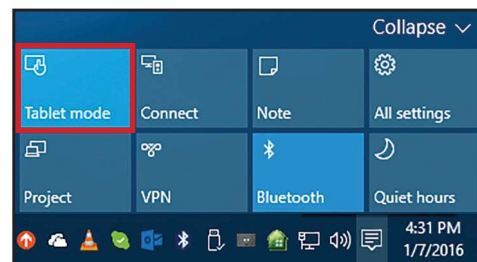
If the mode is set to Tablet, desktop icons will not be displayed. Hence, it is necessary to follow the steps given below;

Step 1

Click on the speech button  on the task bar. (On the left hand side of the time)

**Step 2**

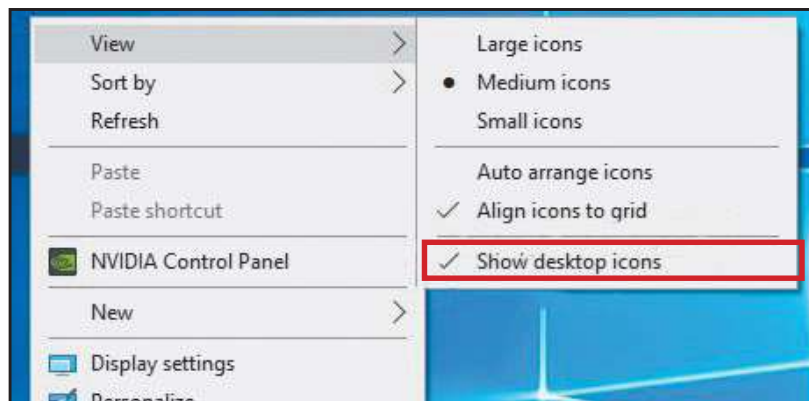
Then, the Windows action center opens. Several rectangular tiled buttons are seen at the bottom. Click the "Tablet mode" button. This option changes tablet mode to PC mode which makes the desktop icons visible.

**Solution 02 :**

If icons are still not visible then, the desktop icons may be disabled. To enable them, follow the steps given below;

Step 1

Right click on the desktop. Click on the "View" menu to see the following sub menu;



Step 2

Click "Show desktop icon" in the sub menu. The symbol "√" will appear on "Show desktop icons". (Desktop icons will now appear on the screen.)

Solution 03 :

If the screen is still blank, the issue may be in the operating system. Access to administrator account is necessary with the assistance of the teacher in order to troubleshoot the issue.



Refer to workbook for Activities 2.4 and 2.5.

Summary

Operating system can be used to change the configuration and settings of a computer.

- It is important to set the date and time in a computer since the date and time is used by the operating system in saving files, searching files, sending reminders and in business correspondence.
- Countries in the world are divided into time zones according to the international standards. These time zones maintain a unique, standard time for legal, commercial and social purposes.
- Currency and their symbols should be adjusted to suit the country standards.
- There are international formats in writing numbers and currency etc.
- There are several attributes in a saved file;
 - Place where it is saved
 - Date of last modified
 - Type of file
 - Size of file
 - Date on which the file is created
 - Rights to access the file
- When a need arises to open a saved file and if the name or the place saved is forgotten, file search can be used to locate it.

- Ports are used to connect a computer to peripheral devices.
- The user may experience two types of problems in using a computer;
 - Hardware related simple problems
 - Software related simple problems
- Troubleshooting hardware related simple problems
 - Keyboard/ mouse related problems
 - Problems with monitors
 - Problems related to speakers
 - Failure to connect to network
- Troubleshooting software related simple problems
 - Problems with Operating System
 - Problems with application software
- Computer virus is a malware (malicious software) which has the ability to cause problems to the computer system, to destroy data and replicate itself.