

Information & Communication Technology

Reading Book Grade 6

Educational Publications Department



To obtain textbooks in electronic medium
www.edupub.gov.lk

First Print - 2018
Second Print - 2019

All Rights Reserved

ISBN 978-955-25-0088-6

Published by Educational Publications Department
Printed by: Karunaratne & Sons (Pvt) Ltd.
65 C, Thalgahavila Road, Midellamulahena, Horana.

The National Anthem of Sri Lanka

Sri Lanka Matha

Apa Sri Lanka Namo Namo Namo Namo Matha
Sundara siri barinee, surendi athi sobamana Lanka
Dhanya dhanaya neka mal palaturu piri jaya bhoomiya ramya
Apa hata sepa siri setha sadana jeewanaye matha
Piliganu mena apa bhakthi pooja Namo Namo Matha
Apa Sri Lanka Namo Namo Namo Namo Matha
Oba we apa vidya
Obamaya apa sathya
Oba we apa shakthi
Apa hada thula bhakthi
Oba apa aloke
Apagae anuprane
Oba apa jeevana we
Apa mukthiya oba we
Nava jeevana demine, nithina apa pubudukaran matha
Gnana veerya vadawamina regena yanu mana jaya bhoomi kara
Eka mavakage daru kela bevina
Yamu yamu vee nopama
Prema vada sema bheda durerada
Namo, Namo Matha
Apa Sri Lanka Namo Namo Namo Namo Matha

අපි වෙමු එක මවකගේ දරුවෝ
එක නිවසෙහි වෙසෙනා
එක පාටුති එක රැදිරය වේ
අප කය තුළ දුවනා

එබැවිනි අපි වෙමු සෞයුරු
සෞයුරියෝ
එක ලෙස එහි වැඩිනා
ඡ්‍රිවත් වන අප මෙම නිවසේ
සෞදින සිටිය යුතු වේ

සැමට ම මෙත් කරුණා ගුණෙනී
වෙළි සමග දමිනී
රන් මිනි මුතු නො ව එය ම ය
සැපතා
කිසි කළ නොම දිරනා

ආනන්ද සමරකෝන්

ශුර තාය් මක්කන් නාමාවොම්
ඉන්ජේ නාම් බාමුම ණල්ලම්
න්‍යන්ජේ ඉතළිල් ඉටුම්
ඉන්ජේ නම් ගුරුති නිඹම්

අතනාල් සකොතරර් නාමාවොම්
ඉන්ජාය් බාමුම බාරුම නාම්
න්‍යන්ජාය් ඇව ණල්ලිනිලේ
නළමේ බාම්තල් වෙන්ඩුම්ජේ.

යාවරුම අන්පු කරුණනායුතන්
ඉංහුමේ සිඟක්ක බාම්ත්තිඹුතල්
පොන්නුම මණියුම මුත්තුමල්ල - අතුවේ
යාන්නු මුඩියාස් ගෙල්වමන්ජේ.

ஆனந்த சமரக்கோன்
கவிதையின் பெயர்ப்பு.



**Being innovative, changing with right knowledge
Be a light to the country as well as to the world.**

Message from the Hon. Minister of Education

The past two decades have been significant in the world history due to changes that took place in technology. The present students face a lot of new challenges along with the rapid development of Information Technology, communication and other related fields. The manner of career opportunities are liable to change specifically in the near future. In such an environment, with a new technological and intellectual society, thousands of innovative career opportunities would be created. To win those challenges, it is the responsibility of the Sri Lankan Government and myself, as the Minister of Education, to empower you all.

This book is a product of free education. Your aim must be to use this book properly and acquire the necessary knowledge out of it. The government in turn is able to provide free textbooks to you, as a result of the commitment and labour of your parents and elders.

Since we have understood that the education is crucial in deciding the future of a country, the government has taken steps to change curriculum to suit the rapid changes of the technological world. Hence, you have to dedicate yourselves to become productive citizens. I believe that the knowledge this book provides will suffice your aim.

It is your duty to give a proper value to the money spent by the government on your education. Also you should understand that education determines your future. Make sure that you reach the optimum social stratum through education.

I congratulate you to enjoy the benefits of free education and bloom as an honoured citizen who takes the name of Sri Lanka to the world.

A handwritten signature in black ink, appearing to read "Akila Viraj Kariyawasam".

**Akila Viraj Kariyawasam
Minister of Education**

Foreword

The educational objectives of the contemporary world are becoming more complex along with the economic, social, cultural and technological development. The learning and teaching process too is changing in relation to human experiences, technological differences, research and new indices. Therefore, it is required to produce the textbook by including subject related information according to the objectives in the syllabus in order to maintain the teaching process by organizing learning experiences that suit to the learner needs. The textbook is not merely a learning tool for the learner. It is a blessing that contributes to obtain a higher education along with a development of conduct and attitudes, to develop values and to obtain learning experiences.

The government in its realization of the concept of free education has offered you all the textbooks from grades 1-11. I would like to remind you that you should make the maximum use of these textbooks and protect them well. I sincerely hope that this textbook would assist you to obtain the expertise to become a virtuous citizen with a complete personality who would be a valuable asset to the country.

I would like to bestow my sincere thanks on the members of the editorial and writer boards as well as on the staff of the Educational Publications Department who have strived to offer this textbook to you.

W. M. Jayantha Wickramanayaka,
Commissioner General of Educational Publications,
Educational Publications Department,
Isurupaya,
Battaramulla.
2019.04.10

Monitoring and Supervision

W. M. Jayantha Wickramanayaka - Commissioner General of Educational Publications
Educational Publications Department

Direction

W. A. Nirmala Piyaseeli - Commissioner of Educational Publications (Development)
Educational Publications Department

Co-ordination

H. A. I. P. Upathissa - Assistant Commissioner
Educational Publications Department

Board of Editors

Dr. Prasad Wimalarathna	- Head, Faculty of Communication & Media Technology University of Colombo School of Computing
Dr. V. G. N. Vidanagama	- Senior Lecturer, University of Wayamba
Dr. Senaka Amarakeerthi	- Senior Lecturer, University of Sri Jayawardenapura
W. W. M. D. C. B. Piyasiri	- Instructor, Technical College, Hasalaka
S. Shanmugalingam	- Senior Lecturer, National Institute of Education
H. A. I. P. Upathissa	- Assistant Commissioner Educational Publications Department
E. N. Boralugoda	- Assistant Commissioner Educational Publications Department

Board of Writers

S. N. O. Rodrigo	- Teacher, Chi/ Madagama Abhaya Maha Vidyalaya Panirendawa
R. M. S. K. Ranathunga	- Teacher, CP/ Hoorikaduwa Balika Vidyalaya Menikhinna
Sanjeeewani Daluwaththa	- Teacher, President's College Maharagama

E. M. Kusum Udayakanthi	- Teacher WP/Ke/ Sri Dharmaloka Maha Vidyalaya Kelaniya
S. M. D. T. Singhabahu	- Teacher Chi/St. Sebastian Central College Katuneriya
L. G. I. Priyadarshani	- Teacher Vidyarthi Balika Vidyalaya Kandy
H. A. I. P. Upathissa	- Assistant Commissioner Educational Publications Department
N. Vagisamurthi	- Director of Education (Retired)
T. Mathiwadanan	- In Service Adviser Zonal Education Office Piliyandala
A. M. Vaseer	- Center Manager Zonal Computer Resource Center Kahagolla
M. F. M. Jarjoon	- Assistant Director of Education Ministry of Education

Language Editing

W. Indumini Darshika	- Assistant Commissioner Educational Publications Department
D. R. N. K. Gamage	- Assistant Commissioner Department of Examinations

Illustrations

Lalith Gunathilake	- WP/Jaya/ Vidyakara Balika Vidyalaya Maharagama
--------------------	---

Cover Page

C. Hapuarachchi	- Computer Assistant Educational Publications Department
-----------------	---

Technical Assistance

B. T. Chathurani Perera	- Computer Assistant Educational Publications Department
J. H. Manorika Priyangani	- Computer Assistant Educational Publications Department

Index

1	Importance of Computers	1
2	Use the Computer Laboratory Safely	14
3	Operating System and File Management	27
4	Using Mouse and Keyboard to use Application Software	41
5	Algorithm & Flow Charts	55
6	Using the Internet for collecting Information and Communication	64



We would be grateful if you could send your suggestions and comments on the content of the grade 6 - 11 Information and Communication Technology textbooks and on the development of the creativity of the students to
feedbackicttextbook@gmail.com

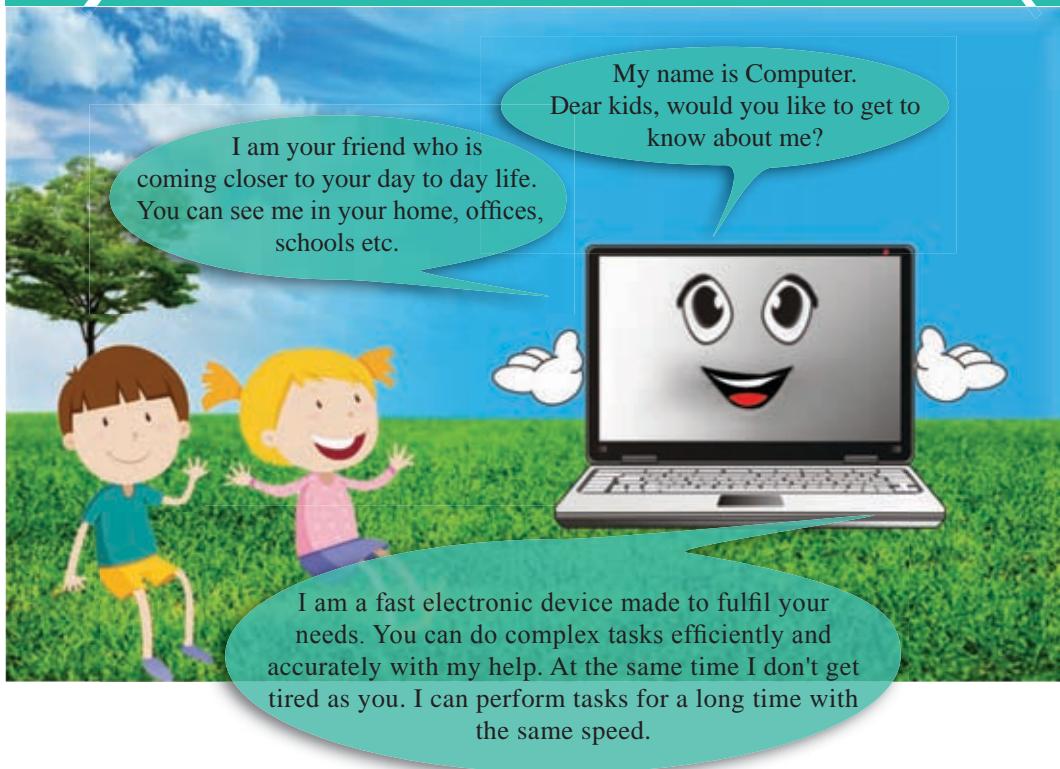
Editorial Board



1

Importance of Computers

1.1 Let's get to know the Computer



1.1.1 Functions of a Computer

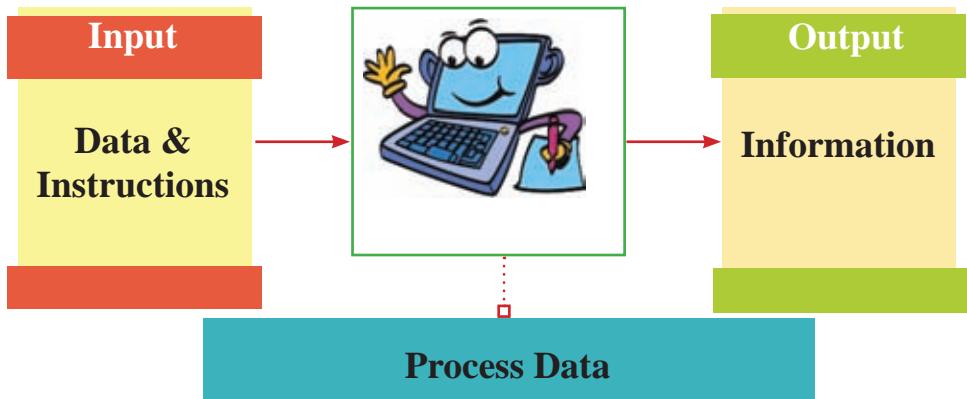
The basic functions of a computer are entering data, processing them and producing processed data (information).

Input

Process

Output

Figure 1.1 - Basic Functions of a Computer

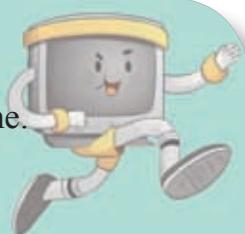


Activity 1 - See 1.1 in the Workbook.

1.1.2 / Significant Features of a Computer

Speed and Efficiency

- 💻 It can finish any given task within a very short time.
(It can perform billions of tasks in a second.)



Accuracy

- 💻 It can provide correct information when correct instructions and data are given.



Reliability

- 💻 You can rely on the process and the output.

Consistency

- 💻 It produces consistent output when the same input is given.

Storage Capacity

It can store a large amount of data. It can obtain them at any given time for any process.

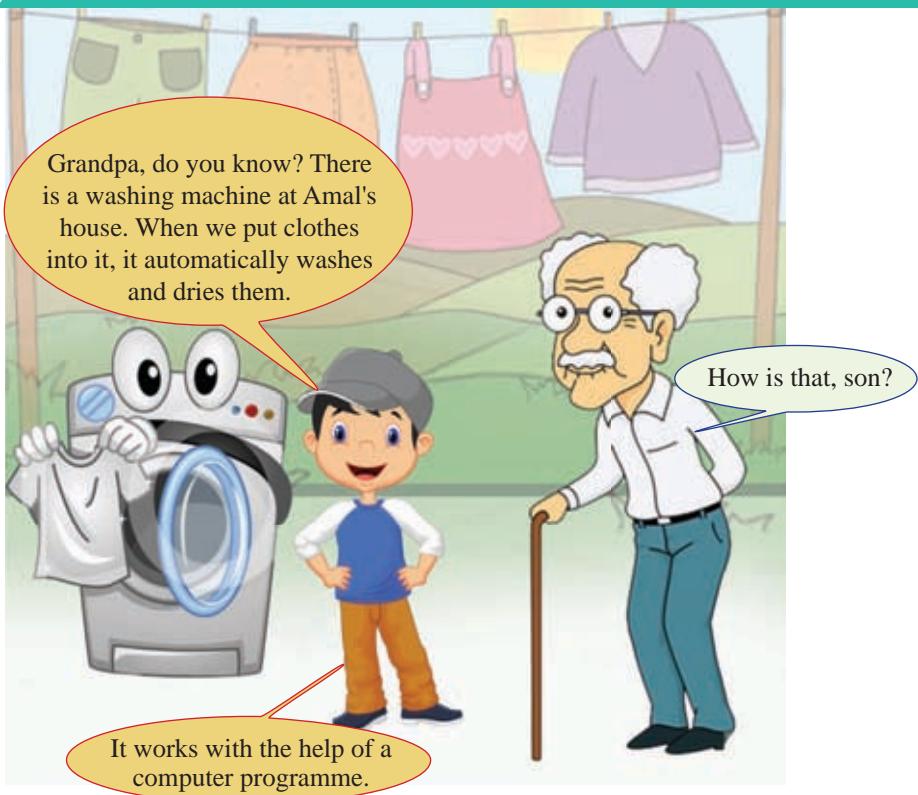
Cost

Though the initial cost is high, the maintenance cost is not so.

Intelligence

It can act according to the given instructions. But it cannot take decisions on its own like a human being.

1.1.3 / Devices with Embedded Computers



Equipment like washing machines, mobile phones, modern motor vehicles and modern televisions are operated by computer programmes. Computer programmes included in such equipment are known as Embedded Computer Systems.



Smart Phones



Washing Machines



Modern Cars



Smart Televisions

Figure 1.2 - Some Devices with Embedded Computers

1.2 / Let's identify the Components of a Computer

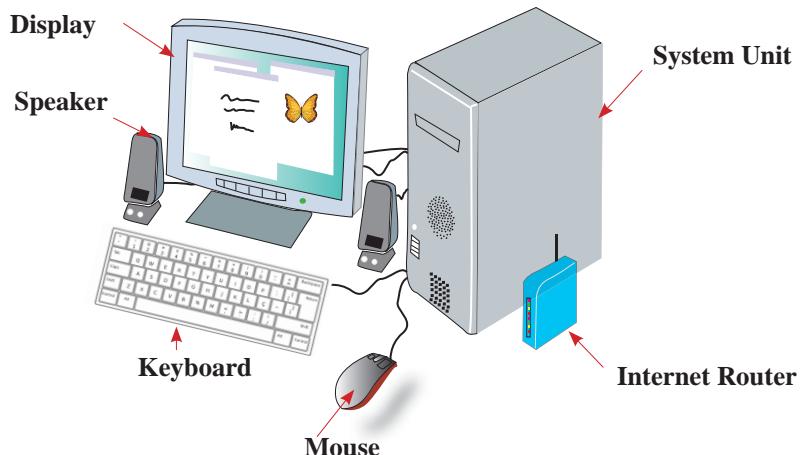


Figure 1.3 - Components of a Computer

A computer is a unit which consists of many parts. We can categorise those parts into components according to the nature of the functions they do.

- Input Devices
- Output Devices
- Central Processing Unit
- Main Memory
- Storage Devices
- Communication Devices

• **Input Devices**

The devices which are used to enter data and instructions to computers are called input devices.



Figure 1.4 - Some Input Devices

• **Output Devices**

The devices which are used to retrieve the data and information are called output devices.



Figure 1.5 - Some Output Devices

- **Central Processing Unit (CPU)**

Controlling the computer and processing data according to the given instructions are done by the Central Processing Unit.

The Central Processing Unit is located inside the system unit. It cannot be seen from outside.

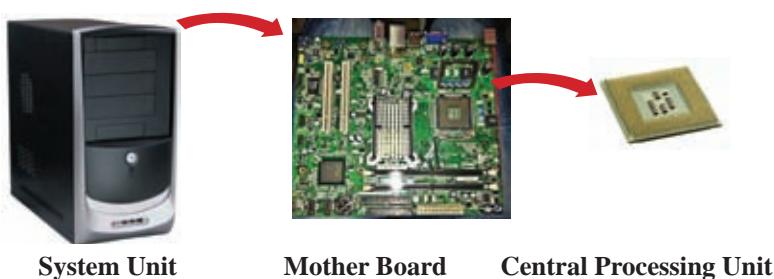


Figure 1.6 - Location of the Central Processing Unit

- **Main Memory**

The device which is used to store data, information and instructions temporarily is identified as the main memory or the primary memory. It is also called the Random Access Memory (RAM).

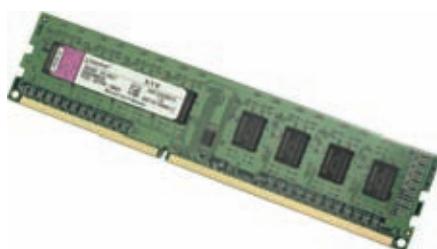


Figure 1.7 - Random Access Memory -RAM

• Storage Devices

The devices which are used to store data, information and instructions are called storage devices.

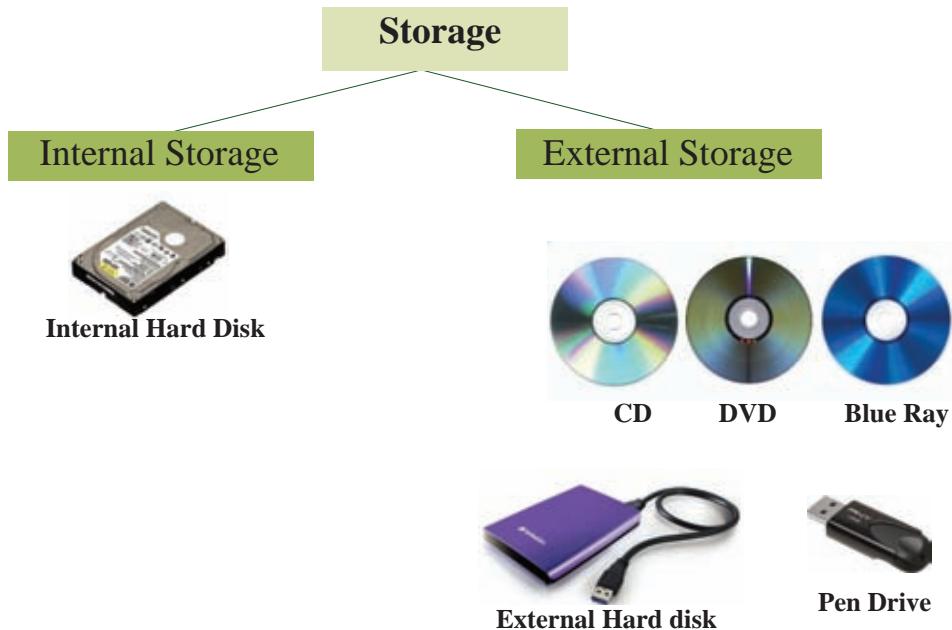


Figure 1.8 - Some Storage Devices

• Communication Devices

The devices which are used to exchange the processed data and information are called communication devices.



Figure 1.9 - Wired/Wireless Communication Devices

1.3 / Importance of Software

A software is a set of programmes designed to execute certain tasks by using a computer.

Activity 2 - See 1.2 in the Workbook.



Hey, what do you mean by Software and Hardware?

Then who is a user?

All the things that you can touch in me are called hardware.

Things that cannot be touched such as programmes with data and instructions are called software.

The person who operates me is called a 'user'.

A user can do different tasks by using software. There are various types of software to fulfil the needs of the user.

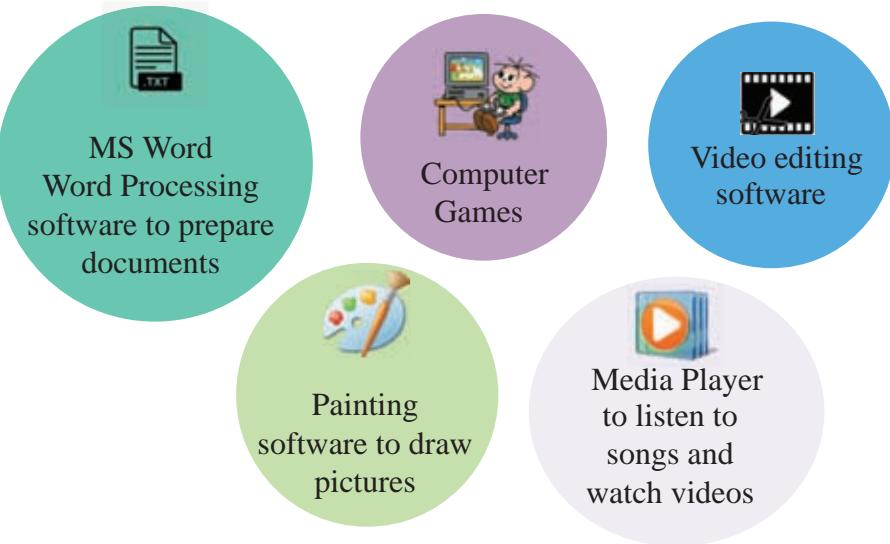


Figure 1.10 - Some Examples for Software

You can study more about software in the forthcoming chapters.

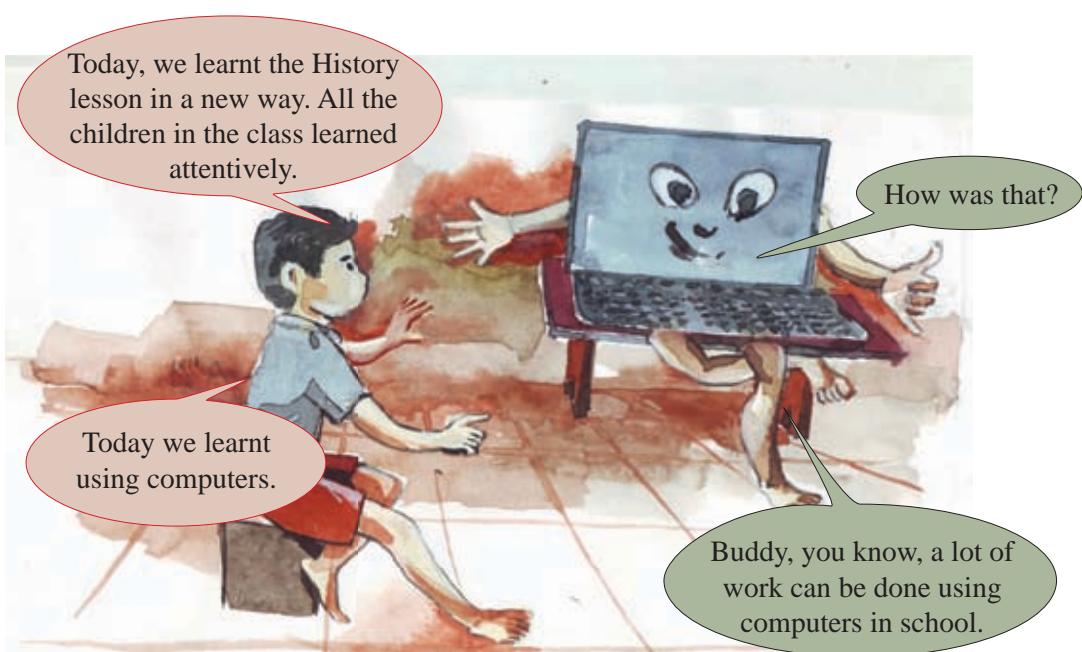
1.4 Application of Computers in Various Sectors

Activities in all sectors have become easy by the use of computers. Several examples for such sectors are given below.



Figure 1.11 - Various Sectors that use Computers

1.4.1 / Schools



Computers simplify work and bring effectiveness to office work in the school system.

Figure 1.12 - Working in the school office using computers

Computers are used instead of blackboard and books in the learning process.



Figure 1.13 - Computer enabled Learning Situation



Obtain additional knowledge related to subjects by accessing the internet.

Figure 1.14 - Getting knowledge from the internet

1.4.2 / Banking

Computer has become an essential tool in the banking activities.



Use of Automated Teller Machine (ATM) to deposit and withdraw money.

Figure 1.15 - An ATM machine

Using electronic cards to settle bills when purchasing goods.



Figure 1.16 - Paying bills by electronic cards



Internet banking and mobile banking are latest trends in the banking system.

Figure 1.17 - Internet Banking

1.4.3 / Hospitals

There are many examples of using computer systems in hospitals.



Figure 1.18 - Thermometer

Digital thermometer is an embedded computer device which can be used at home.

Use of computer and embedded computer devices in Intensive Care Unit (ICU).



Figure 1.19 - Use of computers and computer embedded devices in ICU



Figure 1.20 - Use of computers and computer embedded devices in an operation theatre

Use of computers and computer embedded devices in an operation theatre.

1.4.4 / Factories



Figure 1.21 - Use of Robotic Technology

- Human labour is replaced by computer devices. As a result, production can be increased.
- The use of robotic technology is a latest improvement in industrial work. Activities in industrial sector have become easier by that.

1.4.5 / Agriculture



Embedded computer devices are used in various activities such as harvesting, weeding and water supplying. Thus, the productivity can be increased by minimising expenditure.

Figure 1.22 - Supplying Water and Fertilizer using Modern Technology in Agriculture

Activity 3 - See 1.3 in the Workbook.



Summary

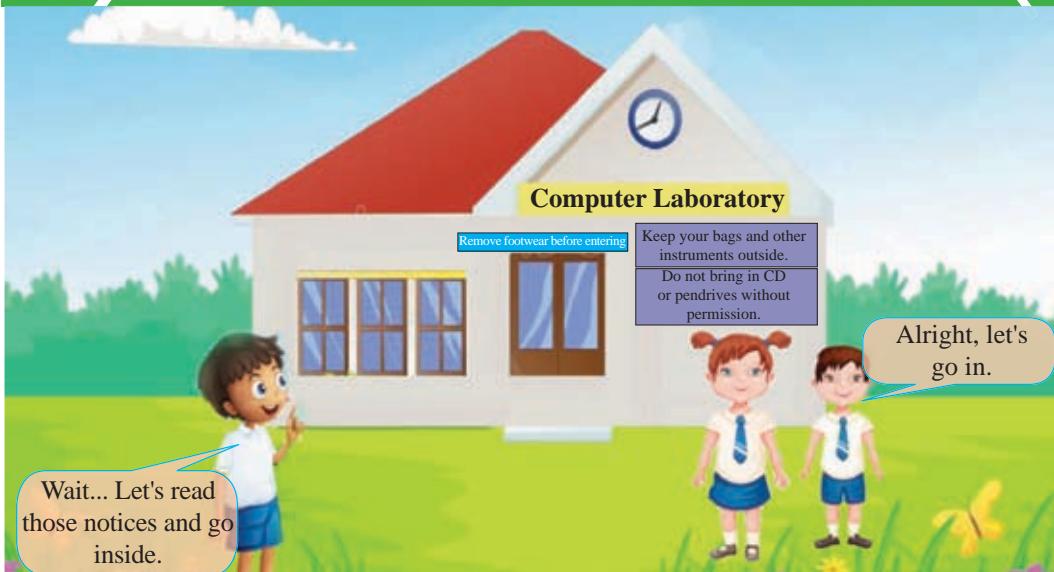
- ★ The main tasks of the computer are input, processing and output.
- ★ Input devices, memory, CPU, output device, communication devices are identified as the main parts of a computer.
- ★ Software is essential to do different tasks of the user.
- ★ Computer is used for various activities of day to day life.
- ★ Smart phones, modern televisions and washing machines can be identified as equipment with embedded computer systems.



2

Use the Computer Laboratory Safely

2.1 Let's Identify the Computer Laboratory



I welcome all of you to the computer lab. This computer lab is a valuable resource in our school. Since you all are new to this place, you need to know about this computer lab and how to use it well.

Computers and other accessories have been installed in the computer laboratory. Printers, scanners, multi-media projectors are some of them.

Computers and other accessories in a lab are expensive and valuable. A large amount of money have to be spent to repair a device, if it is damaged or to replace a new one. Therefore, it is your responsibility to use them properly and keep them safe.



Figer 2.1 - A Computer laboratory

2.1.1 / Let's use the Computer Laboratory Correctly

Using the computer laboratory correctly and safely

Guidelines for your safety

Guidelines for the safety of the devices

For your safety



Be careful when you touch devices such as wires and sockets that are connected to electricity.



Should be aware of the exit doors of the laboratory.



Should be aware of fire extinguishers if any.

Avoid running and playing inside the computer laboratory.



For the safety of the devices



Do not supply power to devices without correct instructions.



The laboratory and all the equipment should be kept clean and dust-free.



All the equipment must be switched off properly after use.



Footwear should be removed and placed outside the laboratory.



The used equipment should be placed in the proper place.



Avoid taking food, water or other liquid into the laboratory because they may damage the equipment.



Virus scanning should be done when connecting external storage devices such as flash drives to the computer.



Activity 1 - See 2.1 in the Workbook.

2.2.1 / Let's operate the Computer

We must practise to operate the computer correctly from our childhood. For that follow the guidelines given below.

1

First, supply electricity to the computer by turning on the switch connected to the computer.



2

If the computer is connected to an uninterrupted power supply (UPS), turn it on.



3

Next, the system unit should be switched on.



4

Finally, the monitor should be turned on.



Anyhow, the above steps may differ in modern computers (like laptop computers) which come with a single power button.



Please follow your teacher's instructions at all times since the above steps might be different in your laboratory.



The functioning computers should be shut down in a proper way. Otherwise, the life span of the computer may be shortened.

First, we should close any programmes that we have opened.



Then, select the command "Shutdown" and click on it.



Switch off the power on/off button of the monitor when its screen becomes dark.



Then, switch off the UPS and the wall switch respectively.

2.2.2 / Let's learn Computer Ethics

"මහත් සෙන් වචවන
සිරිත් මලදම් බලමින
සිරිත් හොඳ දැනගෙන
මහත් යසසිරි ලබනු දෙලොවින"
- සිරිත් මලදම

"Mahath seth wadawana
Sirith maldam balamina
Sirith honda denagena
Mahath yasasiri labanu delowina"
- Sirith Maldama

Meaning : Read Sirith maldama. It brings you peace. Learn and practise good values from it and it will bring you good fortune in this life and lives to come.

Dear children, you always get advices to be a good child at home and at school. These advices are called ethics, values, or good customs.

Good practices help to lead a good life. Similarly, there is a set of ethics that should be followed to use the computer properly. They are identified as 'computer ethics'.



Activity 2 - See 2.2 in the Workbook.

This code of ethics can be considered as a set of guidelines that help you to use the computer properly.



When we use the computer laboratory...

Software which should be used by paying money should not be fakely used or copied.

we must refrain from accessing computer files and articles of others without permission.

we must not repair any computer devices without proper instructions.

we must not access the internet without the supervision of teachers.

we should not uninstall/ change/ delete any programmes without the permission of the teacher.

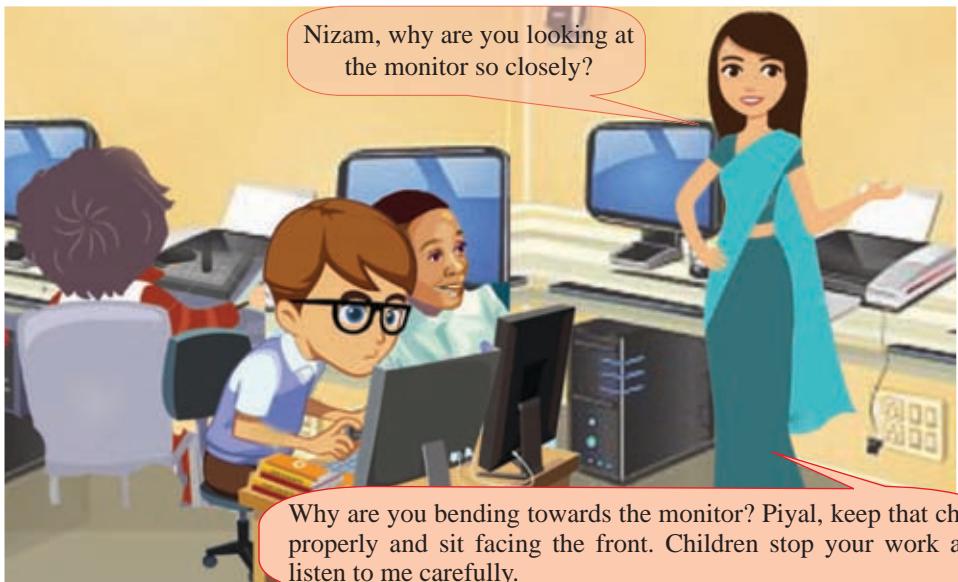
In addition, there can be some other rules and regulations related to your laboratory.

The above regulations are for grade 6 students like you. You will learn more on computer ethics in the forthcoming grades.



Activity 3 - See 2.3 in the Workbook.

2.2.3 / Let's use Correct Postures when using Computers



It is common for various health problems to occur when using computers constantly. Most of the illnesses occur due to the lack of maintaining a correct posture. So we need to practise maintaining a correct posture from our childhood.

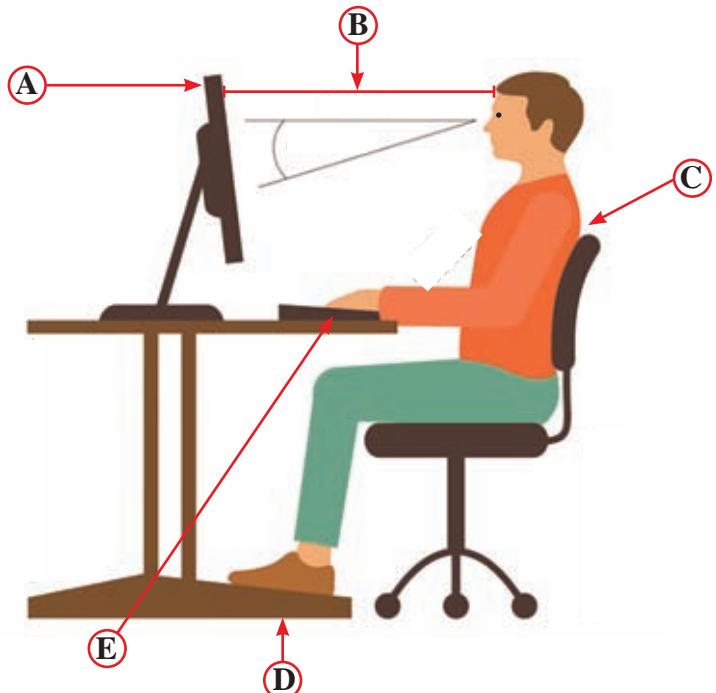


Figure 2.2 - Maintaining a Correct Posture when using a Computer

Correct postures to be followed	When correct postures are not maintained
A. Always keep the computer screen at the level of your eyes or little below.	Pain in the eye, problems in eyesight and tearful eyes can occur.
B. The distance between your eyes and the computer screen should be between 18 and 28 inches.	
C. Sit straight by leaning on to the back of the chair.	Pain in backbone.
D. Keep your legs vertically and place your feet on the ground.	Strain in feet.
E. Keep the keyboard and the mouse at the level of your elbow.	Pain in fingers and elbows.

In addition, adjust the brightness and the contrast of the computer screen to suit your eye. Often give a rest to your eye if you are working on your computer for a long period of time.

Although an incorrect posture can cause health issues, the computer is not a device that can be discarded. Therefore, we must use the computer properly to avoid such problems.



Activity 4 - See 2.4 in Workbook.

2.2.4 / Let's dispose Electronic Waste Safely

All computer hardware is considered as electronic waste when they become out of use or when the user discards them.

When these harmful substances enter the human body. They can cause various diseases. They can cause various day-to-day inconveniences and gradually lead to develop various long-term non-curable diseases such as cancers and kidney diseases.

When we dispose these tools improperly to the environment it can cause great damage to the environment as well as to human beings, since they have been manufactured from various harmful metals such as Copper, Aluminum and Lead as well as from plastic.

●Lead

Damage the brain, kidneys and disorders in blood circulation

●Barium

Brain swelling, muscle weakness, damage to heart

●Mercury

Damage to kidneys and nervous system

●Beryllium

Lung Cancer



Figure 2.3 - Illnesses that can be caused due to electronic waste



Since, these hazards can cause damages for generations, they must be disposed properly. For that, the 3R system can be used.

Figure 2.4 - 3R Method

1. Reduce

It is not necessary to upgrade to new equipment periodically if we maintain existing equipment properly as to use them for a long time.

This reduces the amount of waste that is released to the environment.



One day, there was a problem in our computer. My sister told father to buy a new one. But he brought necessary parts and repaired the computer.



2. Reuse

When purchasing new equipment, consider donating or selling the old equipment if they are in working condition, without discarding them.



If it is not in working condition, then it can be utilized for other purposes.

For instance, as shown in the picture, an empty monitor can be used as a flower pot and a casing of the system unit can be used as a garbage bin.

Figure 2.5 - Uses of Discarded Computers

The amount of waste that is released to the environment is therefore minimal.

3. Recycle

Equipment which are not repairable or reusable, should be recycled without discarding them. It should be handed over to a electronic waste recycling company.



Recycling is a process of transforming the waste to a new product. Waste is separated into small parts and new material is produced through machinery.

Activity 6 - See 2.6 in the Workbook.



2.2.5 / Let's use Passwords to protect Computers

Computers should be safeguarded physically as well as logically.





You must have read in fairy tales that a door is opened with a secret word. Also, there is a key to open main door of your house. Can you open the door without a key?



To protect the information stored in the computer from outsiders, a secret word can be set in the computer. That is known as a password.

Then you must enter the password before entering the computer. If the password is incorrect, the computer does not allow you to enter.

Follow the guidelines given below when setting a password

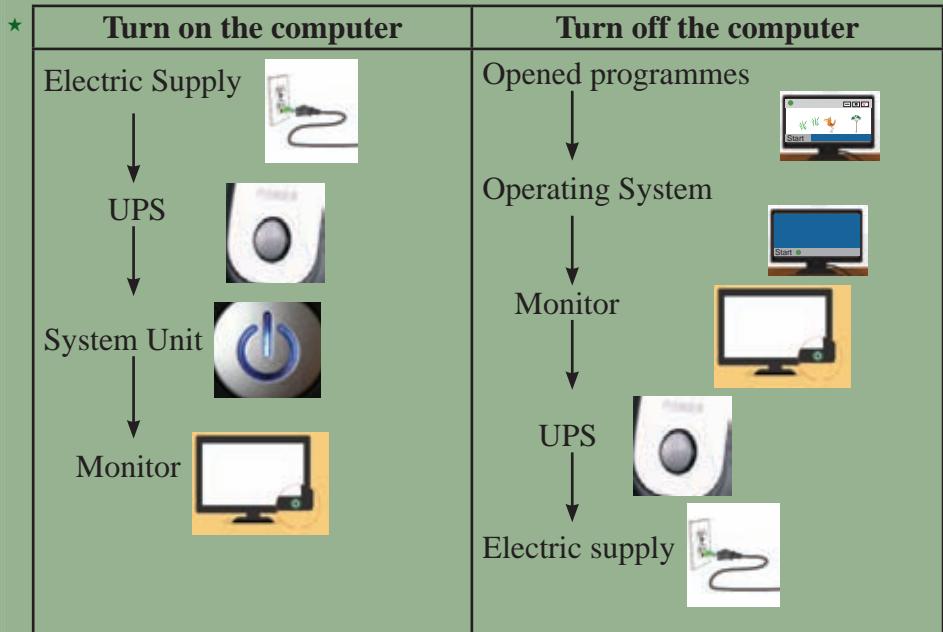
- ☞ The password must be a collection of letters (A-Z), numbers (0 - 9), and symbols (@, #, \$). It should have a minimum of 8 characters including at least one of the above types.
- ☞ The password must not include some simple information like your name, birthday, etc. which can be easily guessed.
- ☞ You can give a password hint.
In case you forget the password, you can give a word or a statement as a hint that will help you to recall it again.
- ☞ By giving an e-mail address, the password can be restored.



Activity 7 - See 2.7 in the Workbook.



Summary

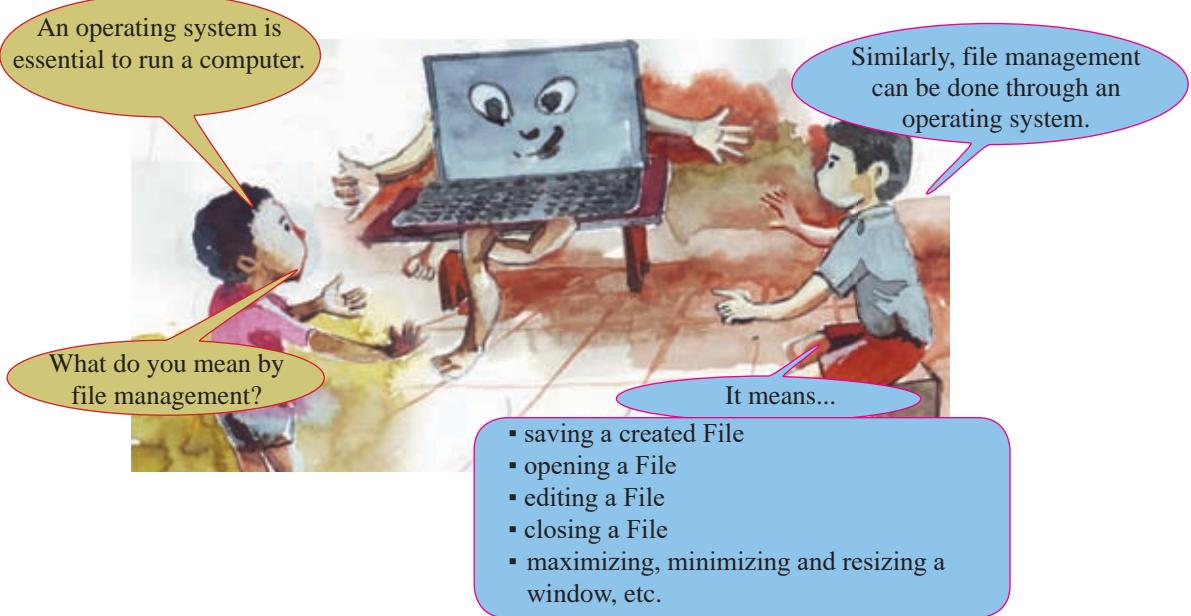


- ★ It's our responsibility to avoid damaging any equipment in the laboratory.
- ★ Passwords can be used to protect the computers.
- ★ Electronic waste should be disposed properly without harming the environment.
- ★ When using the computer, maintain a correct posture to prevent from physical difficulties that occur on a daily basis and from long term health issues.



3

Operating System and File Management



3.1 / Operating System

You have learnt in the first chapter that an operating system is a software. That means, it is a computer programme. It establishes a relationship between the user and the hardware. It also helps to manage other software in the computer.

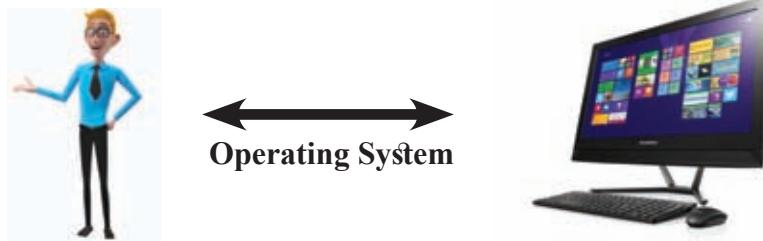


Figure 3.1 - Functions of an Operating System



According to my brother, computer is like a cricket team. Then, the captain is the operating system. Other players are like software and hardware.

The captain leads the players by giving instructions according to the needs of the match. Just like that, software and hardware are managed by the operating system according to the given set of instructions.

Sometimes, captains are changed. Likewise, the operating system also can be changed. Windows, Linux, Ubuntu are some other types of operating systems. It is like changing a captain.

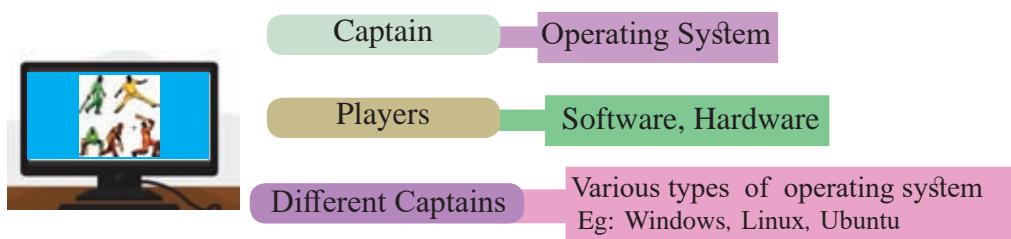


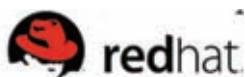
Figure 3.2 - Explaining of Operating System through an Example



Windows O/S



Linux O/S



redhat O/S



Mac OS

Figure 3.3 - Examples for Operating System

3.2 // User Interface



A user interface is given to a user by the operating system to do his tasks. This interface is displayed on the screen when the computer is turned on.



Activity 1 - See 3.1 in the Workbook.

3.2.1 / Let's learn about File





Activity 2 - See 3.2 in the Workbook.

Given below are several files which are stored in a computer.

- List of term test marks in a particular class
- A video of the school play presented at the all island drama competition
- The agenda of the sportsmeet
- The National Anthem
- Images of the sportsmeet

These different types of files are shown with unique symbols. A few examples are given below to give you a basic understanding and you will get a broader knowledge about them in higher grades.

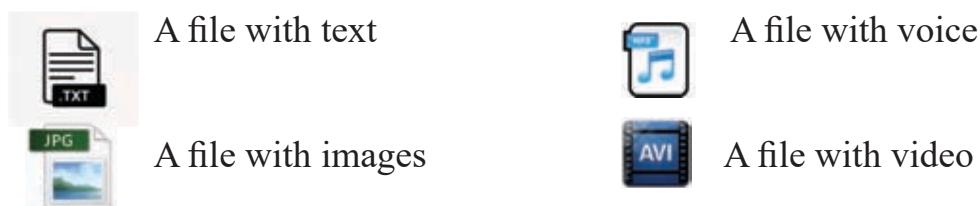


Figure 3.4 - Examples for File Symbols

User Interface

When you open a file or a programme, it is displayed on the user interface.

You can use the icons which are shown on the user interface to open a file, a folder or a programme.

An icon represents a file, a folder or a programme.



File

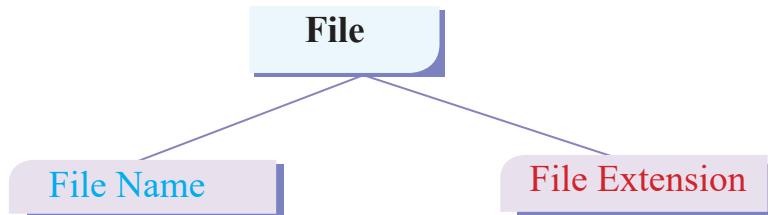


Folder



Activity 3 - See 3.3 in the Workbook.

A file contains two parts.



It is used to identify the file

It is used to find the application software to which the file belongs.

This file is created by a word processing software and it is named as "Kamal".

kamal.**docx**
File Name File Extension



Let's see how certain tasks are done using a graphic software to learn more about files. A graphic software is used to draw images, charts, shapes, diagrams, figures and building plans.



Some Graphic Software



3.2.2 / Let's Identify the Working Window

The working window is displayed once you open a software.

Let's imagine that you drew an art on a working window. (For that, tools in the menu provided in the opened software should be used).

The working window can be maximized , minimized , resized and closed .

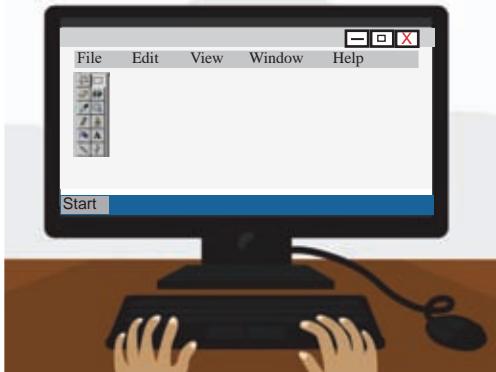


Figure 3.5 - Working Window

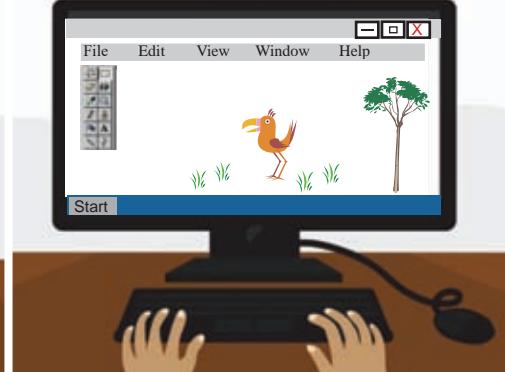


Figure 3.6 - A Working window of an Art

Minimizing the Working Window

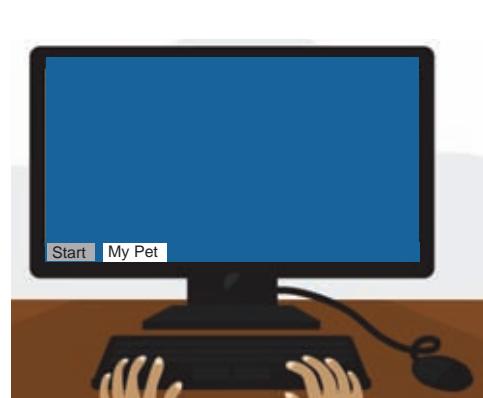
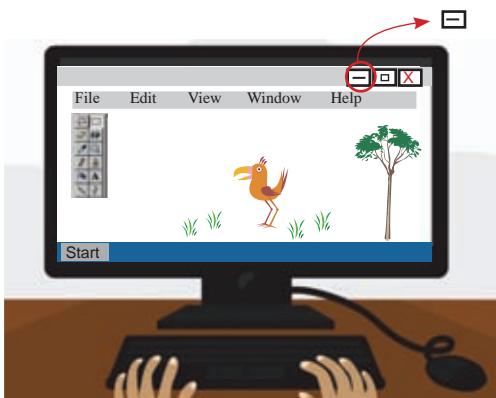


Figure 3.7 - Hiding a Window

Here the window is hidden. The window you opened disappears and is kept on the task bar. It is shown by words or an icon.

Eg:  or 

By clicking on the button shown by the word or the icon, you can restore the working window.

Maximizing the Window

The working window can be enlarged by clicking on the maximize button so that the screen fits into the entire screen.

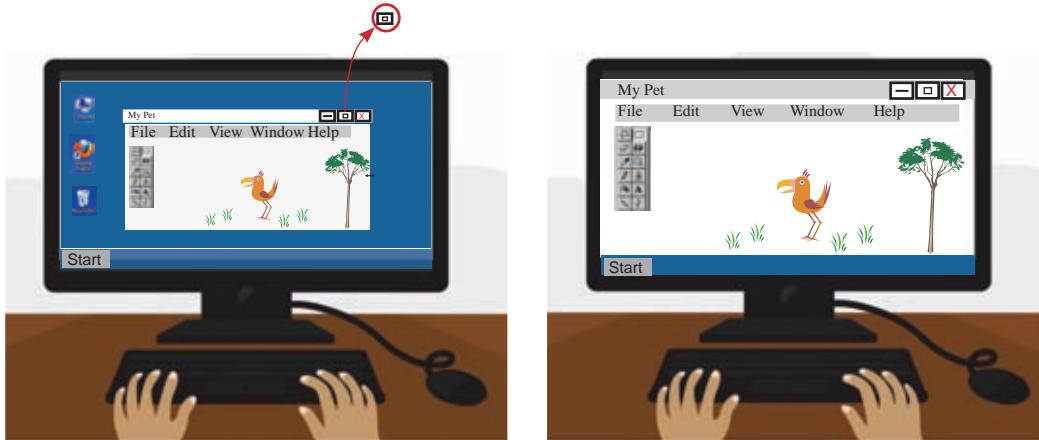


Figure 3.8 - Maximizing a window

It will shrink when you re-click the button again.

Resizing the Window

There is also the opportunity to change the size of the working window that appears on the screen. When the mouse pointer is brought to the edge of the window, arrow shapes are shown. By dragging these arrow shapes you can change the size of the window.

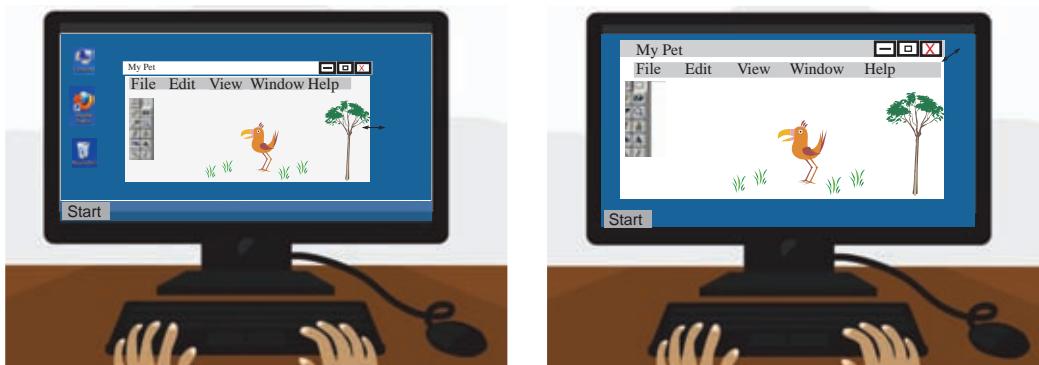


Figure 3.9 - Resizing a Window

Closing the Window

Click the  button on the top right hand corner to close a window.

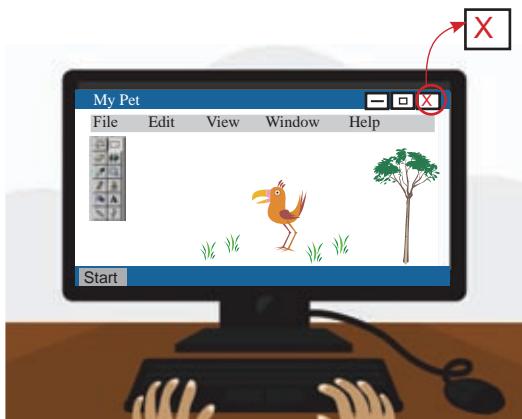


Figure 3.10 - Resizing a Window

When you click the  button, you will see a query window asking whether to save the document or not.

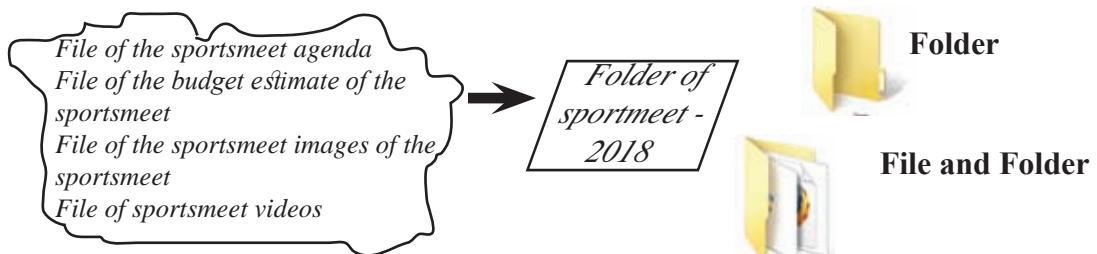
If you want to save the document, to use it later, Select 'Yes' command or if you do not want to save it, click the "No" command.



Figure 3.11 - Saving a Document before closing a Window

3.2.3 / Let's learn about File Folder

Folders are used to keep files in order.



Following facts about folders and the working window will be useful to you.



Symbols like ; < > ... can be used to name a file or a folder.

Folder and Working Window



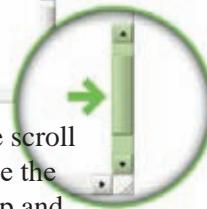
A folder contains files like documents, images, etc.



When you double click on a file or a folder, its content is displayed on a working window.



You can use scroll bars to move the document up and down as well as from left to right.



Menu Bar

Title Bar

The name of the file, document or the programme will be shown on the title bar.



The menu bar contains commands to carry out tasks in a folder, a document or a programme.

Tool Bar

The tool bar contains several commands that are derived from the menu bar.





Multiple working windows can be opened simultaneously.

The active window is visible in front of the other windows and its title bar is highlighted.



To switch between windows, click on the relevant window or the button on the task bar.



The opened windows are displayed as buttons on the task bar. The button related to the active window is displayed in another colour.

Create a File

Consider the simple art drawn above. When you close the window, if you give a command to save it, it creates a file and saves the document.



Figure 3.12 - Creating a File

Activity 4 - See 3.4 in the Workbook.



Saving a File

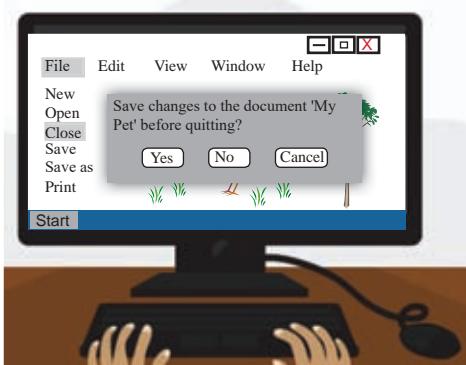


Figure 3.13 - Saving a File

Created files should be saved for reuse. These can be stored in a folder for convenience and order. Here you can use the 'Save' or 'Save as' command to save the file.

When saving the file for the first time, despite the selected command, the "Save as" command window will be opened.

Here, the operating system suggests a name for the file. The user can change it and give a suitable name. Also, determining the location of the file to be stored can be done in the same manner.

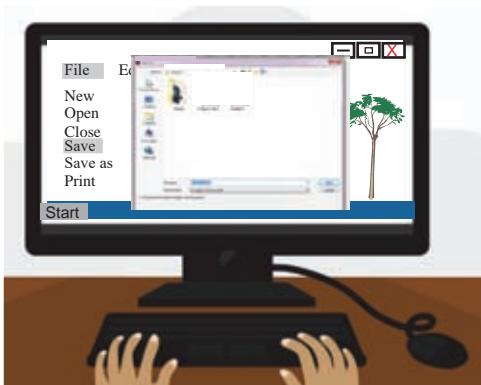


Figure 3.14 - Selecting a Location and giving a Name to save a File

When giving a name to a file, give a name that hints the content of the file. It makes it easier to find the file easily.



It is not allowed to save two files with the same file name which are created by the same software in the same folder. The operation system gives an identity to the file by doing that.

It's also difficult for you to identify several friends who have the same name. Similarly, the same problem affects the operating system. Therefore, it does not allow multiple files to be saved under the same file name in the same folder.

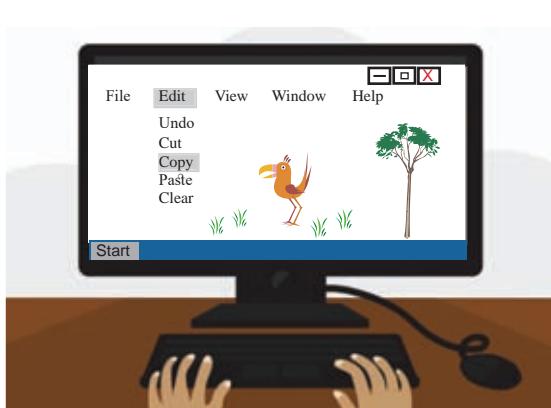
Open a File



To open a saved file, find the file location and the name. Then, click on it.

Figure 3.15 - Opening a File

Edit a File



You will be able to edit the saved file after opening it.

Here, it should be saved once you edit it. For that, 'Save' command can be used. If you want to save the file in a different location, then use the 'Save as' command.

Figure 3.16 - Editing a File



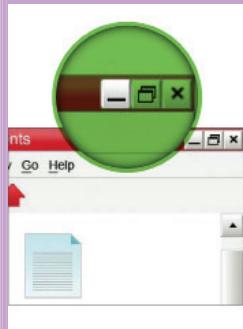
Activity 5 - See 3.5 in the Workbook.



Summary

- ★ The operating system is a bridge that connects the user and the computer.
- ★ File manipulation is a major function of the operating system.
- ★ Creating a file, editing and closing a file can be done through an operating system. In addition, it is possible to maximize, minimize and resize a window.
- ★ A file is a collection of data and information whereas a folder is a collection of files.
- ★ A file name contains a name and an extension whereas a folder contains only a name.

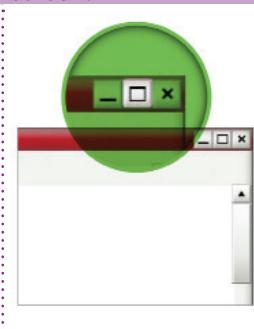
To minimize the screen click the minimize button on the top right hand corner of the screen.



To restore the window, click the relevant button on the task bar.



Click the maximize button to enlarge the screen and to fit the window to the entire screen.



To close the window, click the close button.





4

Using Mouse and Keyboard to use Application Software

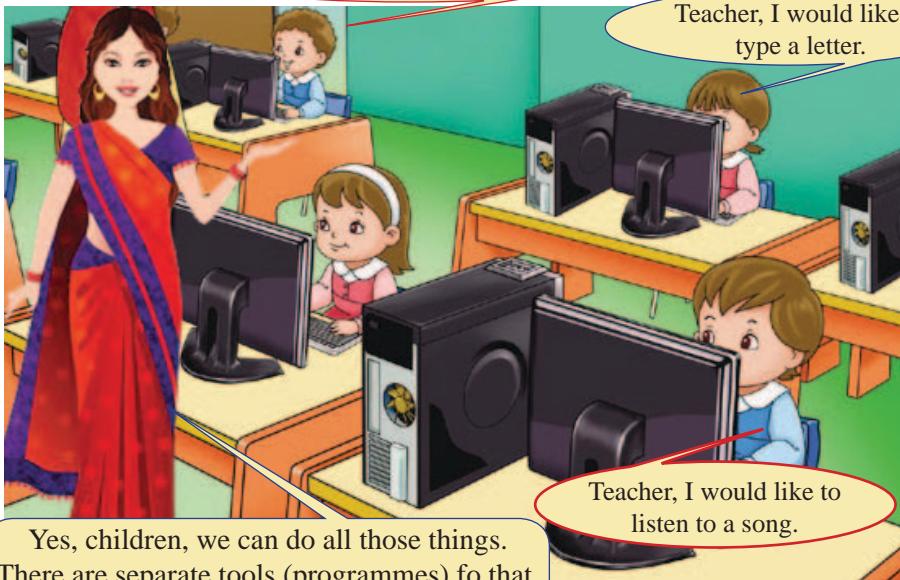
There's a computer.
to listen a song,
to type a letter,
to draw a picture,
what else
do you need?



4.1 Application Software

Teacher, I would like to draw a picture.

Teacher, I would like to
type a letter.



Yes, children, we can do all those things.
There are separate tools (programmes) for that.
We should know about the keyboard and the
mouse to do those things.



4.1 Examples for Tasks that can be done by a Computer

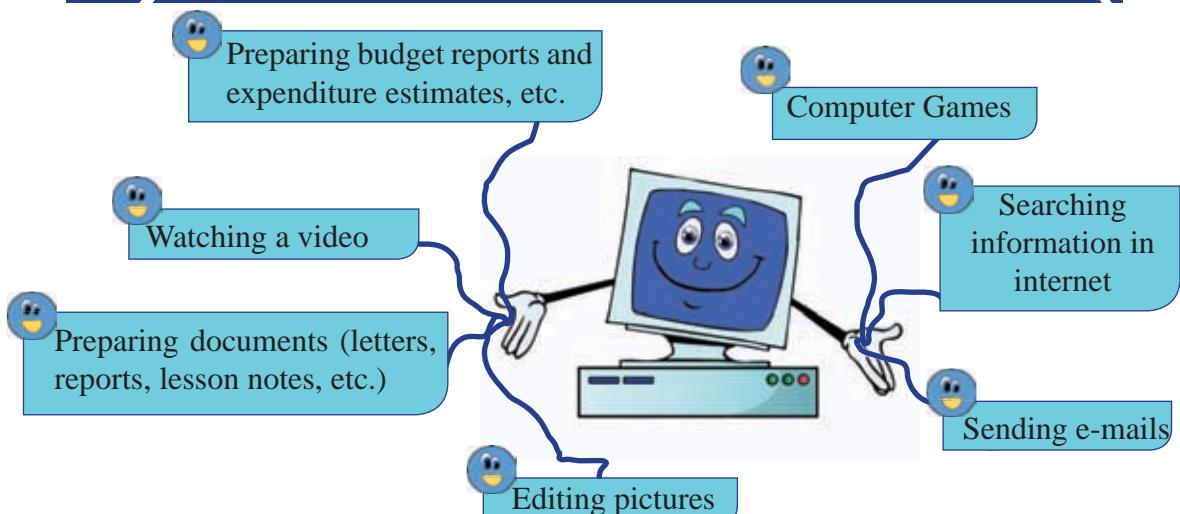


Figure 4.1 - Several Tasks that can be done through a Computer

Various programmes which execute such requirements of the user are called application software.

4.1.1 Types of Application Software

Application software is mainly divided into two parts. They are;

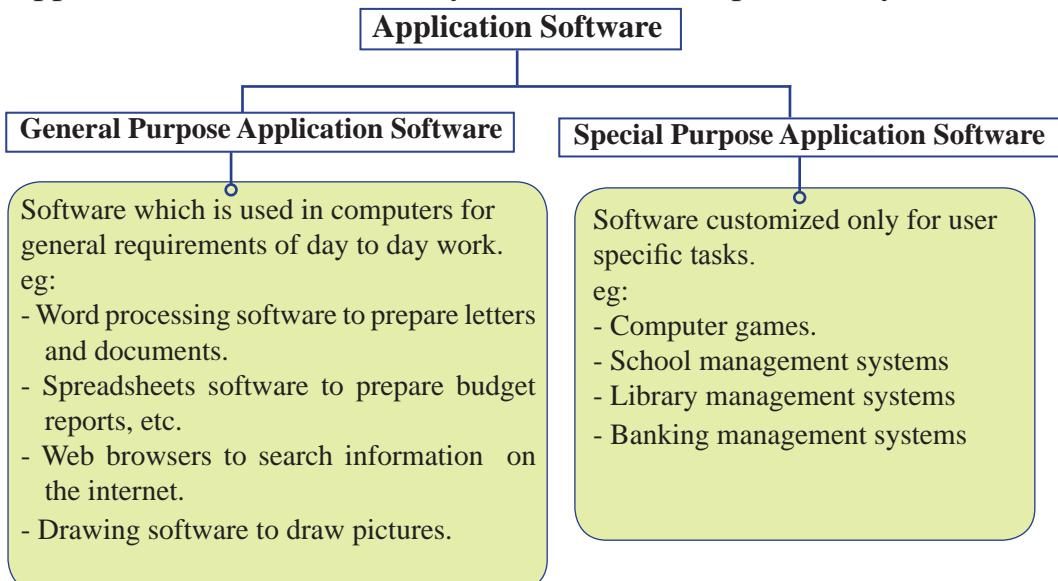
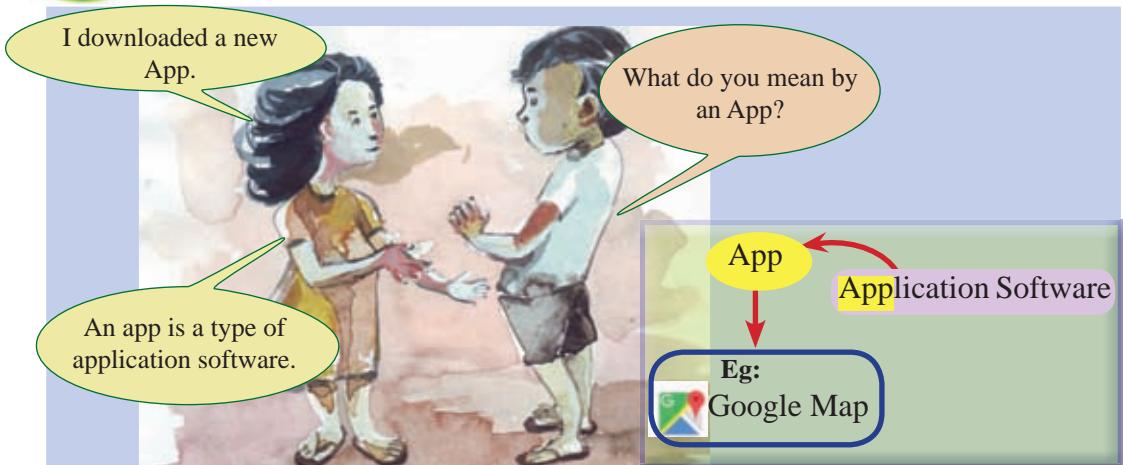


Figure 4.2 - Categorizing Application Software

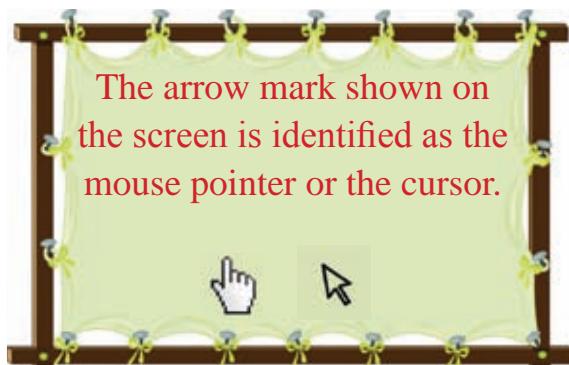


4.2 / Basic Tools needed to use Application Software

When using application software, basically the keyboard and the mouse are used. Therefore, first of all, you need to get a clear understanding of the mouse and the keyboard to accomplish various tasks using application software. You should properly train yourself to use them.

4.2.1 / Using the Mouse

Controlling the pointer on the screen can be done by moving the mouse. Also, opening a file, folder, menu and selecting commands can be done by clicking the buttons on the mouse.





Activity 1 - See 4.1 in the Workbook.

Main Parts of a Mouse

Normally, the mouse has a left and a right button and a small wheel in the middle.

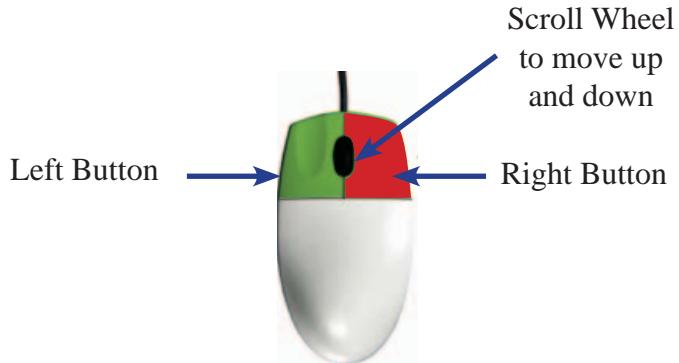


Figure 4.3 - Main Parts of a Mouse



Activity 2 - See 4.2 in the Workbook.

Let's identify several types of mouse that are in use.



Mouse



Wireless Mouse



Touch Pad

Figure 4.4 - Examples for Mouse Types

Functions of the Mouse

Many tasks can be performed on the computer screen with a mouse. They can be divided into following three categories.

- Eg:
- Selecting necessary items
 - Opening necessary items
 - Moving necessary items

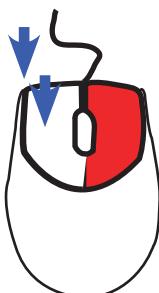
Selecting necessary items



To do this, bring the cursor on to the item and click the left button once. Then the item is highlighted.

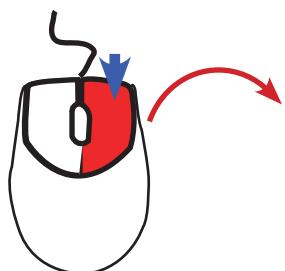
Opening necessary items

Method I



By double-clicking the left button, you can open the application or file that represents a corresponding icon.

Method II



Once you click the right button on the icon, select the 'open' command from the sub menu.

Moving necessary items

Click the left button, then drag and drop it.



In addition, a mouse scroll is used to move the working window up and down. Here, a wheel in the mouse is rotated to move the page up and down.

Let's use the Mouse Properly



When we use the mouse, we need to learn to hold it properly. Holding the mouse improperly can cause pain and difficulty in our hands.

Figure 4.5 - Using the mouse properly



Figure 4.6 - Using the mouse improperly

4.2.2 / Keyboard

There are various keyboards such as wired keyboards, wireless keyboards and touch keyboards.



Figure 4.7 - Keyboard



Figure 4.8 - Wireless Keyboard

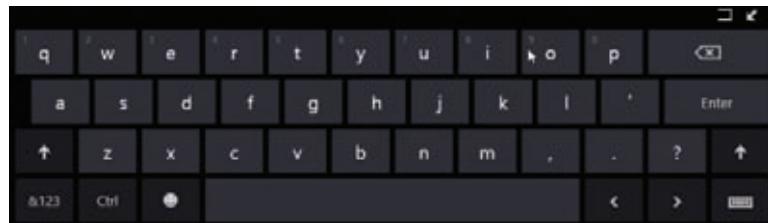


Figure 4.9 - Touch Keyboard

Types of Keys in the Keyboard and Their Functions

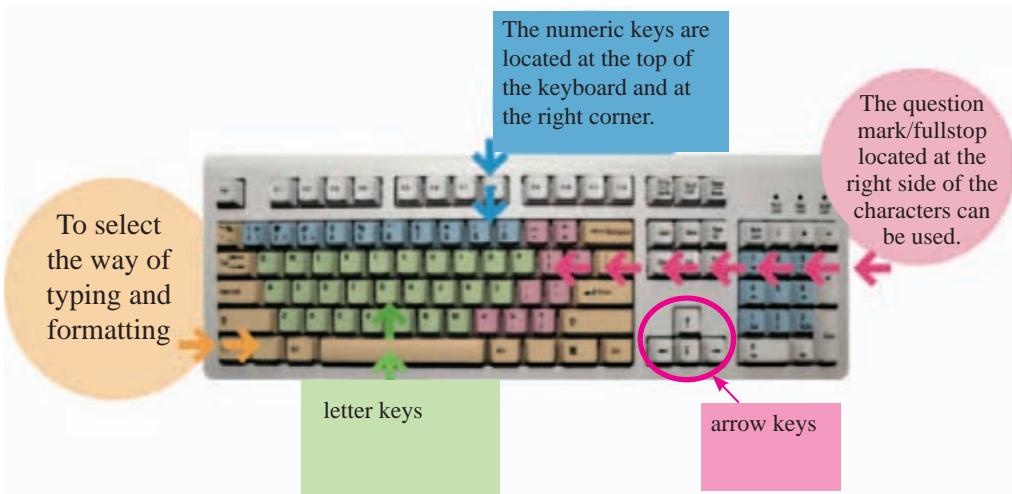


Figure 4.10 - Parts of the Keyboard

There is a vertical line that appears and disappears when you are about to start typing on a document or a box. It is the cursor.



Letter keys are used to type letters. Letter-keys are not located in the order of the English alphabet. The manner in which the letter keys are located on the keyboard is known as 'QWERTY' layout.



The cursor shows the location where the typing starts.

Use the Caps Lock key

After pressing the Caps lock key once, you can type in capital letters. When you need to type normally, press the Caps lock key again.

- Pressing Caps Lock key once
A, C, D
- When you press Caps Lock again a, c, d



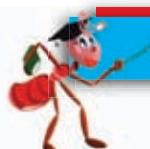
Use the Shift key

There are two Shift keys on the right and left hand on a keyboard. When letter keys are pressed while pressing on the shift key, letters are typed in capital letters. Similarly, while pressing the Shift key, if you press other keys, the symbol at the top of the key is typed.

 + A → A

 + ?/ → ?

Activity 3 - See 4.3 in Workbook.



Space bar - It is used to insert space between words. By pressing this key once, you can get one space and by pressing it twice, you can get two spaces. Likewise, you can press it several times to get the needed space.

Eg:- Pressing once. Thank You
Pressing twice. Thank You

Tab key - It is used to insert a large space between words. If you press it once, one space is kept and by pressing it twice, two spaces can be kept.

Eg:- Pressing once. Thank You
Pressing twice. Thank You

Enter key - This key is used to take the cursor one line below.

Eg:- Pressing once Thank You

Arrow keys - These keys are used to move the cursor up and down and from right or left.

Backspace key - By pressing this once, one letter, space or a number on the left side is deleted.

Let's use the Keyboard Correctly

When we fail to use the keyboard correctly, it will cause inconvenience and pain in fingers as well as in the wrists.

The way you should keep your fingers on the keyboard is shown below.



Figure 4.11 - The method of keeping hands on the keyboard correctly

4.3 / Let's learn how to use the Application Software

It is intended to provide an understanding about some of the application software and we look forward to discuss audio and video software in the forthcoming chapters.

Graphic Software

At first, art was drawn manually by man.

Later, software was produced to draw pictures using the computer.



Figure 4.12 - A hand drawn painting



Figure 4.13 - An art drwan using a computer

Activity 4 - See 4.4 in the Workbook.



Different software is used to create graphics and to draw arts. This software is known as graphic software.



Adobe Illustrator

Microsoft Paint

Figure 4.14 - Examples for Grapic Software

Activity 5 - See 4.5 in the Workbook.



Word Processing Software

The software we use to create and store documents that are needed in everyday life is called word processing software.



Figure 4.15 - Examples for Word Processing Software

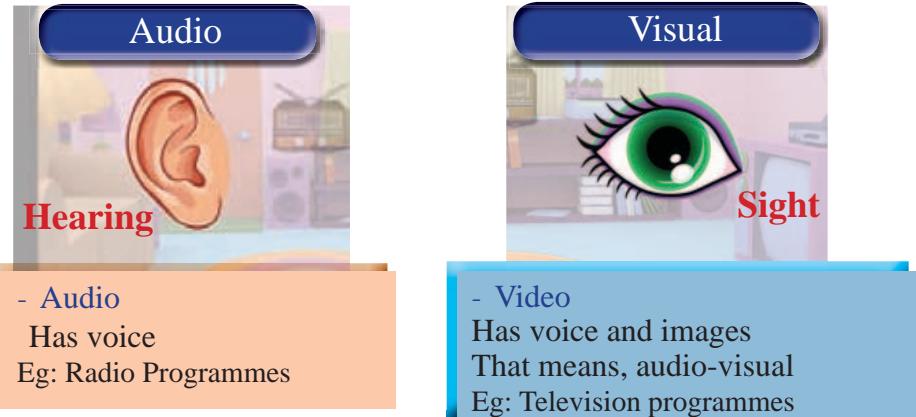
Activity 6 - See 4.6 in the Workbook.



Audio and Video Editing Software



Software has been developed to edit audio and video recordings. Many tasks can be done using this software.



Among several software which is designed to create and edit audio-video material, software created to edit audio recordings is known as audio editing software and software created to edit video recordings is known as video editing software.



Figure 4.16 - Examples for Audio Editing Software

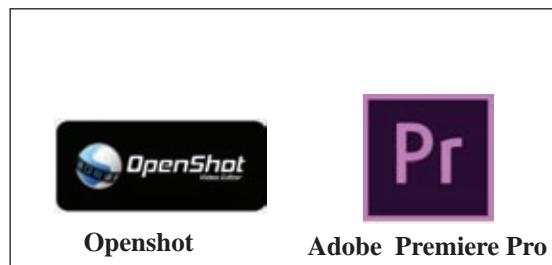


Figure 4.17 - Examples for Video Editing Software



Activity 7 - See 4.7 in the Workbook.

Creating Audio-Video Files

Do you mean that by using a software we can record what we are talking now and edit it as required?

Yes, we can edit it using suitable software.

But, we have to think about a lot of things when we edit the sound tracks and videos. We cannot do it as we wish.

It is very important to comply with the ethics in editing audio and video recordings.

When we record voices and images of others, their permission must be obtained. (In case of small children, the permission of their parents or school must be obtained.)

When editing recordings of voices and images of others, they should not be done in a manner as to make them uncomfortable.

Editing should not be done in a manner as to give a false idea or a message.

You should not use the knowledge of editing software for fraudulent purposes.

If edited audio or video files are made available, it must be done by protecting the identity of you or relevant people.



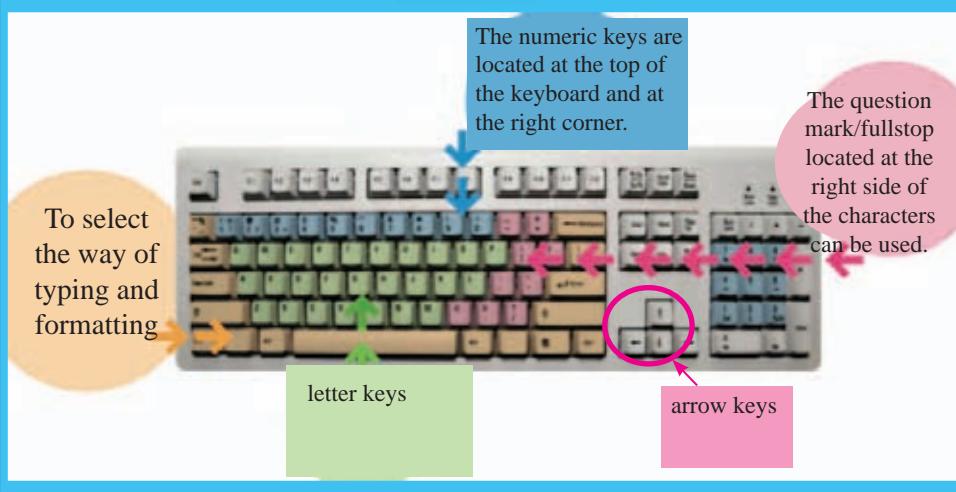
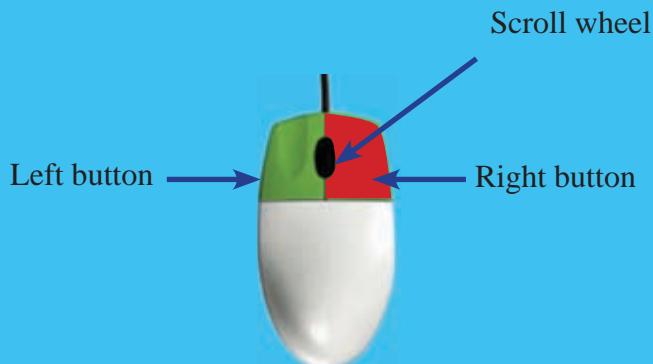
Activity 8 - See 4.8 in the Workbook.





Summary

- ★ Software which is designed to fulfil user requirements is called application software.
Eg: graphics software, word processing software, audio-video software
- ★ Knowledge of the keyboard and the mouse is important to use application software.
- ★ Right button, left button and scroll wheel are the main parts of a mouse.





5

Algorithm and Flow Charts

5.1 / Process of Solving Practical Problems

Imagine that a group of relatives have arrived when you were alone in the house. You need to serve them some tea. Here, you should prepare a cup of tea by following different steps.

On another occasion, you will have to make a fruit salad for a dessert or make a birthday cake. On all these occasions, you need to solve problems. Compare it with calculating the area of a rectangle during your mathematics lesson.

When we have a certain aim, we do certain activities to achieve it. In our day to day life, we often solve problems.

5.1.1 / Problem Solving

The problem needs to be analyzed well before solving it. Then you can get a good understanding of how to solve the problem. The process of problem solving has an input, an outcome and a process.

Input	- Things to be included to solve the problem.
Process	- Guidelines to be followed to solve the problem.
Output	- The result you get after solving the problem.

Thus, you will understand that processing content according to a recipe is known as solving problems.

Example: 1

The input, process and output of preparing a fruit salad is as follows.

Input - a variety of fruits

Process - washing fruits, cutting fruit, mixing

Output - Fruit salad

Example: 2

The input, process and output of finding the area of a rectangle are as follows.

Input - the length and the width of the rectangle

Process - length x width

Output - area of the rectangle



Activity 01 - See 5.1 in the Workbook.

5.2 / Algorithm

If you are able to prepare a cup of tea, tie the shoe lace correctly, or put on the school uniform correctly, then you know how to use an algorithm.



Figure 5.1 - Some instances in daily life where we use algorithms

5.2.1 / What is an algorithm?

Algorithm

A method that includes all the steps of solving a problem in order is known as an algorithm.

Example 1

Steps to create a fruits salad are as follows.

Step 01



Finding various kinds of fruits

Step 02



Washing all the fruits well

Step 03



Cutting fruits into small pieces

Step 04



Putting the pieces of fruit into a bowl

Step 05



Add sugar and mix

Step 06



Serve the fruit salad in bowls

It's important to write the steps sequentially in an algorithm. Think about what will happen if the sixth step is done as the second step. All the fruits mixed with sugar should be washed again.

Therefore, it is important to write the steps of an algorithm sequentially.

5.2.2 / Writing Algorithm

When writing an algorithm in a standard way, every algorithm must have a start and an end. Therefore, it is compulsory to include an initial step and a final step in writing an algorithm in addition to the normal steps.

Example 1

The algorithm for making a chocolate cake

Step 01	Start
Step 02	Clean and wash the baking tray and other bowls
Step 03	Dissolve chocolate
Step 04	Mix wheat flour and baking powder
Step 05	Beat butter until it gets creamy. While beating, add sugar little by little
Step 06	Add the eggs one by one to the sugar and butter mixture and beat it. Then add the flour mixture little by little.
Step 07	Add the dissolved chocolate
Step 08	Add milk
Step 09	Put the mixture into the baking tray and bake it
Step 10	Let it cool after baking
Step 11	Decorate as you wish and serve it
Step 12	End

Example 2

Algorithm to find the area of a rectangle.

Steps 01	Start
Steps 02	Get the length of the rectangle
Steps 03	Get the width of the rectangle
Steps 04	Area = length x width
Steps 05	Get the area of the rectangle
Steps 06	End



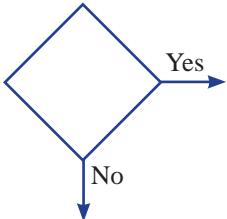
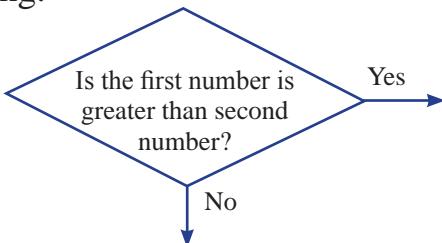
Activity 02 - See 5.2 in the Workbook.

5.3 Flow Chart

A flow chart is a graphical representation of the algorithmic steps.

Here, standard symbols are used to show each action.

Symbol	Usage
An oval shape.	Used to indicate the start and the end. Eg: End
A parallelogram shape.	Used to indicate the input and the output. Eg: Entering student's marks Serving Fruit Salad

	<p>Used to show an action/a process</p> 
	<p>Eg:</p> <p>Adding eggs one by one to the mixture of sugar and butter and beating it.</p> <p>Area = length x width</p>
	<p>Used to indicate an instance of decision making.</p> 
	<p>It is used to indicate the direction of data flow.</p>

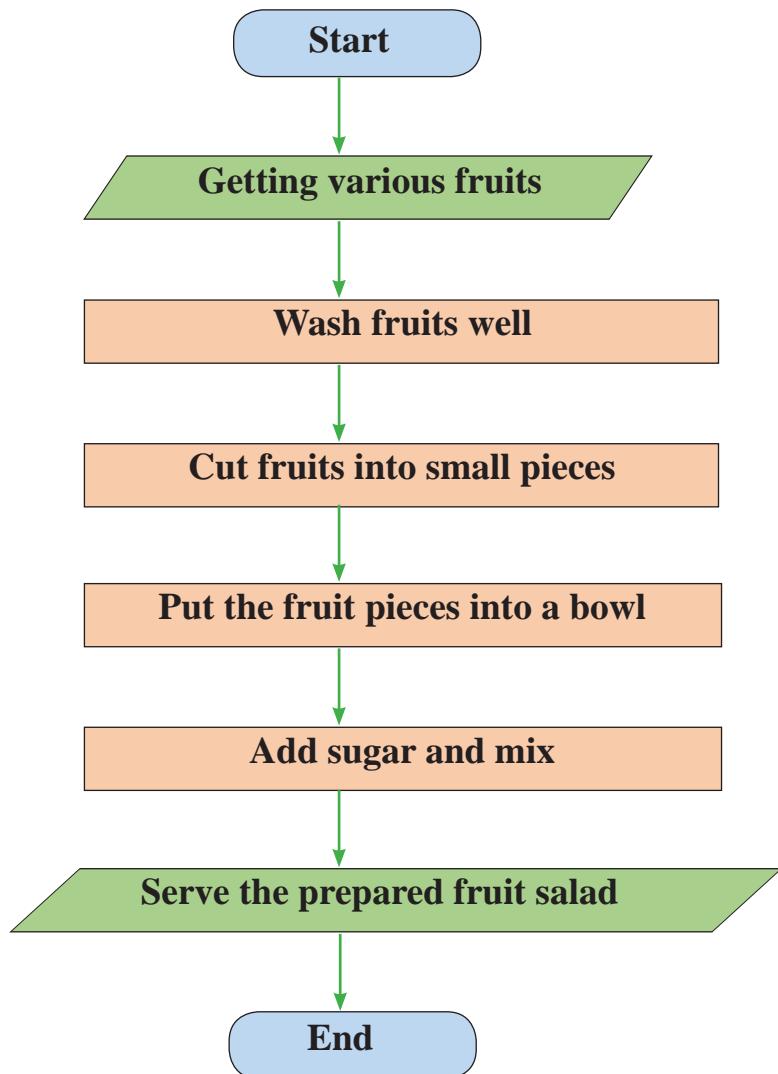
Activity 03 - See 5.3 in the Workbook.



Example 01

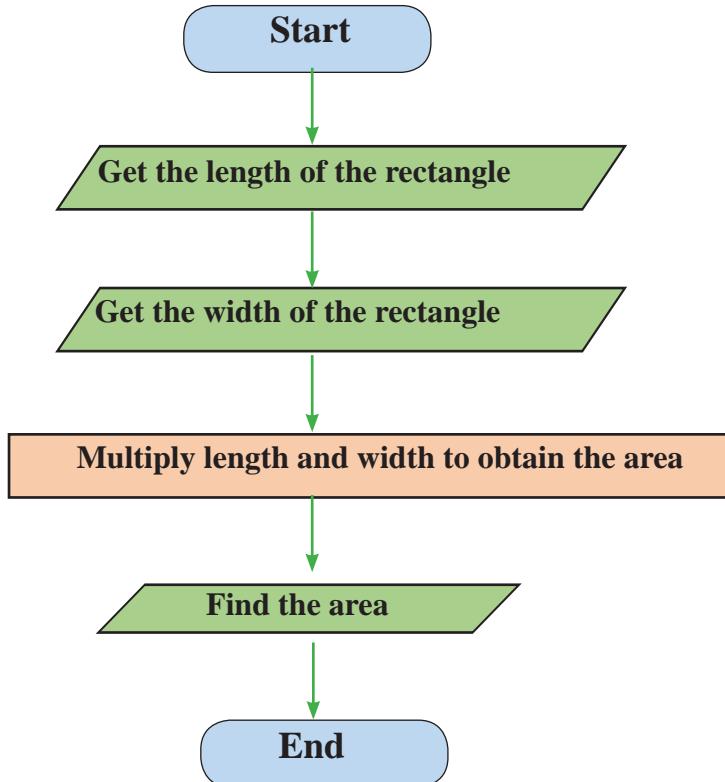
Drawing the flow chart for making a fruit salad using the above symbols is given below.

Here the symbols related to start, end input out and process are used.

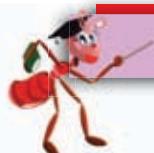


Example 02

The flow chart for finding the area of a rectangle is given below.



Activity 04 - See 5.4 in the Workbook.





Summary

- ★ Before the problem is resolved, it needs to be analyzed well.
 - ★ There is an input, output and a process when solving a problem.
 - ★ Things we feed to solve the problem are identified as the 'input', the steps to be followed when solving a problem are identified as the 'process', and the result we get after solving the problem is named as the 'output'.
 - ★ A method set out in order including all the steps needed to solve any problem is identified as an algorithm.
 - ★ A standard algorithm must have a start and an end.
 - ★ A flow chart is a graphical representation of the algorithmic steps. Specific symbols are used to indicate each action.
-
- ★ shape is used to indicate the start and the end.
 - ★ shape is used to indicate the input and the output.
 - ★ shape is used to indicate the process.
-
- ★ shape is used to indicate the decision taken.



6

Using the Internet for collecting Information and Communication

6.1 / Let's learn about the Internet

Brother, our teacher said that we can find information on sea creatures from the internet.

What do you mean by the internet?

The internet is a large collection of computer networks.



The internet is made up of a large number of computers and computer networks around the world.

Two or more interconnected computers

Computer Network

A large number of interconnected computer networks

Internet

There are a wide range of services available on the internet reading such as reading newspapers, bill payments, online shopping, exchange of letters and watching television.



6.2 / Accessing Internet



6.2.1 / Web Browser

You open a website or a web page in a web browser. The software used to open websites and webpages on the internet is the web browser.

Eg:



Google Chrome



Internet Explorer



Mozilla Firefox

6.2.2 / Use of Web Browsers

To use a web browser, the computer should be connected to the internet.

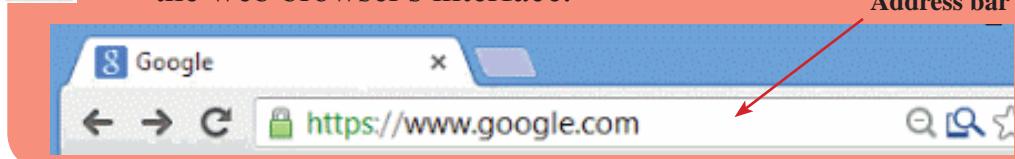


Normally a web browser can be opened via a shortcut on the desktop.



The address bar can be seen on the top of the web browser's interface.

Address bar



If you want to open a website, you need to enter an address in the address bar.

Bring the cursor on to the address bar and click on it. Then enter the address directly. Then press the enter key.

Eg: Accessing the website of the Ministry of Education



Figure 6.2 - Website of the Ministry of Education

If you have typed the address previously, it will be displayed. Hence, bring the cursor and click on it.



Figure 6.3 - Address Bar

There is a toolbar in the web browser. These toolbars can be used to change websites and update web pages.

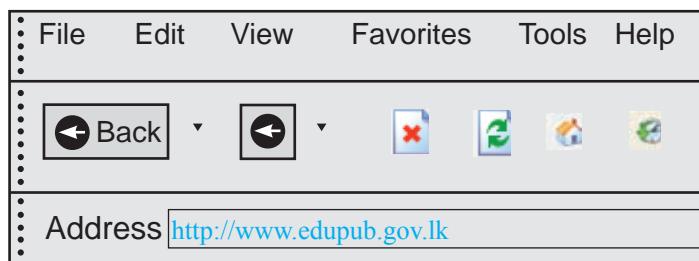


Figure 6.4 - Web Address of the Educational Publications Department

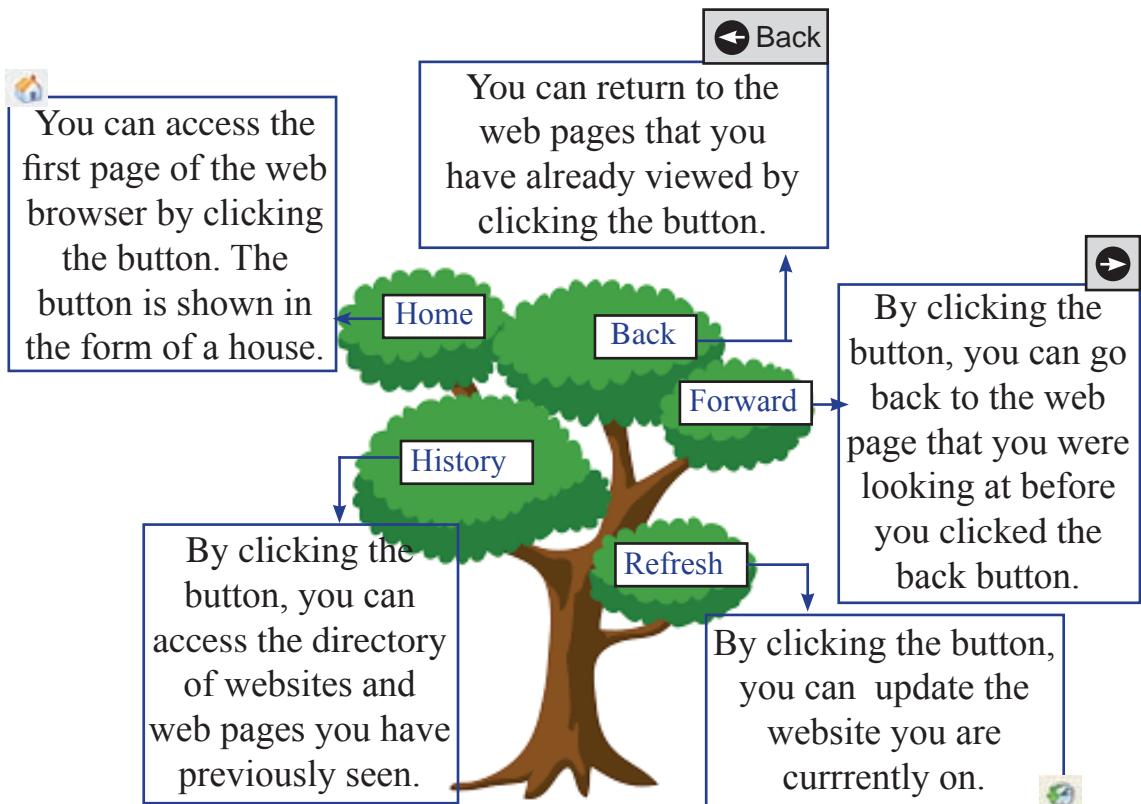
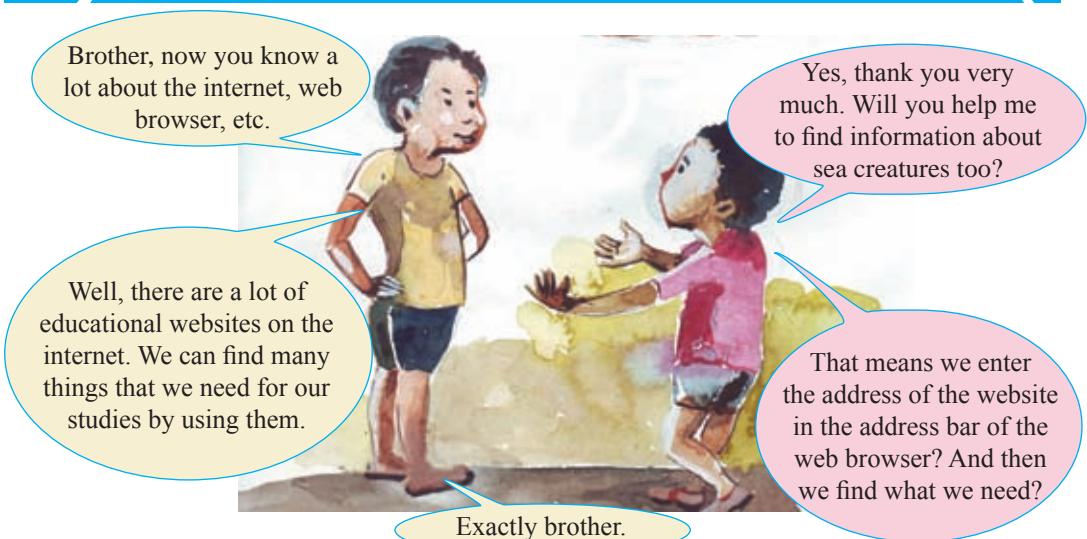


Figure 6.5 - Some Buttons in a Web Browser

6.3 / Obtaining Information from Educational Websites



There are a lot of educational websites on the internet and we can get many information regarding our studies. In order to enter a website the address of the web site should be entered in the address bar of the web browser.

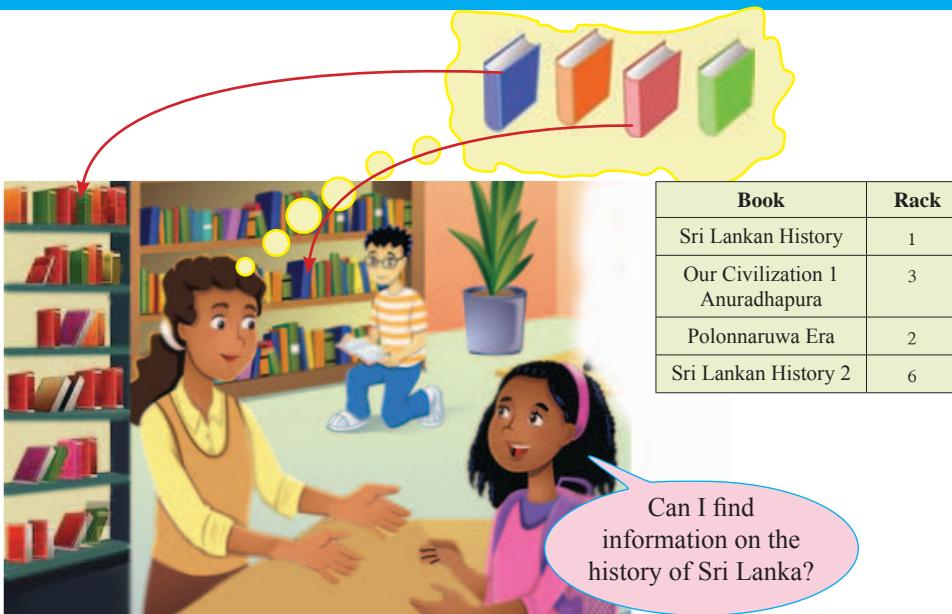
Example : www.bbc.com/bitesize

6.4 / Let's learn about Search Engines



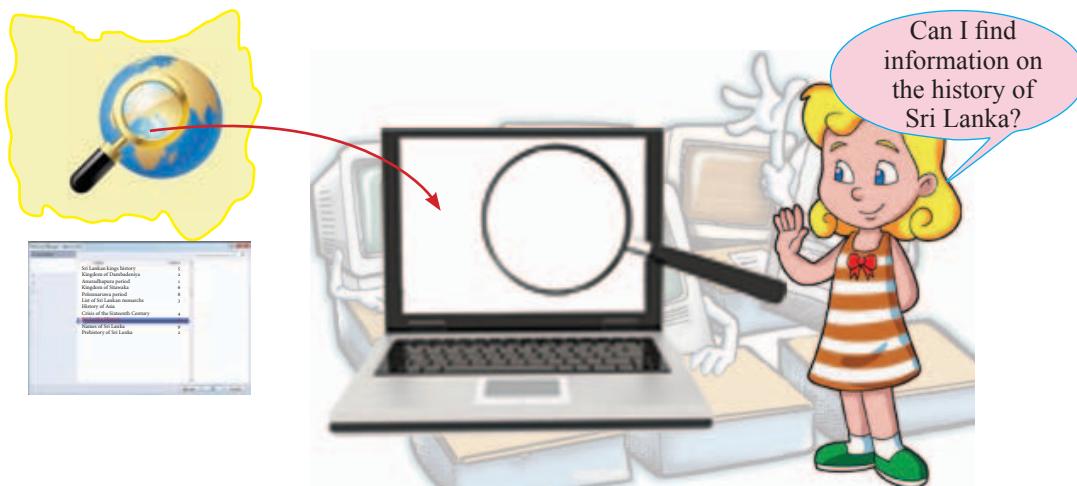
A search engines is a software that can be used to find information on the internet.
This gives you a list of websites related to the facts that we are searching for.

Use of Search Engines



To assist Yalini to find information, the librarian should know the books about the history of Sri Lanka and know the location of books.

In the end, a list of names of the books and the place where the books are placed will be provided.



To help Anne to find the information, the search engine should know about websites or web pages that contain information on the history of Sri Lanka and they should also know the location of websites or webpages.

In the end, a list of names and addresses of websites will be available to help you find relevant websites or web addresses.

There are a large number of websites and web pages on the internet. Search engines can search anything such as recipes, news, history, science, education, etc. on those sites.

Search engines are needed to find what is most productive on the internet.

A search engine efficiently scans thousands of websites and web pages and process them.

- Examples for search engines;

Google	- www.google.com
Yahoo	- www.yahoo.com
Bing	- www.bing.com



Figure 6.6 - Search Engines

Opening and Using Search Engines

To use search engines, you need to open the web browser that is installed in a computer.



The address of the search engine must be entered in the address bar.



You can enter the search engine by clicking the **Search** key on the address bar or by pressing **Enter** key on the keyboard.



There is a search box or a search field in a search engine.



Enter the key words relevant to the information and click the search button.

Your search results are shown as a list of websites and links. It will show a list of the most popular or the most suitable websites or links on the top. From that, you need to select the relevant site and click on the link to view it.

The keywords are the simplest and straightforward terms of what you are looking for.

For example,

Think that you need to search about the history of Sri Lanka. You can use

'History Sri Lanka' as a key word.

Tips for making Search Results more effective

The following short tips can be used to make your search more effective:

- Use keywords. Do not use complete sentences/questions.
Eg: 'I need the history of Sri Lanka'.

You should type 'Sri Lankan History' or 'History Sri Lanka' instead of 'I need the History of Sri Lanka'.

- If you cannot find what you require, try using a different word or a different expression.



Figure 6.7 - Search Information using a Search Engine



Activity 1 - See 6.1 in Workbook

In some searches, it will show hundreds of web pages irrelevant to your search. Be careful when selecting your search terms to avoid that. Your search engine will give an accurate result when your word is more appropriate.

1. Use inverted commas (" ") for a clause with several words.

2. Removing unnecessary words

Do not use words that are not relevant to your search. Do not use words like " how, and, in, to, as". Use the names of people, places or things you want to find.

3. When you want to use more than one main word. Connect the words with '+'. For example, when you need to see the beautiful places in Kandy,

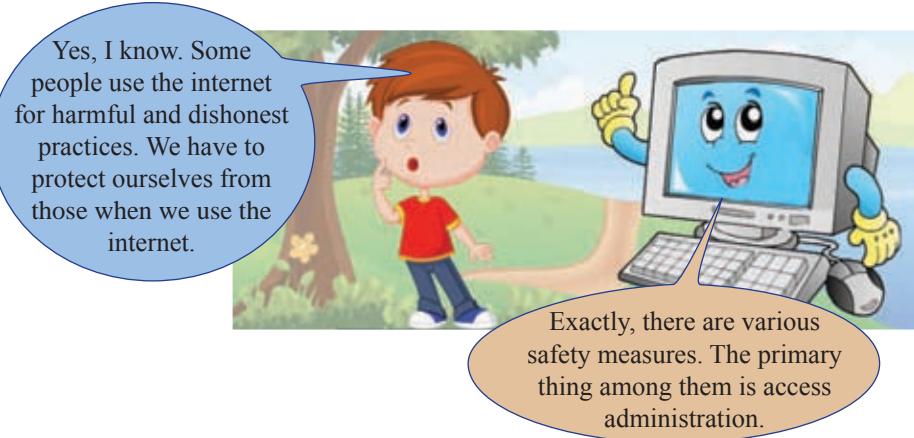
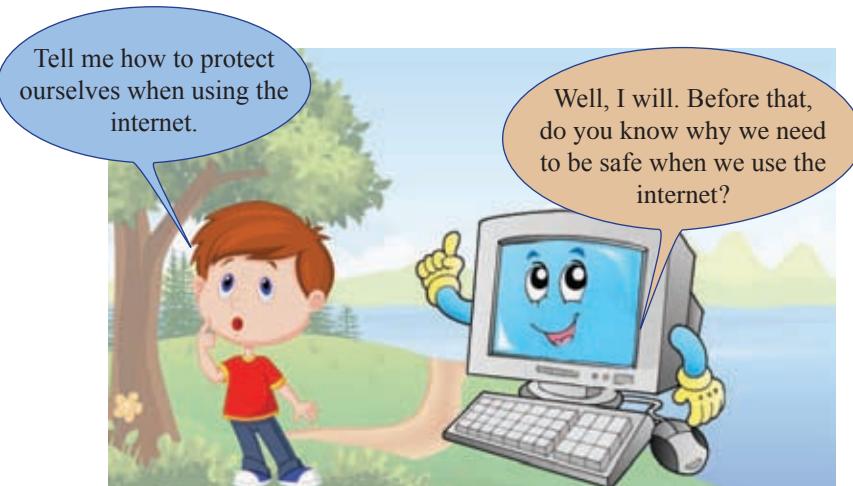
It is better to use

- 4) To remove unnecessary facts

Use '-' in front of the unwanted word. For example, when you are searching for information about Wimbledon, it would show information on tennis too. So to remove details about tennis, use;

5. When looking for an image about something, select the 'image' command of the search engine to search what you need.

6.5 / Let's use the Internet Safely



The access administration is following different measures to access the internet safely and with a control. When we are using the internet, we interconnect with various computer networks and various websites around the world. Thus, it can influence our computer in many ways.

6.5.1 / Provide Usernames and Passwords when Accessing Websites

In some cases, it is necessary to register usernames and passwords when accessing certain websites to obtain specific information.

Your username should not be your name. You can safeguard your identity by giving another word as the username. It should be memorable and shouldn't be easy for someone else to guess.

For a better password, use a password with letters and numbers. It's identified as a strong password.

Eg: Not a suitable password -	password saman 123
Suitable password -	be220mmb* Sama89agu@



- It's safer to use different passwords for different websites.
- It is important to log out when you leave a website after using the username and password to log on.
- Do not give your password to anyone else.

6.5.2 // Use E-mail Safely

Individuals can send e-mail messages in order to access personal information, such as bank account details. We can also receive e-mails containing advertisements that are sent to thousands of people for commercial purposes.

Here are some steps you can follow to safeguard e-mails.

- Be careful when opening e-mails sent by unknown people.
- Avoid replying those e-mails and prevent from accessing links in them.
- Avoid providing information to any institution who request them through e-mails without inquiring about them.

6.5.3 // Doing Safe Online Transactions

One of the important uses of the internet is that we can do online transactions and purchase goods.

But, you should be very careful. In order to purchase goods, you must use most reliable websites and you must do payments through safe methods.



It's important to follow the directions and instructions of those who have good knowledge about using the internet. At present, there is an increase in the fraudulent acts on the internet.

Be sure to get the help and guidance of your teachers, parents, or adults whenever you access the internet. It will make your browsing time more productive, satisfying and safe.



Activity 2 - See 6.2 in the Workbook.



Summary

- ★ The internet is a collection of a large number of computer networks.
- ★ There are a number of internet services that can be used to exchange information and web is one of the services.
- ★ Documents, pictures, videos and sounds can be exchanged through web and they are stored as webpages.
A website is created using web pages. A web address is used to identify a website.

- ★ The software used to look up web pages is the web browser.
- ★ Search engines are used to find information.
- ★ The service used to send messages via the internet is e-mail.
- ★ You can use the internet to make transactions and use secure web addresses only.
- ★ Differences between a web browser and a search engine:

Web Browser	Search Engine
It is a software used to access websites through the internet and view the web pages.	It is a programme used to find information needed from a vast collection of information on the internet. This requires a web browser.
The web address is used to access the website.	The words or phrases are used to find information.
Related website is opened.	Provides a list of relevant websites. You must select the suitable website to find the relevant information.

English-Sinhala-Tamil Glossary

No	English	Sinhala	Tamil
1.	abstract model	විෂුක්ත ආකෘතිය	கருத்தியல் மாதிரி
2.	acceptance testing	ප්‍රතිග්‍රහණ පරික්ෂාව	ஏற்புச் சோதனை
3.	access privilege	ප්‍රවේශනීම් වර්ප්‍රකාදය	அணுகல் உரிமை
4.	agile model	සුච්‍ච ආකෘතිය	சுறுக்குப்பு மாதிரி
5.	alternate key	විකල්ප යෙළ	மாற்றுச் சாவி
6.	American Standard Code for Information Interchange (ASCII)	තොරතුරු තුවමාරුව සඳහා මූල්‍ය අක්‍රෝකානු සම්මුඛ කේතය	தகவல் இடைமாற்றுக்கான அமெரிக்க நியம விதிக்கோலை
7.	amplitude	විස්තාරය	வිෂ்சம்
8.	amplitude modulation	විස්තාර තුරුණාව	வිෂ්චப் பண்பேற்றம்
9.	analog	ප්‍රතිසම්	ஒப்புமை
10.	anchor	யැදුම	நிலை நிறுத்தி
11.	application layer	අනුප්‍රයෝග දේරිය	பிரயෝக அடுக்கு
12.	architecture	தිරිමිය	கட்டமைப்பு
13.	arithmetic and logical unit (ALU)	අංක வளிம ஹ தூர்க்கிக ரේக்கය	எண்களித் மற்றும் தர்க்க அலகு
14.	array	அரාவி	அணி
15.	artificial intelligence	கணித இடையீடு	செயற்கை நுண்ணறிவு
16.	Affective computing	இடைமின் கூற வිෂ්තරීම් පරිගණகය	நுண்ணறிவு உணர்திறன்மிக்க கணிதத்தல்
17.	associative law	සංස්කிண தகාய	கூட்டு விதி
18.	attenuation	විශාර්ம/தාயகය	நோய்மை
19.	attribute	ලුප්‍රාகිය /ஒங்க/ / ලුප්‍රාக්‍රැஷණය	பண்புகள்
20.	authoring tool	සම්පාදන මෙටිලුම	படාප්பாக்கக் கருவி
21.	Automated Teller Machine (ATM)	අවයාக්‍ර මුදුල් கணுவெண கண්கු	தானியங்கிப் பணம் கையாள் இயந்திரம்



22.	autonomous	செவியங்காலக / செவிதன்மூல/செவியக்கீ	சுயாதீன்
23.	axiom	செவிச்சீடிய/பூதங்கீ	வெளிப்படை உண்மை
24.	backups	ரெசெர்	காப்பெடுத்தல்
25.	bandwidth	கலூர் பலம்/இடங் பலம்	பட்டை அகலம்
26.	batch processing	காஷ்டி செக்கூறு	தொகுதி முறைவழியாக்கம்
27.	big data	மிகு இதீர்	பெரிய தரவு
28.	binary	டீலிமீட	துவிதம், இரும்
29.	binary coded decimal (BCD)	டீலிமீட கேரிக் கூகுமீட	இருமக் குறிமுறை தசமம்
30.	bio-inspired computing	ஒபேவி பேரிரத பரிசுநாய / ஒபேவி அனுபேரிரத பரிசுநாய	உயிரியல் உள்ளிரப்புக் கணிப்பு
31.	bit coin	பிபு காசி	நுண்கடன் பணம் செலுத்தல்
32.	bitwise	பிபு அனுகாரித	பிட் வாரி
33.	bitwise logical operation	பிபு அனுகாரித தூர்க்கிக வெநேகூலி	பிட் வாரி தர்க்கச் செயற்பாடு
34.	black box testing	கால மாஞ்சை பரிச்சாவி	கறுப்புப்பெட்டுச் சோதிப்பு
35.	blogging	வெறி கவனங்கை	வலைப்பதிவிடல்
36.	boot-up	பூலீகங்கை	தொடங்குதல்
37.	broadcasting	தீகாஞ்கங்கை	தொலைப்பரப்பல்
38.	browsing	அகரிக்கீம	மேலோடல்
39.	bubble sort	இலுவி வேரிம்/ கா-செக்கூறு வேரிம்	குமிழி வகைப்படுத்தல்
40.	built-in	ஒலுவிசீ / கிலூலி	உட்பொதிந்த
41.	business process re-engineering (BPR)	விகாபார கியாவிலியே பூதி ஓய்க்கேருகைங்கை	வணிக செயல்முறை மீன்கட்டமைப்பு
42.	candidate key	கிர்ஜபத ஈழர்	பிரதிநிதித்துவச் சாவி
43.	cardinality	கஷ்டியதாவி	எண்ணாலைவ
44.	cathode ray tube (CRT)	கைதோவிக் கிர்ன் கலை	கதோட்டுக் கதிர் குழாய்



45.	central processing unit (CPU)	மெடிச கைக்குழு ரீக்காய	மத்திய செயற்பாட்டு அலகு
46.	characteristics	கெலி உக்குண / சீவிலுக்குண	சிறப்பியல்புகள்
47.	check box	சுலதங்கு கோருவி	சரிபார்ப்புப் பெட்டி
48.	client-server model	கேவிள் கேவிள்-கேவிள் டாய்க அக்ஷன்கள்	சேவைப் பயனர் மாதிரி
49.	clock	சீபாத்திரம்	கடிகாரம்
50.	cloud computing	விலூஷலி பரிசுநினை	மேகக் கணிமை
51.	coaxial cable	சுலக்குண கேவிலுக	ஒருச்ச வடம்
52.	code editor	கேவிள் கார்க்கார்க	குறிமுறை தொகுப்பி
53.	comment	வீவர்ணம்	விளக்கக் குறிப்பு
54.	commutative law	நகைடீடு நகை	பரிமாற்று விதி
55.	compact disc	பூசங்கிட சீச்காய	ஒளியியல் வட்டு
56.	compatibility	கெலுப்பு	பொருந்துகை
57.	compiler	கீதிபாடுகாய	தொகுப்பான்
58.	component	சிங்காய்காய	கூறு
59.	composite key	சுங்குக்கு கேவிள்	கூட்டுச் சாவி
60.	constant	தீயகாய	மாறிலி
61.	content management system (CMS)	அன்றைக்கு கலுமினைகர்ணி பட்டினிய	உள்ளடக்க முகாமைத்துவம் முறைமை
62.	context switching	சுந்தரை பூரிவகாய	சந்தர்ப்ப நிலைமாற்றல்
63.	contiguous allocation	காலிட் சிறைகாய	அடுத்தடுத்தான் ஒதுக்கீடு
64.	control structure	பாலுக விழுகாய	கட்டுப்பாட்டுக் கட்டமைப்பு
65.	control unit (CU)	பாலுக ரீக்காய	கட்டுப்பாட்டலகு
66.	credit card	நியபதி	கடன்டை
67.	customization	அகிரலீக்கானம்	தனிப்பயனாக்கல்
68.	data	டத்தை	தரவு
69.	data and control bus	டத்தை காலுக பர்	தரவும் கட்டுப்பாட்டுப் பாட்டையும்



70.	database management system (DBMS)	டத்த குறிடாக கலமினாகர்ண பட்டினி	தரவுத்தள முகாமைத்துவ முறைமை
71.	data definition language (DDL)	டத்த திருவிவந சாகாவி	தரவு வரையறை மொழி
72.	data dictionary	டத்த அவீட்கேஷன்	தரவு அகராதி
73.	data flow diagram	டத்த கெல்லி கிழங்கு	தரவு பாய்ச்சல் வரைபடம்
74.	data flow model (DFM)	டத்த கெல்லி அகாரிய	தரவு பாய்ச்சல் மாதிரி
75.	data link layer	டத்த கிளிடீ ஸ்ட்ராக்	தரவு இணைப்பு அடுக்கு
76.	data manipulating language (DML)	டத்த கூட்டுருசி விச	தரவு கையாளல் மொழி
77.	data migration	டத்த பரைவதாக	தரவு பெயர்ச்சி
78.	debugging	திடூட் திரிம்	வழு நீக்கல்
79.	decision support system (DSS)	தீர்ண சுகாய பட்டினி	தீர்மான உதவு முறைமை
80.	declarative	பூகானாத்திமக	அறிவிப்பு
81.	default values	பேரநிலி அகாய	இயல்புநிலை மதிப்பு
82.	defragmentation	பூதிவிட்டிவகை	துணிக்கை நீக்கல்
83.	demodulation	ரீமூர்புக்கை	பண்பிறக்கம்
84.	device	ரபாங்கை / ரபாங்குமிகை	சாதனம்
85.	device driver	ரபாங்க விவித மின்கூங்கை	சாதனச் செலுத்தி
86.	digital	அங்கித	இலக்க முறை
87.	digital camera	அங்கித கைமிருவி	இலக்கமுறைப் படக்கருவி
88.	digital economy	அங்கித ஆர்வீக்கை	இலக்கமுறைப் பொருளாதாரம்
89.	digitizer	சும்பினாங்கைக்கை	இலக்கமாக்கி
90.	direct implementation	கூட்டுருப்பதாக	போரடி அழுலாக்கம்
91.	disk formatting	கைவி/சீக்க கைவிசிக்கி கைவீரிம்	வட்டு வடிவமைப்பு
92.	distortion	ரிகாரிய	திரிபு



93.	distributive law	சீக்வின கூடு	பங்க்ட் டு விதி
94.	document flow diagram	தேவை கெளிக் கூடுகள்	ஆவணப் பாய்ச்சல் வரைபடம்
95.	domain	விகு	ஆஸ்களம்
96.	domain name server (DNS)	விகு கூடு கேவ்வாலூக்கூடு	ஆஸ்களப் பெயர் சேவையகம்
97.	domain name system (DNS)	விகு கூடு ரட்டிக்கூடு	ஆஸ்களப் பெயர் முறைமை
98.	dynamic host configuration protocol (DHCP)	குதிக் கொருக பாலுக திகளுவில்கூடு	மாறும் விருந்தோம்பி உள்ளமைவு நெறிமுறை
99.	dynamic web page	குதிக் கேவி கீபு	இயக்குநிலை வலைப்பக்கம்
100.	e-commerce	விடுதலை விதிக்கூடு	மின் வர்த்தகம்
101.	economical feasibility	அர்வீக் கூடுக்கூடு	பொருளாதாரச் சாத்தியப்பாடு
102.	elementary process description(EPD)	இலிக் கிளாவ்கு ரீட்டிரக்கூடு	அடிப்படைச் செய்முறை விபரிப்பு
103.	e-market place	ஓ-வெல்டை போல்	இலத்திரனியல் சந்தை இடம்
104.	encryption	ஒத்த கேத்தகூடு	மறைகுறியாக்கம்
105.	enterprise resource planning system (ERPS)	ஒங்கை கிபிள் கூலூக்கு ரட்டிக்கூடு	நிறுவன முலவள திட்டமிடல் முறைமை
106.	entity	ஒதார்பை/அதிகாரத்தைக் கூடுக்கூடு	நிலைபொருள்
107.	entity identifier	ஒதார்பை/அதிகாரத்தைக் கூடுக்கூடு	நிலைபொருள் அடையாளங்காட்டி
108.	entity relationship(ER) diagram	ஒதார்பை கிலிவெட்கூடு ரெபக்கூடு	நிலைபொருள் உறவுமுறை அட்டவணை
109.	executable	கிளாக்கூடு கூடு கூடு	இயக்கத்தகு
110.	executive support system (ESS)	விகியக் கூடு கூடு ரட்டிக்கூடு	நிறைவேற்று உதவு முறைமை
111.	expert system	வினாக்கூடு ரட்டிக்கூடு	நிபுணத்துவ முறைமை

112.	extended binary coded decimal interchange cod (EBCDIC)	විස්තර දුරිමය කේතක දැනම	නිදහස් තුවිත කුරුමුහෙර තසම මූල්‍යාංශක කුරී
113.	extended entity relationship (ER) diagram	විස්තර තුනාරුප සම්බන්ධිතා රෘප සටහන	විරිචාක්කපට්. නිශ්චලපොගුල් මුද්‍රණයෙහි අඩ්ට්‍වුණෝ
114.	feasibility study	අක්‍රාක අධිස්‍යයනය	සාත්ත්‍යියපාටු කරුණක
115.	feedback loop	ප්‍රතිපෙශක ප්‍රපාද	පින්නුට්‍ල් බැස්‍යායම්
116.	fetch-execute cycle	අභාරණ-ලිඛාකරුවීම් ව්‍යුහ	තරුවිපු නිශ්චාවෙශ්‍රුත් කුදාශී
117.	fiber optic	ප්‍රකාශ තන්තු	ඩිඟ්‍යු ඉංජියියල්
118.	file	ගොනුව	කොට්පු
119.	file hierarchy	ගොනු දිරාවලිය	කොට්පු පාඨ්‍යාලෙ
120.	firewall	ලේඛි පටුර	ත්ස්කවර්
121.	normal form	ප්‍රථම ප්‍රමිත අවස්ථාව	ඩියල්පාක්කල් බාධාවම්
122.	fixed internal hard disk	අවල අභ්‍යන්තර දැක් තැවැට්	නිශ්චාවාන ම්‍යාලික වෘත්තය්
123.	flash memory	සැක්‍රේ/ ක්‍රේඩ්සිඩ මිතකය	පැලිස්සිට්‍රු නිශ්චාවකම්
124.	flash memory card	සැක්‍රේ/ ක්‍රේඩ්සිඩ මිතක පත	පැලිස්සිට්‍රු නිශ්චාවක ප්‍රාග්ධනය
125.	flat file system	ලේඛ ගොනු පද්ධතිය	සමත්‍යාක්‍රමක කොට්පු මුද්‍රණයෙහි
126.	flip-flop	පිළි-පොල	සුය-විශු
127.	float	ඉපුරිම්/ඉපිලිම්	මිතකව
128.	floppy disk	නම්ක තැවිය	ඛෙක්ස් වැට්‍රු
129.	flow chart	ගැලීම් සටහන	පාය්ස්සර් කොට්ඳුප්පාම්
130.	folder	ගොනු බිජුලුම්	කොට්පුරෙ
131.	foreign key	ආගන්තුක පතුර	අන්ත්‍යිම්සාවී
132.	formatting	හැඳිකාවී ගැන්වීම	ව්‍යුත්පනයෙහි
133.	frame	රාම්ව	ස්ටෑකම්
134.	frequency modulation	සංඛ්‍යාත මුරිජනය	අන්ත්‍රික්‍රෙඩ් පස්ස්පෙර්රාල්



135.	full adder	பூர்ணகலூகை	முழுமைக் கூட்டி
136.	function	திதய / காரைய	சார்பு
137.	functional dependency	காரை மிட்சி பருவத்தை	செயல் சார்புநிலை
138.	functional requirement	காரை மிட்சி அவசியத்தை	செயல்படு தேவை
139.	quantum computing	க்ஷலோன்வு பரிசுத்தை	சொட்டு கணிப்பு அடிப்படை
140.	gateway	ஸ்ரைன் முக / வாக்ஸ் டீவியை /வாக்ஸ் ஸ்ரைன்	நுழைவாயில்
141.	genetic algorithm	குறை ஆல்னோர்டுகை	மரபணு வழிமுறை
142.	geographical information system(GIS)	ஒள்ளேற்ற தொரத்துர் பட்சிதைய /கிடிதை தொரத்துர் பட்சிதை	புவியியல் தகவல் முறையை
143.	graph plotter	புக்கை உதவுக்கரண்டை	படவரையி
144.	graphic tablet	பிழகுகளைகை	வரைவியல் விவரமாக்கி
145.	grid computing	புகுக பரிசுத்தை	கோட்டுச்சட்டக்க கணிமை
146.	guided media	கிளிதி மாதிரி	வழிபடுத்தப்பட்ட ஜிடகம்
147.	half adder	அர்மிகலூகை	அரை கூட்டி
148.	hand trace	கால்கைகளைப்பிடிகை	கைச் சுவடுகள்
149.	hard disk	டிரை தையை / டிரை சிக்கை	வன்தட்டு
150.	hardware	உயிர்கள்	வன்பொருள்
151.	hexadecimal	ஏவி முகமை	பதினாறுமும்
152.	hierarchical model	இருவகு அகங்கை	படிநிலை மாதிரி
153.	host	கத்தைகை	விருந்தோம்பி
154.	hub	நுதிக	குவியன்
155.	human operator	மனிதன் கைக்கருவீ	மனித இயக்குபவர்
156.	hybrid approach	ஒட்டுநீங் பூவேகை	கலப்பு அனுகல்
157.	hyperlink	அடிக்கீங்கைகை	மீ இணைப்பு
158.	Integrated circuits (IC)	அனுக்குத் தொகுப்பு	ஒருங்கிணைந்த கருப்பு
159.	icon	கிரங்கை	சிறு படம்



160.	identity	සැර්වසාම්ස	අභ්‍යන්තරයෙහි
161.	image	රෝග	පෘථිම්
162.	imperative	විධානාත්මක	කට්�ණ
163.	incremental	වර්ධනාත්මක	ශ්‍රුමාන, අන්තිකරිප්පූ
164.	indexed allocation	අනුකූලීක විගාරහය	සැංචි තොක්කේ
165.	information	තොරතුරු	තකවල
166.	inkjet printer	රින්ග විදුම් මූලකය	සමත්-තාරෑ-අස්ක්ප්බොරි
167.	instant messaging	ක්‍රේඩික ප්‍රවීති යැවීම	ඉ-ඕනෑෂ් ජේය්ත්‍යිල්
168.	integrated development environment(IDE)	සම්බුධාතික සංවර්ධින පරිකරය	ශ්‍රුම්කිණෙන්ත විරුත්ති සුළුව
169.	integration test	අනුකළන පරික්ෂණය	ශ්‍රුම්කිණෙන්ත සොතිප්පූ
170.	intelligent and emotional computing	ඉදිරිමත් සහ විෂ්වාසීය පරිගණකය	නුත්ත්‍යාච්‍යාව සහ ඉ-ඡාර්තිරුහුමික්ක කණිත්තල
171.	interface	අදාළ මූලුණ	இடைமுகம்
172.	internet service provider(ISP)	අන්තර්ජාල දේවාය සපයන්නා	இணையச் சேவை வழங்குனர்
173.	interpreter	අර්ථින්තාසකය	மொழிமாற்றி
174.	interrupt	අදාළ විදුම	இடையුறு
175.	intranet	අන්ත:ජාලය / අන්තෝජාල	அகவිණෙයාம்
176.	internet of things (IoT)	සාර්ව ද්‍රව්‍ය අන්තර්ජාලය/ සඩ්ඩ් ද්‍රව්‍ය අන්තර්ජාලය	පොරුട්-කளින் இணையம்
177.	iteration	ප්‍රත්‍රිකරණය	மீள் செயல்
178.	karnaugh map	கාරෝ සිරියම	கானோ வரைபடம்
179.	knowledge management system(KMS)	දෙනුම් කළමනාකරණ උද්ධිතිය	அறிவு முகாமைத்துவ முறையை
180.	large scale integration (LSI)	විශාල පරිමා හේ අනුකළනය	பாரிய அளவு ශ්‍රුම්கිණෙப්පූ
181.	latency	பමාච/ஒத්‍யதාච	மறைந்தை



182.	least significant	அடிமேலேக்கீ	சிறும மதிப்பு
183.	legend	வீச்சுர அடிக	குறி விளக்கம்
184.	life cycle of data	டுத்த தீவின விறை	தரவு வாழ்க்கை வட்டம்
185.	light emitting diode(LED) display	அலோக வீலோவிக டீயெஷன் கண்டர்கை	ஒளிகாலும் இருவாயித் திரை / ஒளி உழியும் இரு முனையம்
186.	linked allocation	கல்லீடி வீகாரகை	இணைப்பு ஒதுக்கீடு
187.	linker	கங்கொர்கை	இணைப்பி
188.	liquid crystal display(LCD)	லிகிச்ரீக கண்டர்கை	தீரவுப்பளிங்குக் கணினித் திரை
189.	list	ஒரேச்சுவி	பட்டியல்
190.	liveware	கீலாங்	உயிர் பொருள்
191.	local publishing	கீர்திக பிகிட்டிக் கிரிம்	உள்ளக வெளியீடு
192.	local area network (LAN)	கீர்திக பிள்ளை குடுகை	இடத்துறி வலையமைப்பு
193.	logic gate	கூர்கிக டீவிாரக	தர்க்கப் படலை
194.	Logical Data Modeling(LDM)	கூர்கிக டுத்த அகாரிகரங்கை	தர்க்கத் தரவு மாதிரியுருவாக்கல்
195.	logical data structure	கூர்கிக டுத்த விழுகை	தர்க்கத் தரவுக் கட்டமைப்பு
196.	logical design tools	கூர்கிக கூலைப்பி மேவிலும்	தர்க்க வடிவமைப்புக் கருவி
197.	looping	ஒப்பை	வளைய வரல்
198.	machine code	கன்று கேந்கை	இயந்திரக் குறியீடு
199.	machine-machine coexistence	கன்று-கன்று கூலைவிசைம்	இயந்திர- இயந்திர ஒருங்கிருத்தல்
200.	magnetic ink character reader(MICR)	முதிர்கிக கீஞ்க அன கூஷ்டு கீகுவினை	காந்த மை எழுத்துரு வாசிப்பான்
201.	magnetic stripe reader	முதிர்கிக திருக் கீகுவினை	காந்தப்பட்டி வாசிப்பான்
202.	magnetic tape	முதிர்கை பரீக	காந்த நாடா
203.	malware	அதிகெடி மீட்காங்	தீம்பொருள்

204.	management information system (MIS)	கலூம்புகர்ண தொரதூர் பட்டினிய	முகாமைத்துவ தகவல் முறைமை
205.	man-machine coexistence	தீவிர-யன்ற கூடுதலைக்கேள்வு	மனிதன் - இயந்திரம் ஒருங்கிணுத்தல்
206.	media access control (MAC)	மாடிச பிரேரண பாடுக	ஊடக அணுகல் கட்டுப்பாடு
207.	memory management unit(MMU)	மினக கலூம்புகர்ண ரீதைய	நினைவுக முகாமைத்துவ அலகு
208.	mesh topology	ஏட்டி சிருதுகை	கண்ணி இடத்தீயல்
209.	microprocessor	சீதூடு கூடுதலை	நுண்செயலி
210.	microwave	சீதூடு தர்ங்க	நுண்ணலை
211.	mini disk	ஒரு திருதை	சிறு வட்டு
212.	mobile computing	பாங்கு பரிசுத்துக்கை	செல்லிடக் கணிமை
213.	mobile marketing	பாங்கு அலூரிகர்ணதை	செல்லிடச் சந்தைப்படுத்தல்
214.	modularization	மோடியூலுகர்ணதை	கூறு நிலையாக்கம்
215.	modulation	இருப்புகை	பண்பேற்றும்
216.	most significant	ஒருஷிம வேகேஸி	அதியுயர் மதிப்பு
217.	mother board	மூடு பிரிவு	தாய்ப்பலகை
218.	multi agent systems	மினு கார்க பட்டினிய	பல்முகவர் முறைமை
219.	multi user-multi task	மினு பரிசுகு - மினு கார்கை	பற்பயனர்-பற்பணி
220.	multi-core processors	மினு கர கூடுதலை	பல்கரு செயலி
221.	multimedia objects	மினு மாடிச விசீடு	பல்லுடைக் பொருள்
222.	multiplexer	மினு பர்கார்கை	பல்சேர்ப்பி
223.	multiplexing	மினு பர்கர்ணதை	பல்சேர்ப்பு
224.	multiprocessing	மினு கூகூலம்	பன்முறைவழியாக்கி
225.	multitasking	மினுகார்க கிரும	பற்பணி
226.	multi-threading	மினு-ஏன்டிகியாகையை	பல் செயல்கூறு
227.	nature inspired	புதை கீழ்க்கண்ட பரிசுத்துக்கை/	இயற்கை உள்ளீர்ப்புக்



	computing	பூகாலி அனுப்பேற்ற பரிசுத்தங்கள்	கணிப்பு
228.	nested loop	தீவிர ஒப்பு	நீடித்த வகையம்
229.	network addresses translating (NAT)	ராலு யோசித் தொழில்தாவரிகள்	வலையமைப்பு முகவரி பெயர்ப்பு
230.	network architecture	ராலு தீர்மதிகள்	வலையமைப்புக் கட்டமைப்பு
231.	network layer	ராலு கீர்தார்ய	வலையமைப்பு அடுக்கு
232.	network model	ராலு ஆகாரிய	வலையமைப்பு மாதிரி
233.	neural network	ஈநூறுகு ராலுகள்	நரம்பியல் வலையமைப்பு
234.	non-functional requirement	கார்யமிட்டின் நோவின் அவசியத்தாவி	செயல்சாராத் தேவைகள்
235.	normalization	பூமிகர்ணகள்	இயல்பாக்கல்
236.	null	அனிடுநக	வெற்று
237.	object code	விட்டு கேத்/	பொருள் குறி
238.	object oriented	விட்டு காலூர் / பாடக	பொருள் நோக்குடைய
239.	object- relational model	விட்டு-கலீபிள்ளைக் காகாரிய	பொருள் உறவுநிலை மாதிரி
240.	octal	ஏஞ்சுமிகு	எண்மை
241.	office automation system (OAS)	கார்யால சீலியங்கர்ண பட்டினிய	அலுவலகத் தன்னியக்க முறையை
242.	offline	மார்க அபகை / மார்ககை நோவின்	தொடர்பு நிலை
243.	one's compliment	ஒரேகீ அனுப்புக்கை	ஒன்றின் நிரப்பி
244.	online	மார்ககை	தொடர்பா நிலை
245.	open source	ஓப்பா திட்டா	திறந்த மூலம்
246.	operational feasibility	ஓபேஷனல் கூகாத்தாவி	செயற்பாட்டுச் சாத்தியப்பாடு
247.	operator category	கார்க பூர்க்கை	செயலி வகை
248.	operator precedence	கார்க பூமிக்கை	செயலி முன்னுரிமை
249.	optical character reader (OCR)	பூகாக அடு செல்ல கீர்வுகள்	ஓளியியல் எழுத்துரு வாசிப்பாள்

250.	optical mark reader (OMR)	பிரகார ஒழுங்கு கீலுவனால்	காந்த மை எழுத்துரு வாசிப்பான்
251.	output	பிரதிலூகங்கள்	வெளியீடு
252.	packet switching	பொடி ஒலிமிளூலி	பொதி மடைமாற்றல்
253.	paging	பிருகரங்கள்	பக்கமிடல்
254.	paradigm	ஒண்மொடிரகங்/ பிரதிமானங்/பிரதிரச்சங்கள்	கோபாட்டுச் சட்டகம்
255.	parallel implementation	கூடுதல் சீர்ப்பங்கள்	சமாந்தர அமுலாக்கம்
256.	parameter passing	பருத்தி கூறும்	பரமானக் கடத்தல்
257.	parity	கூறுகூறு	சமநிலை
258.	password	முரு படிக	கடவுச்சொல்
259.	payment gateway	கேவுல் வாசல் டீலார்ய	பணக் கோடுப்பனவு நுழைவாயில்
260.	periodic refreshing	ஏவ்வாறு குறைக்கப்படும் காலமுறை புதுப்பித்தல்	காலமுறை புதுப்பித்தல்
261.	peripheral device	பரிசுத் திட்டங்கள் / திட்டங்கள்	புறச் சாதனம்
262.	phablet	உருவிலூரி	பெப்லட்
263.	phased implementation	ஒவ்வொரு பகுதி / பிரதிரச்சு கூடுதல்களில்	கட்ட அமுலாக்கல்
264.	phase modulation	கலா இருப்பங்கள்	நிலை பண்பேற்றும்
265.	phishing	தாழ்விலை	வழிப்பறித்தல்
266.	physical layer	கோதிக சீர்ப்பங்கள்	பொதிக அடுக்கு
267.	physical memory	கோதிக மதகங்கள்	பொதிக நினைவுகம்
268.	pilot implementation	தியாக சீர்ப்பங்கள் / தியாக கூடுதல்களில்	முன்னோடி அமுலாக்கல்
269.	piracy	வேர்த்திவரி/ குல்லிக்கங்கள்	களவு
270.	pirated software	வேர்த்திவரி மூலக்காங்கள்	திருட்டு மென்பொருள்
271.	plagiarism	ஒத்திருப்பு/ ஒத்திருப்பு வேர்த்திவரி	கருத்துத் திருட்டு
272.	point to point connection	கூட்டு கூட்டு கூறுகூறுகூறு	ஒன்றுடனொன்று இணைப்பு



273.	pointing device	දැක්වුම් උපාංගය	ස්ථි සාත්‍යම
274.	port	කෙටියිය	වායිල්, තුරු
275.	portable external hard disk	ජංගම/සුවහිඟ බාකිර දැක්වුම් කැටිය	කාවත්තකු පුර බණත්ටු
276.	portal	දේවාරය/ ආමුබද්ධාරය	වෘෂ්‍යවාසල
277.	Point of sale (POS) machine	විශ්‍යුල් පොල යන්තු	විශ්‍යුපෙන මූල පියන්තිරම
278.	postulate	උපකළුපනය	සැක්කොස්
279.	power supply	විදුලි සැපයුම්/ජව සැපයුම	මින් වුහුණ්කි
280.	presence check	තරිතකා පරීක්ෂාව	இருத்தல் சரிபார்த்தல்
281.	presentation layer	සම්බන්/ஓයිරිපත් කිරීම් දේරය	முன්வෙස්பු அடுக்கு
282.	primary key	ප්‍රාර්මික/මුල් යුතු	முதன்மைச் சාධී
283.	primitive data type	ප්‍රාර්මික දත්ත වර්ගය	பුர්වීகத் தரவு வகை
284.	privacy	පොදුගැලීகත්වය	அந்தரங்கம்
285.	private key	පොදුගැලීக යුතු	பிரத்தியேகச் சාධී
286.	process	க්‍රියාවලිය/ක්‍රියාகங்கள்/ சூக்ஷ்ம	செயல்/ முறைவழியாக்கல
287.	process control block(PCB)	ක්‍රියාக පාලන බණ්ඩය	செயல் கட்டுப்பாட்டுத் தொகுதி
288.	process management	ක්‍රියාகங கலூலினாகர்ண்ட	செயல் முகாமைத்துவம்
289.	process states	ක්‍රියාகங தக්தீலி	செயல் நிலை
290.	process transition	ක්‍රියාகங சங்கு மின்ற	செயல் நிலைமாறல்
291.	product commercialization	தිෂ්பාடக வாணிபகர்ண்ட	தயாரிப்பு வர்த்தகமயமாக்கல்
292.	product of sum (POS)	வෛක்ஷன்னේ ඉඩිகය	සැක්டුத்தொகையின் பெருக்கம்
293.	program translator	நிமුலேஷன் பரிவர்த	செய்நிரல் மொழிபெயர்ப்பான்
294.	proprietary	தිම්கම් සහිக	தனியுரிமை
295.	protocol	தියමාවලිය	நடப்பொழுங்கு

296.	prototyping	இலாகாதிகரணம்	மூலவகை மாதிரி
297.	proxy server	திருப்பு வேலையகை	பதிலாள் சேவையகம்
298.	pseudo code	ஒழுக கேதக	போலிக்குறி
299.	public switch telephone network (PSTN)	பொடு சீரிவ டிரங்கள் தலை	பொது ஆளியிடப்பட்ட தொலைபேசி வலையமைப்பு
300.	public key	பொடு யார்	பொதுச் சாலி
301.	pulse code modulation	செபன்ட் கேத இருப்பு	துடிப்புக்குறி பண்பேற்றம்
302.	pulse width modulation	செபன்ட் ரீதர் இருப்பு	துடிப்பு அகலப் பண்பேற்றம்
303.	radio button	ரீகல்ட் கேரிம்	ரேடியோ பொத்தான்
304.	random access memory (RAM)	கடமினாவி பிரேரிக மதகை	தற்போக்கு அணுகல் நினைவகம்
305.	range check	பருக பரித்துவி	வீச்சு சரிபார்த்தல்
306.	rapid application development (RAD)	கூஜ கேட்டுவிதி கங்களிக்கை	துரித பிரயோக விருத்தி
307.	read only memory (ROM)	படிந மாறு மதகை	வாசிப்பு மட்டும் நினைவகம்
308.	real time	தெரிச காலிக	நிகழ்நேரம்
309.	record	ரெகுலரியாக	பதிவு
310.	redo	கூவித கிரிம்	மீன்ச் செய்
311.	redundancy	குமிரிக்கை	மிகைமை
312.	reference model	கோடு அகாரிய	வலையமைப்பின் கட்டமைப்பு
313.	refreshing	புதுப் கிரிம்	புத்துயிர்ப்பித்தல்
314.	register memory	ரெகிஸ்டர் மதகை	பதிவுகம்
315.	relational	குமிந்திக	தொடர்பு, உறவுநிலை
316.	relational model	குமிந்திக அகாரிய	உறவுநிலை மாதிரி
317.	relational database	குமிந்திக ட்டீத குமிழாய்	உறவுநிலை தரவுக்களும்
318.	relational instance	குமிந்திக திட்டங்கை	தொடர்பு முறை எடுத்துக்காட்டு



319.	relational schema	සම්බන්ධිත පර්පාටික සටහන	தொடர்பு முறைத் திட்டம்
320.	relationship	සම්බන්ධිතாචய	தொடர்புமுறை
321.	remote	දුරක්	தொலை, தூர
322.	render	விளை	வழங்கு
323.	repeater	ප්‍රහරිකරකය	மீளி, மீட்டி
324.	repetition	ப්‍රහරිக்கிய	மீள் செயல்
325.	reset button	ප්‍රහරිக்க வோத்தம்	மீளமைப்புப் பொத்தான்
326.	retrieve	கமුද්ධிரණ	மீளப்பெறு
327.	return value	ප්‍රහරිக்க அடக்க	திரும்பல் பெறுமானம்
328.	reverse auction	ප්‍රකிளின்ட்டெக்ன	எதிர்மாற்று ஒலம்
329.	ring topology	இடු සේලුகரக	வளைய இடத்தியல்
330.	router	மிஂ கண்ணல்	வழிப்படுத்தி, வழிச்செலுத்தி
331.	routing	மிஂ கண்ணலீම	வழிச்செலுத்தல்
332.	scanner	සුපிரික்கரகය	நானுகு நோக்கி
333.	scheduler	தியமிகர்ணக	ஓழுங்குபடுத்தி
334.	scope of variable	விலாக பரාகர	மாறி செயற்பாடு
335.	query	விட்டும்	வினவல்
336.	selection	தெரிம	தெரிவு
337.	selector	වரகர	தேர்வி, தேர்ந்தெடுப்பி
338.	sensor	சாலேடுகர	உணரி
339.	sequence	அனுமதிய	தொடர்
340.	sequential circuit	அனுமதிக පරිපරිக	தொடர்ச் சுற்று
341.	sequential search	அனுமதிக ශேறுமித	வரிசைமுறைத் தேடல்
342.	server	ஷெல்லாகரக / அனுගுகரக	சேவையகம்
343.	session layer	செச් සේர்க	அமர்வு அடுக்கு
344.	shareable pool	நுவ்வார் ஓங்கர	பகிரதகு பொது இடம்
345.	sign-magnitude	ஒங்குவித் பிளிங்கர / சங்குக்கித	குறியுடைய வீச்சளவு



		பரிமானங்கள் / அங்கிரு பரிமானங்கள்	
346.	single user-multi task	சீக் பரிசீலக-இண் கூர்கள்	தனிப்பயனர்-பற்பணி
347.	single user-single task	சீக் பரிசீலக-சீக் கூர்கள்	தனிப்பயனர்-தனிப்பணி
348.	smart card	சூழங் காசிப்பக	குட்டிகை அட்டை
349.	smart phone	சூழங் டிரங்கள்கள்	குட்டிகைத் தொலைபேசி
350.	smart system	சூழங் படிவியல்	குட்டிகை முறைமை
351.	social networking	குமுக ரூல்கள்கள்	சுழக வணல்யமைப்பாக்கல்
352.	software	ஓடுகூடு	மென்பொருள்
353.	software agent	ஓடுகூடு கூர்கள்	மென்பொருள் முகவர்
354.	sort	பேரிட	வரிசைப்படுத்து
355.	source	பூனை	மூலம்
356.	spiral model	கரிபிட ஆகையை	கருளி மாதிரி
357.	spooling	உரிம	கற்றுதல்
358.	Star topology	கூர்கூ ஸ்ட்ரீல்கள்	விள்மீன் இடத்தியல்
359.	stepwise refinement	பீரவர்கூர் பீரிலகூவு	படிமுறை நீக்கல்
360.	storage	ஆவகங்கள்	சேமிப்பு
361.	storage allocation	ஆவகங் வினாக்கள்	சேமிப்பு ஒதுக்கல்
362.	stored program concept	ஆவீத ஒமேல்லே சங்கல்லை	சேமிக்கப்பட்ட செய்நிரல் எண்ணக்கரு
363.	structure	விழுகள்	கட்டமைப்பு
364.	structure chart	விழு ஈவகள்	கட்டமைப்பு வரைபு
365.	structured	விழுகளை	கட்டமைப்புடைய
366.	structured query language(SQL)	விழுகளை ரிமேக்டு செய்து	கட்டமைப்பு விளவல் மொழி
367.	submit button	கோடி வீங்கீம்	சமர்ப்பித்தல் பொத்தான்
368.	subnet mask	ஸ்டெ ராடு ஆவர்கள்	உபவலை மறைமுகம்
369.	sub-netting	ஸ்டெ-ராடுகள்	உபவலையமைப்பு



370.	sub-program	ஸுப்-ஷுமில்ரை	துணைச் செய்நிரல்
371.	sum of products (SOP)	ஒளித்தன்றே வேகங்கள்	பெருக்கங்களின் கூட்டுத்தொகை
372.	supply chain management	ஈபெட்டு டாம் கலூக்காகர்ண்கள்	விநியோக சங்கிலித்தொடர் முகாமைத்துவம்
373.	swapping	பிரதிகரண்கள்	இடமாற்றல்
374.	switch	சீலிவிய	ஆஸி
375.	syntax	கார்க் ரீதி	தொடரியல்
376.	system development life cycle(SDLC)	பட்டினி ஈவிருப்பின தீவின விழுகள்	முறைமை விருத்தி வாழ்க்கை வட்டம்
377.	table	விழுபு	அட்டவணை
378.	table check constraint	விழு பரிசீலனை ஈவிருப்பிகள்	அட்டவணை சரிபார்த்தல் கட்டுப்பாடு
379.	tag	லிங்குலந்கள்	ஒட்டு
380.	Technical feasibility	தொகைத்திற உகங்காலி	தொழில்நுட்பச் சாத்தியக் கருக்கை
381.	telecommuting	பூர்வீர ஈவிடுதல் / பூர்வ ஈவிலேரிடுதல்	தொலைசெயல்
382.	testing strategy	பரிசீலனை உருவாக்கம்	பரிசீலித்தல் உபாயம்
383.	text and font	பாரி சுதா அக்ஷரம்	வாசகமும் எழுத்துருவும்
384.	text formatting	பாரி கூடிகளில் கூண்டிம்	வாசக வடிவமைப்பு
385.	text input	பாரி ஆட்டான்	வாசக உள்ளீடு
386.	normal form	பிரதி அவிச்ராவி	இயல்பாக்கல் வடிவம்
387.	thumbnail	ஈகேலீ ரீ	குறும்படம்
388.	time division modulation (TDM)	கால மெட்டு இருப்பிகள்	நேரப் பிரிவுப் பண்பாக்கம்
389.	time sharing	கால விதரிகள்	நேரப்பகிர்வு
390.	timing	கால ஏதின்கள்	நேரக்கணிப்பு
391.	top down design	மூடின் சில ஈருணும்	மேலிருந்து கீழான வடிவமைப்பு

392.	touch pad	தீர்க்க உபயோகம் / பாடகம்	தொடு அட்டை
393.	touch screen	தீர்க்க திரு	தொடுதிரை
394.	transaction processing system(TPS)	அனுமதி கைவழி பட்டினம்	பரிமாற்றச் செயலாக்க முறைமை
395.	transitive dependency	கங்குத்தி பருத்தத்துடன்	மாறும் சார்பு நிலை
396.	transport layer	பூர்வ தீர்க்க	போக்குவரத்து அடுக்கு
397.	transport protocol	பூர்வ திட்டமாவறிய	போக்குவரத்து நடப்பொழுங்கு
398.	tuple	உபலூகியான/பேரிய	பதிவு/நிரை
399.	twisted pair	ஒசிரி இடை	முறுக்கிய சோடி
400.	two's compliment	டெக்காடி அனுப்புக்கம்	இரண்டின் நிரப்பி
401.	type check	பூர்ப பரிசீலனை	வகை சரிபார்த்தல்
402.	constraint	கங்கீடிய	கட்டுப்பாடு வகை
403.	ubiquitous computing	கரீவிலர்தி அனுப்புக்கம்	எங்கும் வியாபித்த கணிமை
404.	undo	அனைதி திரும்	செயல்தலிர்
405.	unguided media	தியலி கோவில் மூடிச	வழிபடுத்தப்படாத ஊடகம்
406.	uni-casting	கூட்டு கலீப்புக்கம்	தனிப்பரப்பல்
407.	unicode	ஒத்திகேடி/ ரீதகேடி	உற்றைக்குறி முறை
408.	unique constraint	அனுகூல கங்கீடிக்கம்	தனித்துவக் கட்டுப்பாடு
409.	unit testing	ரீதக பரிசீலனை	அலகுச் சோதனை
410.	universal	கார்விடு	பொது
411.	updating	காலத்தொடர்பு திரும்	தற்காலப்படுத்தல்
412.	user	பரிசீலக	பயனர்
413.	user defined	பரிசீலக திருவாசித	பயனர் வரையறை
414.	validation	விளங்கி திரும்	செல்லுபடியாக்கல்
415.	variable	விவரங்கள்	மாறி
416.	very large scale integration (VLSI)	ஒது ரீதால் பரிமானம் அனுகூல	மிகப் பெரியளவிலான ஒருங்கிணைப்பு



417.	video graphic adapter (VGA)	ඩුජස විතක අනුහුරුණුවට වි	කාජොලී බරෙයි පොරුත්ති
418.	virtual community	අතර්ත ප්‍රභාව	මෙය්තිකර් සරුකම්
419.	virtual memory	අතර්ත මිතකය	මෙය්තිකර් ත්‍රිඛෙවකම්
420.	virtual storefront	අතර්ත වේලද පුද්ගලිකාගාරය	මෙය්තිකර් කැංමුකප්පු
421.	waterfall model	දියඇලු ආකෘතිය	න්ර් ඩේෂ්ස් මාත්‍රි
422.	wave length	තරංග ආකෘතිය	අවශ න්සෑම්
423.	web portal	වෙබ් ද්වාරය	වැළඳ බාසල්
424.	web server	වෙබ් දේවාදායකය	ඉණෙය ලේඛායකම්
425.	web service provider	වෙබ් දේවා සැපයුම්කරු	ඉණෙය ලේඛාව ව්‍යුහුතුන්
426.	white box testing	ස්ටෝර මිංුකා පරික්ෂාව	බෙන්පෙට්ඩ්ස් තොතිප්පු
427.	world wide web(WWW)	ලෝක ටෙක්ස් ටියමින	ඡලකණාධිය බැළෙ
428.	uniform resource locator (URL)	ලේකාකාරී සම්පත් තිජ්වායකය	ස්රීම බණ තුළුපිළින්කාට්ඩ්
429.	uniform resource identifier(URI)	ලේකාකාරී සම්පත් හැඳුන්වනය	ස්රීම බණ අභ්‍යාර්ථකාට්ඩ්





98

For free distribution