KEMENTERIAN PELAJARAN MALAYSIA

Self Access Learning Module

ICT Literacy for Secondary School Programme

NETWORKS AND THE INTERNET

The Internet

PUSAT PERKEMBANGAN KURIKULUM
KEMENTERIAN PELAJARAN MALAYSIA

MODULE 1

Introduction to the Internet

Curriculum Development Centre
Ministry of Education Malaysia

1. **Name of Module :** Introduction to the Internet

2. **Learning Outcomes:** The students should be able to:

    a. Define the Internet
    b. Discuss advantages and disadvantages of the Internet

3. **Knowledge and Skills**

    a. Locating the meaning of internet
    b. Discussing advantages and disadvantages of the internet
    c. Showing and explaining basic requirement to access the internet

4. **Module Summary:**

    At the end of the module, students should be able to Define the Internet and state advantages and disadvantages of the Internet.

    - The Internet.
    - Advantages of the Internet
    - Disadvantages of the Internet
    - Requirements need to access the Internet

THE INTERNET

The internet or the Net is the world's largest computer network which connects millions of computer all over the world. Many organizations including private as well as government agencies, educational institutions and individuals are connected to the Internet.

More than one billion people around the world use the internet daily for a variety of reasons, including the following:

- Communicate with and meet other people
- Access a wealth of information, news, and research findings
- Shop for goods and services
- Bank and invest
- Take a class
- Access sources of entertainment and leisure, such as online games, videos, books and magazines
- Download music
- Share information

Advantages of the Internet

1. Data and information rich, including a range of media.
2. Anyone can publish online (tripod.com and other hosting sites)
3. Learners can become researchers because of easier access to data
4. Search engines that are fast and powerful
5. Easy to use.
6. Smaller, faster, cheaper all the time

Disadvantages of the Internet

1. Information overload.
2. No librarians for quality control(with some exceptions, like Kids Click! And other sites for children).
3. Need for quality control in the data that student find and use.
4. Search engine that show result base on who pays the most.
5. Not enough training for effective use.
6. Push to upgrade constantly.

INTERNET REQUIREMENTS

Basic requirements needed to access the internet :

1. Network Interface Card (NIC)

A network interface card is a computer circuit board that is installed in a computer so that it can be connected to a network.

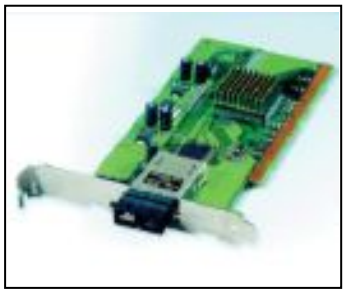


Figure 1: Network interface card

2. Access Account

New subscriber needs to subscribe for an account from the service provider (ISP). There are several listed internet service providers in Malaysia such as JARING, TELEKOM MALAYSIA - TMnet, MAXIS - maxis.net and TIME.COM - time.net.

There are two ways of accessing the internet:

a. Direct access:

   User computers are directly connected to the internet through a local network server

b. Dial-up

   Accessing the internet is made by making a call through the telephone line to the ISP

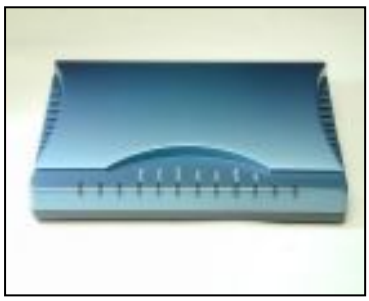
3. Wireless Network Interface Card

Is a network card which connects to a radio-based computer network. It uses an antenna to communicate through microwave. A WNIC can operate in two modes known as infrastructure mode and ad hoc mode. In an infrastructure mode network the WNIC needs an access point while an ad hoc mode network the WNIC does not require an access point.

4. Modem (internal and external)

Modem is abbreviation for modulator/demodulator. It is a device that enables a computer transmits data over telephone or cable lines. Computer information is store digitally, whereas information transmitted over telephone lines is transmitted in the form analog waves. A modem converts between these two forms. There are two types of modem, external and internal modem.

External modem can be attached to any computer that has an RS-232 port. An internal modem is an expansion board that can be inserted into vacant expansion slot in a computer.



EXTERNAL MODEM

INTERNAL MODEM

5. Hub / Switch

A hub is a device acting as the cable center of a network that uses to connect segments of LAN and has either 8 or 16 port. Hub broadcasts the data that it receives from one port to all of its port.

A switch can also connect multiple communication lines and it can receive packets from different protocol. Switch is more intelligent than a hub as it will on only deliver the data to the particular port. This actually helps to make the network significantly faster. It filters and forward packers between a LAN segments.

SWITCH

6. Router

A router is attached to two or more networks an forwards Packets form one network to another. It acts as a junction between two or more networks to butter and transfer data packets among them.

ROUTER

7. Wireless Access Point

Wireless access point or AP is a device that connects wireless communication devices together to form a wireless network. It is usually connects to a wired network and can relay data between wireless and wired devices.

WIRELESS ACCESS POINT

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2. H.L Capron – J. A. Johnson (2004) *Computers,* New Jersey, Pearson Education International.

3. Garay B. Shelly, Thomas J. Cashman, Misty E. Vermaat (2007) *Discovering Computers,* THOMSON COURSE TECHNOLOGY.