UNIVERSITY TECHNOLOGY MALAYSIA
FACULTY OF EDUCATION

MASTER OF EDUCATIONAL TECHNOLOGY

FOUNDATION TO EDUCATIONAL TECHNOLOGY
MPT 1113

PROF DR. BAHARUDDIN BIN ARIS

ASSIGNMENT 1
LAPTOP

TEE LEE FANG (MP081152)
2008/2009/semester 2

1.0   What is Laptop?

- Laptop also called **notebook**;
- extremely lightweight personal computer (PC), weigh 3 to 12 pounds (1.4 to 5.4 kg)
- designed for **mobile use**;
- integrates all typical components of a desktop computer, (CPUs, memory capacity, and disk drives;
- including a display, a keyboard, a pointing device (a **touchpad**, also known as a trackpad, or a pointing stick) and a battery into a single portable unit;
- the rechargeable battery is charged from an **AC/DC adapter** and has enough capacity to power the laptop for several hours;
- include several I/O ports, such as USB ports, that allow standard keyboards and mice to be used with the laptop
- designed in the **flip** form factor to protect the screen and the keyboard when closed;
- shaped like a large notebook with thickness of 0.7–1.5 inches (18–38 mm) and dimensions ranging from 10x8 inches (27x22cm, 13" display) to 15x11 inches (39x28cm, 17" display) and up;
- modern laptop often include a wireless networking adapter as well, allowing users to access the Internet without requiring any wires.
- most laptops **cost more** than a desktop model with a monitor, keyboard, and mouse.
- different brands of laptop: Apple, Acer, Asus, Sony VAIO,Lenovo, Dell, Fujitsu, Toshiba, Panasonic, MS, Hp and etc.
- the first laptop designed in 1979 by a British, William Moggridge used by NASA on the space shuttle.
- the first notebook utilized today by almost all laptops, appeared in 1982;
- the Gavilan SC, released in 1983, was the first notebook marketed using the term "laptop".
  (http://inventors.about.com/library/inventors/bllaptop.htm)
- today, more laptops than desktops in the enterprise and, according to a forecast by Intel, more laptops than desktops will be sold in the general PC market in 2009.
  (http://www.techterms.com/definition/laptop)
- the principal difference between a laptop and a PC is the display screen;
- notebook computers use a variety of techniques, known as *flat-panel technologies,* to produce a lightweight and non-bulky display screen;
- many notebook display screens are limited to VGA resolution;
- Active-matrix screens produce very sharp images, but they do not refresh as rapidly as full-size monitors.

2.0 Classification of Laptop

By purpose and (approximately) by screen size:

2.1 Desktop Replacement

- emphasizes performance,
- is less portable,
- sometimes called **desknotes**,
- 17" and larger screen; e.g; An Apple 17" MacBook Pro; "**Media Center Laptops**" and "**Gaming Laptops**" are also used

2.2 Standard Laptop

- mainstream/all-purpose laptop
- balances portability and features, 13-15" screen
- offer reasonable performance
- weight (about 4-7lbs), being about 1.5 inches thick or less.
- battery life generally goes up to about 4 hours, depending on processor, and feature

2.3 Subnotebook

- called an *ultraportable* ,
- emphasizes portability (small size, low weight and long battery life)
- usually reserved to laptops that run general-purpose desktop operating systems such as Windows, Linux or Mac OS X, rather than specialized software such as Windows CE, Palm OS or Internet Tablet OS. e.g; Sony VAIO C1 subnotebook;
- has less features, 13" or smaller screen;
- weighing between 0.8 and 2 kg;
- the battery life can exceed 10 hours when a large battery or an additional battery pack is installed;
- to achieve the size and weight reductions, ultraportables use high resolution 13" and smaller screens (down to 6.4"),
- have relatively few ports, employ expensive components designed for minimal size and best power efficiency, and utilize advanced materials and construction methods;

By features:

- **Budget** - a cheap, lower-performance standard-sized laptop;

2.4 Tablet PC

- Has a touch-screen interface, may or may not have a keyboard;

2.5 Netbook

- A cheaper, smaller version of a subnotebook designed mainly for Internet surfing and basic office applications.
- Netbooks use 10" and smaller screens,
- weigh 0.6 to 1.2 kg (1.5 to 3 pounds),
- generally powered by a CPU from one of the low-cost families with a high performance-to-power ratio such as Intel Atom, Celeron ULV, or VIA C7 processors.
- Netbooks use general-purpose operating systems such as Linux or Windows XP.
- Some models use small-capacity (4 to 40 Gb) SSD drives instead of the usual HDDs to save weight and battery power.

2.6 Rugged Laptop

- Engineered to operate in tough conditions (strong vibrations, extreme temperatures, wet and dusty environments).
- usually designed from scratch;
- bulkier, heavier, and much more expensive than regular laptops,
- seldom seen in regular consumer use. e.g: Panasonic Toughbook,
- commonly used by public safety services (police, fire and medical emergency), military, utilities, field service technicians, construction, mining and oil drilling personnel.
- usually sold to organizations, rather than individuals, and are rarely marketed via retail channels

3.0 Comparition of Advantages and Disadvantages Between Laptop with Desktop

	Advantages of Laptop	Disadvantages of Laptop
3.1	Getting more done	more expensive
3.2	Immediacy	Upgradeability of laptops is very limited
3.3	Up-to-date information	Ergonomics and health
3.4	Connectivity	Durability-more wear and physical damage
3.5	Size - laptops are smaller than standard PCs.	Security - Being expensive, common and portable, laptops are prized targets for theft.
3.6	Low power consumption	
3.7	Quiet - laptops are often quieter than desktops	
3.8	Battery - a charged laptop can run several hours	
3.9	Performance for Internet browsing and typical office applications, spends of netbook-class laptops are fast enough	
3.10	Upgradeability - hard drives and memory can be upgraded easily.	

4.0 Major Brands and Manufacturers
- The major brands usually offer good service and support,
- Capitalizing on service, support and brand image, laptops from major brands are more expensive
- Some brands are specializing in a particular class of laptops, such as gaming laptops (Alienware), netbooks (EeePC) and laptops for children (OLPC).
- Many brands, including the major ones, do not design and do not manufacture their laptops.
- Instead, a small number of **Original Design Manufacturers (ODMs)** design new models of laptops, and the brands choose the models to be included in their lineup.
- In 2006, 7 major ODMs manufactured 7 of every 10 laptops in the world, with the largest one (Quanta Computer) having 30% world market share.
- Therefore, there often are identical models available both from a major label and from a low-profile ODM in-house brand.

4.1 Major brands
- **Acer** - TravelMate, Extensa, Ferrari and Aspire
- **ASUS** - Asus Eee, Lamborghini
- **Compaq** - Evo, Armada, LTE, and Presario
- **Dell** - Inspiron, Latitude, Precision,Studio, Vostro and XPS
- **Gateway**
- **Hewlett-Packard** - HP Pavilion, HP Omnibook, HP Compaq Notebooks
- **Lenovo** - ThinkPad, IdeaPad, and 3000 series
- **Panasonic** - Toughbook, Satellite, Let's Note (available in Japan only) [1]
- **Samsung** - SENS: M, P, Q, R and X series
- **Sony** - VAIO: FJ Series, UX, TZ, NR, SZ, CR, FZ, and AR series
- **Toshiba** - Dynabook, Equium, Portege, Tecra, Satellite, Qosmio, Libretto

4.2 Original Design Manufacturers (ODMs)
- **Quanta** sell to (among others) HP/Compaq, Dell, Toshiba, Sony, Fujitsu, Acer, NEC, Gateway and Lenovo/IBM - note that Quanta is currently (as of August, 2007) the largest manufacturer of notebook computers in the world.
- **Compal** sells to Toshiba, HP/Compaq, Acer, and Dell.
- **Wistron** (former manufacturing & design division of Acer) sells to HP/Compaq, Dell, IBM, NEC, Acer, and Lenovo/IBM.
- **Flextronics** (former Arima Computer Corporation notebook division) sells to HP/Compaq, NEC, and Dell.
- **ECS** sells to IBM, Fujitsu, and Dell.
- **Asus** sells to Apple (iBook), Sony, and Samsung.
- **Inventec** sells to HP/Compaq, Toshiba, and BenQ.

- **Uniwill** sells to Lenovo/IBM and Fujitsu.

Original design manufacturer (ODM) brands

- **Clevo**
- **Compal Electronics**
- **ECS**

5.0 Things to be Considered in Choosing a Laptop

	The simple version		The advanced version
5.1	Preferred brand	5.4	RAM memory
5.2	Your budget	5.5	Hard drive sizes
5.3	The size of the screen	5.6	Processor speed
		5.7	Integrated or dedicated GPU
		5.8	Weight

6.0 Comparison Between Different Brands of Laptop

Brands	Model	Price (RM)	Saiz of screen	os	HD saiz	RAM memory	Processor speed	graphics	warranty
Toshiba	**M300**	3099	14.1"	Home Premium Built in FM turner	200 GB	1GB DDR2	T5850 2.16GHz	ATI Radeon 896MB	1year (Easy protect)
Asus	**F80**	3199	14.1"	Home Premium Built in webcam	250 GB	3GB after upgrade	2 Duo P7350 2.0 GHz	ATI Radeon HD3470 256MB	1 year
Compaq	**CQ40**	2299	14.1"	Home Premium	320 GB	1.24GB DDR2	2.1GHz	ATI Radeon HD3450 256MB	1 year
Acer	**Aspire 4935G**	2999	14"	Home Premium	250 GB	2GB DDR2	P8400 2.26GHz	NVIDIA 9300M 2303MB	1year

7.0 Recommended Top Laptop Brands and Why?

Types	Brands	Model	Why
Cheap Laptops	Acer	Aspire One	- equipped with single-core processors like the Intel Celeron - **Netbook range** use for simple tasks like web browsing and office applications - A small form factor (If you need better multi-tasking capabilities and performance, it's generally worth stepping up to an affordable dual-core laptop)
	Dell	Inspiron Mini 9	
	MSI	Wind U100	
	Asus	EeePC 4G,	
	Lenovo	S10	
Gaming Laptops	Alienware	M15x	- The first thing to look for is a discrete graphics card from ATI or Nvidia - Integrated varieties such as Intel's GMA are very common, cost-effective and power efficient, but practically useless for modern 3D games.
	HP Pavilion	Pavilion HDX 16t	
	Alienware Area	51 m9750	
	Asus	G50vt- X1	
	HP Pavilion	HDX Dragon	

Types	Brands	Model	Why
Business Laptops	Lenovo	x200	• Best low-key design, durable build quality and lack of entertainment features such as discrete (gaming) GPUs and Blu-Ray players.
	Lenovo	ThinkPad X301	• Build quality rather than design is often the determining factor for businesses of any size.
	Toshiba	Satellite Pro L350	
	Lenovo Thinkpad	T400	• Laptops are rapidly replacing traditional desktop PCs in the business segment, and a common sight in offices around the world is 14- or 15-inch laptop
	Fujitsu	Lifebook E8410	
	HP Compaq		
	Dell Latitude		
Ultraportable Laptops	Lenovo	x200	• small and lightweight laptops,
	MSI Wind	U100	• usually with a screen size of 12 inches or less
	Lenovo	ThinkPad X301	• weigh 3 pounds or less, although some 13-inch laptops may also be categorized as ultraportable.
	Lenovo	ideapad U110	• have longer battery life (~5+ hours) due to the common usage of lower voltage processors.
			• Thin-and-light laptops are typically more expensive than their mainstream-sized counterparts, with a notable exception of Netbooks – small and inexpensive computers with Linux or Windows XP that run on Intel Atom CPUs.
			(less powerful than larger ones because of their iniaturized hardware, but that's a compromise you'll have to live with for excellent mobility.)

8.0 Conclusions

- There are varying performance which affect the work tasks from different brands and types of laptop.
- I came to a conclusion that cost is a deciding factor when you shop around for a new laptop for most people.
- Just focusing on the price tag when you buy a laptop computer is often misleading, however, as a slightly more expensive machine can offer much better value for the money in terms of performance and life span/durability.
- To choose the best laptop, you need to have the ability to connect to the Internet and company networks in a variety of methods and have a laptop capable of undertaking your daily work tasks.
- Evaluate the tasks you perform and compare them against the laptop features to ensure you get the right laptop.
- Acer and Compaq cost cheaper compared to other brands of laptop.
- Most affordable people choose Fujitsu, Toshiba or Hp as suggested that the laptops can be best, luxury and leading innovation brands of laptop.

Bibliography

http://www.techterms.com/definition/laptop
http://aptoplogic.com/resources/glossary
http://inventors.about.com/library/inventors/bllaptop
http://www.xomba.com/advantages_and_disadvantages_of_a_laptop
http://www.xomba.com/best_laptops_for_high_school_students