NAMA KURSUS : LANGUAGE AND ICT

KOD KURSUS : BBI 3423
KREDIT : 3(2+1)
JPP : 122 jam
PRASYARAT : TIADA

OBJEKTIF : By the end of the course, students will be able to:

1. discuss the relationship between developments in ICT and language (C4),
2. search for, manage and communicate information using computer technology (C5, A4),
3. evaluate language development sites and software (C6), and
4. deliver multimedia presentations using appropriate language (P5, CS).

SINOPSIS : This course traces developments in ICT and corresponding developments in language and language use. It examines the nature and social dimension of ICT language, and discusses the features of good language development websites and software. The course involves using ICT to gather, manage and communicate information, as well as to create effective multimedia presentations.


KANDUNGAN : TAJUK

KULIAH

1. Relationship between ICT and language
   • Role of language in ICT
   • Role of ICT in language development
   • Synchronous and asynchronous communication

JAM : 2
### KANDUNGAN

<table>
<thead>
<tr>
<th>TAJUK</th>
<th>JAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identifying types of computer hardware and software</td>
<td>2</td>
</tr>
<tr>
<td>2. Online collaborative activity: introduction to online forums and discussions</td>
<td>1</td>
</tr>
<tr>
<td>3. Examining language use in online social forums</td>
<td>1</td>
</tr>
<tr>
<td>4. Sourcing and managing language materials from online domains</td>
<td>2</td>
</tr>
<tr>
<td>5. Evaluating CALL software</td>
<td>1</td>
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<tr>
<td>6. Evaluating websites</td>
<td>1</td>
</tr>
<tr>
<td>7. Creating Web pages: organising and displaying language materials</td>
<td>2</td>
</tr>
<tr>
<td>8. Creating multimedia presentations</td>
<td>4</td>
</tr>
</tbody>
</table>

### PENILAIAN

- Kerja Kursus
  - Tugasan 1 – 20%
  - Tugasan 2 – 20%
- Peperiksaan Pertengahan - 30%
  - Jenis soalan – MCQ dan soalan pendek
  - Jangkaan jumlah soalan –MCQ dan soalan pendek
  - Anggaran jangkamasa – 1 jam
  - Unit-unit terlibat: 1 – 3
- Peperiksaan Akhir - 30%
  - Jenis soalan – MCQ dan soalan pendek
  - Jangkaan jumlah soalan – 30 MCQ, 10 soalan pendek
  - Anggaran jangkamasa – 1 jam 30 minit
  - Unit-unit terlibat: 4 – 8
Role of the Computer in ICT & Multimedia

- Communication: multimedia use in ICT
- Store and distribute software/programmes
- Disseminate information globally: Internet

ICT Texts (Hall)

- Language used in:
  - Communication, e.g., Internet advertising, business letters
  - Research, e.g., reports, articles, news reports
  - Education: CMC, e.g., lecture notes, video conferencing, online conference classes

Role of Language in ICT & Multimedia

- Language plays central role in:
  - Constructing ICT texts
  - Writing computer programmes

ICT Texts (Hall)

- Social interaction:
  - Synchronous: real-time, e.g., IRCs
  - Asynchronous: e.g., e-mail
**USES of the COMPUTER**

**Uses of computers**

- Computers are used where
  - there is a lot of data to be manipulated
  - complex tasks must be managed
  - there is a need for real-time access to information from geographically distant locations

**Computers in the office**

- Management of records
- Analysis of data
- Preparation of documents (reports, letters, etc.)
- Management of information (e.g., adding, updating, deleting information and retrieving information)

**Advantages of using computers to perform office tasks (1)**

- Computer records can be
  - rapidly searched to retrieve information
  - accessed without human assistance (e.g., staff can retrieve information directly from central records using own office computers, without requiring someone else to gather and copy the appropriate data
  - easily stored and archived (computer records usually take up less space than paper records)

**Advantages of using computers to perform office tasks (2)**

- Computer data can be
  - processed to automatically generate reports (such as a list of all unpaid bills)
  - readily fed to other computer systems (that is, once the information is in electronic form, it can be readily used by any computer program for various purposes, such as analysis)

**Computers in industry**

- Most important uses of computers is in
  - product development (Computer Aided Design, CAD)
  - manufacturing control (Computer Aided Manufacturing, CAM)
Computers in Retailing

- Check-out machines can scan goods and add up cost.
- Check-out computers may report directly to a central computer that controls the stock room, informing retailers when the supplies of a particular product are low.
- Stock-room computers may send an order to the appropriate manufacturer.
- Charge cards similar to ATM cards can be used to authorize direct payment from the customers' bank accounts.

Computers in Education

- Computers are also widely used in education for:
  - Administration
  - Teaching
THE COMPUTER

4 basic functions
- Input
- Processing
- Output
- Storage

Hardware

The computer
- An integrated unit
- Most basic collection includes a
  - CPU (Central Processing Unit)
  - Monitor (output device)
  - Keyboard (input device)
  - Mouse (input device)

The CPU
- May be housed in
  - a rectangular box: "Desktop Case"
  - a long upright box: "Tower Case"
- Term is often used to refer to the whole collection of electronics inside the box

The monitor
- The window that lets the user see what the computer is doing - it provides the interface between user and computer
Useful computer terms (3)

- **Modem**: A telecommunications peripheral device that allows computers to communicate with one another via conventional telephone lines. Rated by their speed in moving data from the computer to the telephone line - speed measured in bits per second (bps). Standard modern modems are rated at 28,600 bps, 33,600 bps and 56,400 bps.

Useful computer terms (4)

- **Motherboard**: The circuit board on which most of the major electronic components are situated. Most manufacturers integrate cable attachment ports on the back-end of the motherboard. They also include slots so that owners can add their own cable attachment ports.

Useful computer terms (5)

- **Network Card**: A card that can be installed in one of the motherboard slots to give the computer the ability to talk to other computers with similar cards. A collection of similarly equipped computers connected by specially designed cables is known as a network. The mechanism (including languages and protocols) used to communicate on a network are varied.

Useful computer terms (6)

- **Pentiums**: Faster, larger CPU devices that are designed to allow more computing instructions to occur per second. Most computers manufactured in the past 10 years contain this device.

Useful computer terms (7)

- **RAM**: This acronym stands for Random Access Memory. RAM is commonly called "memory". Memory is measured in megabytes (MB) and usually comes in multiples of 2 or 4, e.g., 32 MB, 64MB, 128MB, 512 MB of RAM.

Software (Programmes)

- **System programmes**
- **Application programmes**
The Computer: A Digital Tool

The computer

A computer is a computationally complete system - capable of solving all of the problems that can be solved algorithmically. To be practically applicable, however, it not only has to be complete, but to be fast and reliable as well. The electronic computer serves this purpose by means of digital technology.

Digital Technology

- Based upon bistable electronic components
- Always in 1 of 2 states: conventional to represent these states using digits 0 and 1
- Relationship between electronic components and the binary number system.

Binary system (1)

- Uses only two digits: 0 and 1, to represent numbers.
- Larger numbers are represented as sequences of digits, in which each position in the sequence is associated with a different weight.

Binary system (2)

- This sequence of digits 10100011 represents the number 163:
  - Position: 7 6 5 4 3 2 1 0
  - Weight: 128 64 32 16 8 4 2 1
  - Value: 1 0 1 0 0 0 1 1
  - Digit sequence: 10100011
  - Value of digit sequence: \(128 + 0 + 32 + 0 + 0 + 0 + 2 + 1 = 163\)

Binary system (3)

A single binary digit is called a bit. In practice, the circuits of contemporary computers are commonly based upon sequences of 8 bits, called bytes. The largest value that can be represented by a single byte is 255 (digit sequence: 11111111).

\[11111111 = 2^7 + 2^6 + 2^5 + 2^4 + 2^3 + 2^2 + 2^1 + 2^0 = 2^8 - 1\]
Data storage on a disc

- A CD-ROM stores data in pits and lands:
  
  ![CD Surface Diagram]
  
- A pit disperses light
- A land reflects light
- Light reflectability forms the binary digits 1 and 0
- A computer needs to process data
- The more data, the more pits and lands

Advantages of CD-ROM

- Availability of large installed-base – easy distribution
- Large storage capacity – average CD-ROM holds 650 MB of data (~470 1.44 MB floppy disks)
- Able to play audio and video
- Read-only medium: data can be read, not written to
  
  - 25-40 years life
  - Cannot be erased
  - Durable – lifespan of 100 years
  - Cannot ‘crash’ like hard drive – surface does not wear

Disadvantages of CD-ROM

- Can only read data – cannot be updated or changed
- Duplication: copies will contain same (unerasable) problems
- 'Coasters' – editing and testing important
- Slow access time (compared to hard drive)
GUIDELINES FOR DESIGNING AND PRODUCING SLIDES

Elements to consider
- Purpose of presentation
- Audience
- Setting – presentation venue
- Content

Elements to work on
- Layout
- Design template
- Colours
- Fonts
- Transition effects
- LANGUAGE
- Sound effects

Layout
- Title slide
- Bulleted lists
- Chart/graph slides
- Blank slides

TITLE SLIDE
This is usually the first slide in the presentation.

Bulleted lists (1)
- Item 1
- Item 2
- Item 3
Colour schemes

Dark text on light background

Light text on dark background

Fonts (formal)
- Tahoma
- Times New Roman
- Arial (Black)
- Bookman Old Style
- Impact

Fonts (Informal)
- Caramond Italic
- Lucida Handwriting
- New York
- Microtype Corsiva
- Comic Sans MC

Font size
- At least 18-point
- Should vary for different levels:
  > Title
  > Sub-title(s)

Language
- Present key ideas, avoid excessive detail
- Use key words
- Maintain parallelism in
  > slides
  > bulleted lists
Parallelism in slides

Maintain parallelism in
- design
- linguistic structure

Parallelism in linguistic structure (1)

Repetition of linguistic patterns
- Good mothers, great moons
  - (adjective + noun, adjective + noun)
- Cows moo and horses neigh
  - (noun + verb, noun + verb)

Parallelism in linguistic structure (2)

- Laugh and the whole world laughs with you.
  - Cry and you cry alone
  - Imperative
  - Verb + conjunction + noun (phrase) + verb + adverbial phrase

Linguistic parallelism in bulleted lists

- Present key ideas,
  - avoid excessive detail
- Use key words
- Maintain parallelism in
  - titles
  - bulleted lists
  - Verb or noun
  - noun (phrase)
COMPUTER-MEDIATED DISCOURSE

- Computer-mediated communication (CMC)
- Computer-mediated discourse – considers context, social relationships, underlying ideologies, values, biases, etc.
- Chat rooms – real-time, synchronous
- Online courses and e-mail – asynchronous
- Computer conferencing

COMPUTER CONFERENCING

- Features, as described by Eastmond (1992), Fiorini (1989), Karnsim, 1990, and Hitlm (1990):
  - Asynchronicity
  - Structured communications
  - Multiple sites
  - Text-based environment
  - Interactivity
  - Group involvement
LANGUAGE DEVELOPMENT AND EVOLUTION

- Nature of text: "written talk" (Tornow, 1997)
- Self-representation
- Development of Social Presence

LANGUAGE DEVELOPMENT AND EVOLUTION (continued)

CMC users develop an ability to express missing nonverbal cues in written form
- Emoticons :-( :-(
- Emoting in text - using a word or phrase enclosed in angle-brackets or asterisks
  <sigh>, <grin>, <mademad!!!>,

LANGUAGE DEVELOPMENT AND EVOLUTION (continued)

- Acronyms (LOL, ROTFL)
- Verbalized pauses for thought
  - "<tiptoeing in quietly>, and
  - "<??? > scratching my head!
- Playfulness and humour
- Displaying shared interest
COMPUTER-ASSISTED
LANGUAGE LEARNING
(CALL)

History of CALL
3 three main stages since 1960s
- Behaviouristic CALL
- Communicative CALL
- Integrative CALL

Behaviouristic CALL
(1950s – 1970s)
Computer: mechanical tutor – never tired, judgmental, allowed individual pace
Informed by behaviourist learning model
- Repetitive language drills drill and practice
- Grammatical explanations
- Translation tests at various intervals

Communicative CALL
(1970s - 1980s) (1)
Personal computers - greater possibilities for individual work
- Cognitive theories: learning through discovery, expression, and development
- Focus more on using forms than on the forms themselves
- Implicit rather explicit grammar instruction
- Generation of original utterances rather than prefabricated language

Communicative CALL (2)
- Predominant or exclusive use of target language
- Text reconstruction programmes (students rearrange words and texts to discover patterns of language and meaning)
- Simulations (stimulated discussion and discovery)
- Focus not what students did with machine, but with each other

Integrative CALL
(late 1980s till now) (1)
Criticism of Communicative CALL: computer used in ad hoc, disconnected fashion – need to
- Integrate various skills (e.g., listening, speaking, reading, and writing)
- Integrate technology more fully into the language learning process
**Designing Web-based Lessons**

- Decide how to organise content
  - By topic area
  - Personal Information
  - Maps and directions
  - Employment
  - By language item
  - Noun phrases
  - Adjective
  - Passive voice

**Designing Web-based Lessons**

- Match content with language objectives
  - Often, topic areas complement language objectives – a relationship between topics and elements of language, e.g. a unit on daily routine necessitates the use of the present tense
  - Should be derived from students' assessed needs
  - Low-level: names
  - Using the web to be
  - Using subject pronouns
  - High-level: names
  - Preparing answers for possible interview questions
  - Nounphrases

**Designing Web-based Lessons**

- Define language objectives
  - Students will be able to ask and answer questions concerning geographical information
  - Students will be able to use the comparative and superlative to compare the different countries represented in the classroom

**Designing Web-based Lessons**

- Incorporating Computer Skills
  - Elementary word processing
  - Fundamentals of email
  - Basic Internet browsing and searching
  - Sequence the introduction of computer skills
  - Introduce skills according to difficulty and necessarily: easier skills before more difficult skills
  - Certain skills prerequisites to other skills
  - Often, computer objectives in Web-based CALL lessons are to reinforce and refine existing skills

**Example**

- Content Area
  - Getting to know each other (personal information)
  - Geography
History of Computers

Early Computing Machines and Inventors

The abacus, a device that allows users to make computations using a system of sliding beads arranged on a rack, may be considered the first computer. It emerged about 5,000 years ago in Asia Minor, popularly used by Chinese traders for trading transactions. After the abacus, several versions of a calculator were invented and refined, but it was in 1820 that mechanical calculators gained widespread use. Charles Xavier Thomas de Colmar, a Frenchman, invented the arithmometer, a machine that could perform the four basic arithmetic functions: add, subtract, multiply and divide. Because of its enhanced versatility, the arithmometer was widely used up until the First World War.

However, the real beginnings of computers as we know them today, is associated with an English mathematics professor, Charles Babbage (1791-1871) – the Father of the Computer. Out of frustration at the many errors he found while examining calculations for the Royal Astronomical Society, Babbage declared, “I wish to God these calculations had been performed by steam!” With those words, he began the automation of computers. Babbage noticed that machines and mathematics could work well together because machines were best at performing tasks repeatedly without mistakes, and mathematics often required the simple repetition of steps. Babbage’s first attempt at applying the ability of machines to the needs of mathematics was in 1822, when he began to invent a machine to perform differential equations, called a Difference Engine. The steam-powered machine would have a stored programme and could perform calculations and print the results automatically. After working on the Difference Engine for 10 years, Babbage had a sudden inspiration to begin work on the first general-purpose computer, which he called the Analytical Engine. He was assisted by Augusta Ada King, the Countess of Lovelace (1815–1842). She was one of the few people who understood the Engine’s design as well as Babbage, and she created the instruction routines to be fed into the computer, making her the first female computer programmer.

Although Babbage’s steam-powered Engine was ultimately never constructed, and though it may seem primitive by today’s standards, it outlined the basic elements of a modern general-purpose computer. Consisting of over 50,000 components, the basic design of the Analytical Engine included input devices in the form of perforated cards containing operating instructions. It could store in memory 1,000 numbers of up to 50 decimal digits long. It also contained a control unit that allowed processing instructions in any sequence, and output devices to produce printed results. Thus, it could perform the four basic operations of the modern computer and was a breakthrough concept.

In 1889, an American inventor, Herman Hollerith (1860-1929), was commissioned by the U.S. Government to find a faster way to compute the U.S. census. The previous census in 1880 had taken nearly seven years to complete, with a rapidly expanding population, they feared it would take 10 years to count the latest census. Hollerith used cards to store data information which he fed into a machine that compiled the results mechanically. With his machine, census takers compiled their results in just six weeks with. In addition to their speed, the punch cards served as a storage method for data, and they helped reduce computational errors. Subsequently, Hollerith brought his punch card reader into the business world, founding Tabulating Machine Company in 1896. In 1924, after a series of mergers, it became the company that most of you will be now familiar with; International Business Machines or IBM. Other companies continued to manufacture different machines.

The early machines were large and cumbersome, making use of hundreds of gears and shafts to represent numbers and their various relationships to each other. To eliminate this bulkiness, John V. Atanasoff and his graduate student, Clifford Berry, envisioned an all-electronic computer that applied Boolean algebra to computer circuits. Their approach was based on the ideas of George Boole (1815–1864) who had clarified the binary system of algebra, which stated that any mathematical equations could be stated simply as either true or false. By extending this concept to electronic circuits in the form of on or off, Atanasoff and Berry
Throughout the early 1960's, there were a number of commercially successful second-generation computers used in business, universities, and government. They contained all the components we associate with the modern-day computer: printers, tape storage, disk storage, memory, operating systems, and stored programmes. By 1965, most large business performed routine financial information using second-generation computers.

Two developments finally made computers cost effective and practical enough for business use: the stored programme and programming language. The stored programme concept meant that instructions to run a computer for a specific function (known as a programme) were held inside the computer's memory, and could quickly be replaced by a different set of instructions for a different function. For example, a computer could print letters, and minutes later design products or calculate overtime pay. High-level languages such as COBOL (Common Business-Oriented Language) and FORTRAN (Formula Translator) came into common use during this time. These languages replaced cumbersome binary machine code with words, sentences, and mathematical formulas, making it much easier to programme a computer. Several types of careers (programmer, analyst, and computer systems expert) and the entire software industry began with this generation of computers.

Third Generation Computers (1964-1971)

Although the transistors used in second-generation computers were much better than vacuum tubes, they still generated a great deal of heat, which damaged the computer's sensitive internal parts. Jack Kilby, an engineer with Texas Instruments, and Robert Noyce eliminated this problem by developing the integrated circuit (IC) in 1958, using quartz rock. The IC - or the Chip - combined three electronic components onto a small silicon disc, which was made from quartz. Scientists later managed to fit even more components on a single chip, called a semiconductor. Consequently, computers became ever smaller as more components were squeezed onto the chip. Another useful third-generation development was the use of an operating system that allowed machines to run many different programmes at once with a central programme that monitored and coordinated the computer's memory. The concept of 'windows' was introduced at this time, as well as the mouse, a device that imitated the movement of one's hand on the computer screen and so named because of the tail that came out at one end.

Fourth Generation (1971-Present)

Computers began to get smaller and smaller. Large-scale integration (LSI) allowed hundreds of components to be fit onto one chip. By the 1980's, very large scale integration (VLSI) could squeeze hundreds of thousands of components onto a chip, and Ultra-large scale integration (ULSI) later increased that number into the millions. The ability to fit so much onto an area about the size of a ten sen coin helped diminish the size and price of computers. It also increased the power, efficiency and reliability of the machines. In 1971, the Intel 4004 chip, took the integrated circuit one step further by locating all the components of a computer (central processing unit, memory, and input and output controls) on a very small chip. Prior to this, the IC had had to be manufactured to fit a special purpose, but now one microprocessor could be manufactured and then programmed to meet any number of demands. Soon, microprocessors were used in everyday household items such as TV sets, microwave ovens, and cars.

By the mid-1970's, computer manufacturers brought computers to general consumers. In 1981, IBM introduced its personal computer (PC) for use in the home, office and schools. Clones of the IBM PC made the personal computer even more affordable. IBM's PC received direct competition from Apple's Macintosh line, introduced in 1984. During this generation, computers continued their trend toward a smaller size, working their way down from desktop to laptop computers (which could fit inside a briefcase) to palmtop (able to fit inside a breast pocket).

These minicomputers came complete with user-friendly software packages that offered even non-technical users a variety of useful applications, most popularly word processing and spreadsheet programmes.
HISTORY OF THE INTERNET

Some sources
Summary of information obtained from Websites such as:
- Hobbes' Internet Timeline
- What is the Internet?
- History of Internet
- http://www.isoc.org/internet/history/

Beginnings of communication revolution
- 1835: Telegraph invented, Morse Code developed
- 1858-1866: Transatlantic cables laid, allowing direct and instantaneous communication across the Atlantic.
- 1876: Telephone invented by Alexander Graham Bell.

Question
How is each of these inventions/developments relevant to the development of the Internet?
- Telegraph
- Transatlantic cables
- Telephone

Answer (1)
- Morse Code uses a system of dots and dashes, particular sequences of dots and dashes represent letters of the alphabet, much as digital communication uses series of digits (0 and 1) based on the binary system.

Answer (2)
- Transatlantic cables today connect all continents and are still a main hub of telecommunications.
Commercialisation of the Internet

- 1974: Bolt, Beranek and Newman open Telnet (Telnet) - first commercial version and public data service of the ARPANET.
- 1974 – 1981: ARPANET moves away from military/research roots, general public gets first hint of how networked computers can be used in daily life.
- 1976: Queen Elizabeth goes online with the first royal email message.

Public groups

- 1979: Newsgroups and listservs are born - Users from all over the world join these discussion groups to talk about the Net, politics, religion and thousands of other subjects.
- The first MUD (MultiUser Dungeon) interactive multi-user sites are introduced, making it possible for the development of interactive adventure games, board games, and rich and detailed databases.

Internet language

- 1982: The term Internet is used for the first time.
- 1982 – 1983: TCP/IP becomes the universal language of the Internet - for the first time, the loose collection of networks that make up the ARPANET is seen as an Internet – a connected set of networks (specifically those using TCP/IP), and the Internet as we know it today is born.

Development of Personal Computer industry

Mid-1980s:
- A boom in the personal computer (PC)
- Combination of inexpensive desktop machines and powerful, network-ready servers allows many companies to join the Internet for the first time.
- Corporations begin to use the Internet to communicate with each other and with their customers.

Development of Names

- 1983 - 1984
  - Number of Internet hosts breaks 1,000 — difficult to remember exact paths
  - Domain Name Server (DNS) introduced. Instead of a domain number like 123.456.789.10, it is easier to remember something like www.myuniversity.mydept.myemail.mycountry (e.g., www.cs.cf.ac.uk).

Development of Terms

- 1984: William Gibson coins the term "cyberspace" in his novel Neuromancer.
- 1988 - 1989:
  - Internet Chat Relay (IRC) developed
  - Privacy and security in digital world threatened
  - New words, such as hacker, cracker and electronic break-in, are coined
- Nov. 1, 1988: malicious programme called “Internet Worm” unleashed, temporarily disabling approximately 6,000 of the 60,000 Internet hosts
World Internet Usage (1)

http://www.internetworldstats.com/stats.htm

<table>
<thead>
<tr>
<th>Region</th>
<th>Internet Users</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>161,201,000</td>
<td>18.6%</td>
</tr>
<tr>
<td>Asia</td>
<td>1,095,000,000</td>
<td>31.2%</td>
</tr>
<tr>
<td>Europe</td>
<td>738,800,000</td>
<td>22.4%</td>
</tr>
<tr>
<td>Middle East</td>
<td>210,100,000</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

(last updated 29/3/2004)

1 December 2004

World Internet Usage (2)

http://www.internetworldstats.com/stats.htm

<table>
<thead>
<tr>
<th>Region</th>
<th>Internet Users</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>125,194,100</td>
<td>20.5%</td>
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<tr>
<td>Asia</td>
<td>1,080,000,000</td>
<td>22.5%</td>
</tr>
<tr>
<td>Europe</td>
<td>706,600,000</td>
<td>37.1%</td>
</tr>
<tr>
<td>Middle East</td>
<td>201,000,000</td>
<td>38.4%</td>
</tr>
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(last updated 20/3/2004)

1 December 2004

Internet Usage in Malaysia

http://www.internetworldstats.com/stats.htm

<table>
<thead>
<tr>
<th>Country</th>
<th>Internet Users</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>2,231,000</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

(last updated 20/3/2004)

1 December 2004

COUNTRIES WITH HIGHEST NUMBER OF INTERNET USERS

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Internet Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>125,194,100</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
<td>20.5%</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>4.3%</td>
</tr>
<tr>
<td>4</td>
<td>Germany</td>
<td>4.9%</td>
</tr>
<tr>
<td>5</td>
<td>United Kingdom</td>
<td>4.4%</td>
</tr>
<tr>
<td>6</td>
<td>Korea (South)</td>
<td>3.8%</td>
</tr>
<tr>
<td>7</td>
<td>India</td>
<td>2.2%</td>
</tr>
<tr>
<td>8</td>
<td>Malaysia</td>
<td>1.1%</td>
</tr>
<tr>
<td>9</td>
<td>Indonesia</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

(last updated 20/3/2004)

1 December 2004

Additional slides

How does the evolution of the Internet impact on language and communication?
Examples:
1. E-mails
2. ICQ / IRC
3. Electronic Bulletin Board
4. Weblog
5. Wiki