

# கானானியம்

Kananiyam, a newsletter of the Computer Society,  
University of Jaffna.

ஆவணி 1999

எப்பொருள் யார்யார் வாய்க் கேட்டிலும் அப்பொருள் மெய்ப்பொருள் காண்பது அறிவு

## எம்மொழியும் சம்மதம்

கணவியாளது அடிப்படையில் இரும் எண்களையே பயன்படுத்தக்கூடியது. எண்கள், எழுத்துக்களிற்கு குறியீடு எண்கள் நிர்ணயிக்கப்பட்டு இக்குறியீடு எண்களின் இரும் வடிவினை (Binary format) கணவிகள் உபயோகிக்கின்றன. பல குறியீடு நிர்ணயக்கள் தற்போது பாவனையில் உள்ள ASCII (American Standard Code For Information Interchange), EBCDIC (Extended Binary Code for Decimal Interchange Code) ஆகியவை பொதுவான குறியீடு முறைகளாகும். இவற்றில் ஆங்கில மொழிக்கான எழுத்துக்களிற்கும் (a, b, c... z, A, B... Z) எண்களிற்கும் (0, 1, 2.....9) மற்றும் சில சிறப்பு குறியிருக்களிற்குமே குறியீடு என் நிர்ணயிக்கப்பட்டுள்ளது. ஏனைய மொழிகள் இவற்றினை அடிப்படையாகக் கொண்டே பயன்படுத்தப்படுகின்றன. உதாரணமாக “கணவி” என்ற சொல்லினை “fzdp” என்ற ஆங்கில எழுத்து கோவையின் மூலமே உள்ளிடு செய்யலாம். இவ் ஆங்கில எழுத்துக் கோருவையின் இரும் வடிவினையே கணவி பயன்படுத்தும் சேமிக்கும். இதனால் வரிசெப்படுத்தல் (Sorting), தேடுதல் (Searching), தகவல் சேகரிப்பு (Data collection), தகவல் பரிமாற்றம் (Data interchange) போன்ற முக்கிய செயற்பாடுகளை ஆங்கில மொழியில் மட்டுமே மேற்கொள்ளக்கூடியதாகவுள்ளது.

இக்குறைபாடுகளை நீக்கி உலகில் உள்ள அனைத்து மொழி எழுத்துக்களிற்கும் ஒரு பொதுவான எண் குறியீடுகளை வழங்கும் நோக்கோடு Unicode என்ற குறியீடு முறையானது உருவாகி வருகின்றது. இம் முறையினால் உலகில் கணவியின் பயன்பாடு பஸ்டங்கு அதிகரிக்கும் என எதிர்பார்க்கப்படுகின்றது.

உலகில் உள்ள அத்தனை மொழிகளையும் உள்ளடக்கிய குறியீடு ஒன்றை தயாரிப்பதற்காக Unicode Consortium என்ற அமைப்பு தொடங்கப்பட்டுள்ளது. Unicode என்ற திட்டம் 1988<sup>th</sup> ஆண்டு முன்வைக்கப்பட்டது. Unicode Consortium 1991<sup>th</sup> ஆண்டு ஜனவரியில் ஆரம்பிக்கப்பட்டது. இவ்வைமைப்பு ஒவ்வொரு மொழியையும் கவனமாக ஆராய்ந்து அம்மொழி வல்லுனர்களுடன் தொடர்பு கொண்டு சரியான முறையில் Unicode குறியிடுகளை நிர்ணயித்து வருகின்றது.

ஒரு மொழிக்குரிப் எழுத்து வடிவம் வரிவடிவம் எண்படுகிறது. தமிழ்மொழி வரிவடிவம், தேவனகிரி வரிவடிவம் என்பன தமிழ் மொழிக்குரிய வரிவடிவங்கள். ஆங்கில மொழி எழுத்துக்கள் இலத்தின் வரிவடிவம் ஆகும். ஆனால் மொழிகளும் வரிவடிவங்களும் இரு வேறு பிரிவுகளாக உள்ளன. ஒரு மொழி பல வரிவடிவங்களைக் கொண்டிருப்பதும் உண்டு, ஒரு வரிவடிவம் பல மொழிகளிற்கு பொதுவாக இருப்பதும் உண்டு. உதாரணமாக இலத்தின் வரிவடிவை நாற்றுக்கணக்கான மொழிகள் பயன்படுத்துகின்றன. Unicode மொழிக்குரியதன்று வரிவடிவங்களிற்கே உரியது. அனைத்து

## Message from the Patron

I am happy to learn that the Computer Society of our university has decided to publish a news letter with a view to disseminating knowledge about computers and their applications. The news letter is also to contain information about the activities of the society for the benefit of its members and others.

The need for promoting computer knowledge among the student community at university and school levels can hardly be emphasized. Computers have had a major beneficial impact on all human activities in the modern world and are certain to have a greater impact in the future. A working knowledge of computers is likely to become an essential requirement for employment in all major sectors in the future. There is a vast amount of literature and information on this fast developing field which do not reach our students at present because of the prevailing situation here. We do not even have adequate e-mail and Internet facilities whereas such facilities are commonplace in other countries and some other parts of this country.

Under these conditions the efforts of the Computer Society to disseminate computer knowledge through its diverse activities are commendable and I wish the Society success in its endeavor.

Prof.K.Kunaratnam.

வரிவடிவங்களிற்கும் குறியீடு நிர்ணயிக்கப்பட்டு வருகின்றது.

தற்போது Unicode Standard Version 2.1 என்ற பதிப்பு வெளியிடப்பட்டுள்ளது. இதில் தமிழ், சிங்களம் உட்பட அமெரிக்கா, ஜீரோப்பா, மத்திய கிழக்கு, ஆபிரிக்கா, இந்தியா, ஆசிய மற்றும் பக்பிக் வட்டகைகளை சேர்ந்த பிரதான மொழிகளின் 38,887 வரிவடிவங்களிற்கு குறியீடு நிர்ணயிக்கப்பட்டுள்ளது. ஏனைய மொழிகளையும் உள்ளடக்கும் பணி தொடர்ந்து நடைபெற்று வருகின்றது.

மேலும் விபரங்களிற்கு <http://WWW.unicode.org> என்ற வெப் தளத்தை பார்க்கவும். \*

# LINUX

## Is this the future operating system for PC's?

B.Subashini 3<sup>rd</sup> Year-A, Faculty of Science

Nowadays most of us are using Windows 95(98/NT) as our operating system. Windows 95 was introduced to the computer world in august 1995, and created a new generation of operating systems for personal computers. But before this there was an operating system which had been developed in 1991 based on UNIX operating system with some modifications . That is the one now becoming a challenging operating system not only for Windows 95 but also for Windows NT is LINUX.

In 1991 LINUN TORVALDS a Student of University of HELSINKI Finland intended to make an operating system based on UNIX that would eventually replace DOS and Windows. He wrote his own operating system called LINUX version 1.0 and introduced it in 1994. Since then LINUX operating system has become very popular.

### Special Features of LINUX

1. Multitasking: LINUX can do several tasks at the same time.
2. Multi user: Multiple users can work with LINUX at a time .
3. Virtual Memory: LINUX uses a part of the hard disk as a Virtual Memory and store only most frequently used information in the RAM. It increases the speed of the operating system.
4. XWindows system,XWindows graphical user interface: Which is popular with UNIX based machines can now work with LINUX.
5. Networking: Since LINUX has the TCP/IP protocols connections, Network File System (NFS) and Network information system (NIS),it is possible to communicate between computer systems using an Ethernet card and can access Internet by connecting it to a modem.
6. System Security :Like UNIX, information can be stored safely in LINUX based systems.

LINUX attracts most of the users because the source codes are given with LINUX almost free of charge. It can be down loaded directly from the Internet. Therefore the users can modify the source code according to their needs. But still some companies charge for some versions of LINUX. Their charges differ according to the usage and the efficiency.

Some firms in America such as Redhat software,Walnut,Slackware,Calderasase, Deblan and craftworks distribute this operating system,application software and tools which work on this operating system for a nominal charge . Among these firms Slacwares system called Slacware LINUX 96 with many application software, Tools, Compilers, Xwindows Applications, Communication programs,Text editors,Games etc as its components.

LINUX operating system can run in any computer and in any platforms. For example LINUX can run in the old 386/486 Computers, Apple's Macintosh, Sun Micro system and SPARC Computers.

The stability of LINUX makes it a better server operating system and also acts as a tool for manufacturing and developing software. Since it is fast it is suitable for Multimedia Computers. The Special effects in the film "TITANIC" were created using LINUX operating system. Nowadays LINUX and Windows NT operating systems are the two main competitors in the Computer software market.

The latest version, LINUX 2.1.5 has all the features of other modern operating systems. It is used in space research, military, web servers and in several fields. LINUX accept XWindows as its GUI. LINUX can handle the file systems of the other modern operating systems, such as FAT of DOS, VFAT of Windows 95, HPFS of OS/2. Many of the software that run on DOS, Windows can run on LINUX also. The software such as "DOSEMU" and "wine" which run on LINUX are becoming very popular. For earlier versions of LINUX, only 150MB hard disk space and 2MB RAM were needed. But UNIX needs a minimum of 500MB hard disk space. The new version of LINUX however needs systems that have 386 on latter processors with 260MB hard disk space and 8MB RAM.

LINUX can run on DOS, DOS also can run on LINUX. To run DOS on the LINUX platform we have to run DOSEMU ( DOS Emulator for LINUX). If we run DOS on LINUX platform using the DOSEMU, we can use all the DOS applications such as Edit, Wordstar, Foxpro, Lotus 1-2-3 etc . Most of the application that run on Windows 3.X can run on LINUX using a software called wine. For example the software that run on Windows 3.X like

MS-Office, Lotus, Smartsuite, Solitaire can run on LINUX with the use of wine. Wine is compatible with 32 bit operating environment however, now it is capable of running only 16 bit windows Applications. Therefore we cannot run Windows 95 related applications using wine in LINUX. But software like Oracle, Power builder can run on LINUX using wine. Only the UNIX Versions of word perfect and Coral draw can run on LINUX and not the DOS versions. UNIX's popular VI Editor has been incorporated into all the versions of LINUX. Further language compilers such as Basic, C , C++ , Pascal, Fortran,

Ada and software like PERL, CGI Script, JAVA, X Windows builder can run on LINUX. There is software called Mac Executor, which is used to run the Mac related software in LINUX. All the mackintosh related software could be run on LINUX platform. Netscape Navigator has been introduced now and the Web browsers Arena, Lynn and Grill (which are used to browse through the Web pages) are available in the Computer Software market. Special features are being added to LINUX day by day. Thus, LINUX operating system posses a big challenge to other PC operating systems.♦

## கணனி அறிமுகம்

ச.கந்தன். 3<sup>o</sup> வருடம் A

கணனி ஓர் அறிவியற்மான சாதனம் என்பதையாவரும் அறிவோம். கணனியை நாம் மனித மூளையிடன் ஒப்பிடலாம். மனிதருளை செய்யும் பல செயல்களையும் கணனி செய்கின்றது மனித மூளையை விட மிக வேகமாகவும் துல்லியமாகவும் செய்கின்றது. ஆனால் மனித மூளை கணனியை விட உயாந்தது. ஏனெனில் மனித மூளையால் குயமாக சிந்திக்க இயலும், செயற்பட முடியும் ஆனால் கணனி மனிதனின் கட்டளைக்கலையைவே செயற்படும். எனவே கணனி தவறு செய்துவிட்டது எனக்கூறுவது பொருத்தமற்றதாகும்.

மனித மூளை தனக்கு தேவையான தகவல்களை கண், காது, தோல் போன்ற உறுப்புகளால் பார்த்தோ, கேட்டோ, உணர்தோ பெற்றுக் கொள்கின்றன. இதேபோல் கணனிக்கு தகவல்களை வழங்குவதற்கு பயன்படுத்தப்படுவன “உள்ளிட்டு சாதனங்கள்” (Input Devices) ஆகும். மூளையின் கட்டளைகளை நாம் கை, கால், வாய் என்பவற்றின் மூலம் செயற்படுத்துகின்றோம். கணனியானது தனது தகவல்களை வெளியிட “வெளியிட்டு சாதனங்கள்” (Output Devices) பயன்படுத்துகின்றது.

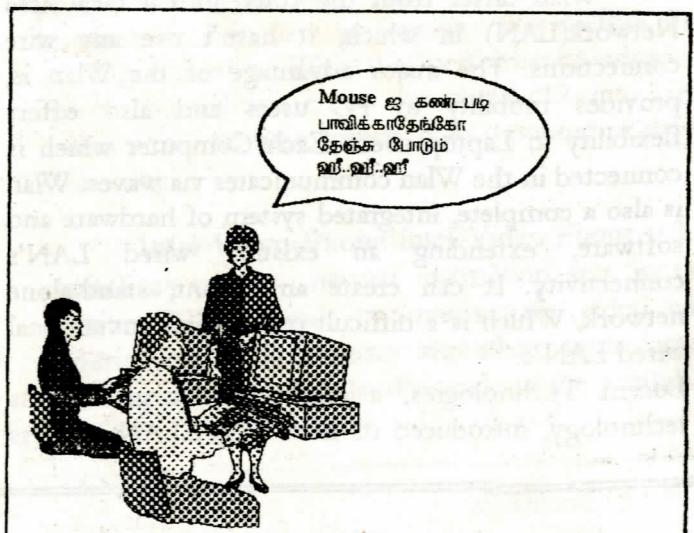
இங்கு முன்பே குறிப்பிட்டது போல் கணனி தனக்கிடப்பட்ட பக்கிகளை செல்வதே முடிப்பதற்கு கணனியை பயன்படுத்துவதே கணனி செய்யவேண்டிய பணி என்ன என்பதுபற்றி தெளிவாகவும் வரையறையாகவும் கணனிக்கு முன்பே அறிவியற்துவேண்டியது அவசியமாகும். இந்திலையில் கணனிக்கும், அதனை பயன்படுத்துவதுக்குமிடையிலே ஓர் தொட்டாடல் ஜாடகம் அதாவது ஓர் மொழி தேவை. இதன் அடிப்படையில் உருவாக்கப்பட்ட மொழிகளே “கணனிச் செயலொழுங்கு மொழிகள்”(Computer programming languages) ஆகும்.

கணனிக்கு தெரிந்த விடயம் 5V DC யும் 0V DC யும் ஆகும். இத்தன “ON”, “OFF” என்ற இரண்டு நிலைகளில் குறிக்கலாம். இந்த இரு நிலைகளையும் இரும் என் முறையில் (Binary number system) 0,1 ஆகிய இரு இலக்கங்களை பயன்படுத்தி குறிக்கலாம். இதில் 1 என்பது ON நிலையையும், 0 என்பது OFF நிலையையும் குறிக்கும். இந்த 0,1 ஆகியவற்றை மட்டும் பயன்படுத்தி எழுதும் மொழி “எந்தீர் மறை குறி”(Machine Language) என்படும்.

என்களை இரும் என் முறைக்கு மாற்றுவதன் மூலம் கணனிக்குத் தெரிந்த எந்தீர் மறை குறியில் எழுதலாம். ஆங்கில எழுத்துக்கள் மற்றும் +, -, = போன்ற குறியிடுகளை இரும் என்களாக மாற்றுவதற்கு ஒவ்வொர் எழுத்துக்கும் குறிப்பிட்டு என்கள் வழங்கப்பட்டுள்ளன. ASCII [American Standard Code for Information Interchange], EBCDIC

[Extended Binary Coded Decimal Interchange Code] போன்ற சில குறிப்பிட்டு முறைகள் நடைமுறையில் உள்ளன. எனவே இந்த 1,0 மட்டும் வைத்து எவ்விடயத்தையும் எழுதிவிடலாம். ஆனால் ஓர் மொழியில் உள்ள மொத்த எழுத்துக்கள் குறைவடைய சொல்லில் உள்ள எழுத்துக்களின் எண்ணிக்கை அதீர்க்கிறது. இதனால் எந்தீர் மறைக்குறியில் எழுதும் சொற்கள் நீளமானவைக் கிருக்கும். இதனால் ஆங்கில எழுத்தையும், இலக்கத்தையும் இரும் இலக்கத்துக்கு மாற்றுவதற்கு கடினமான பழுமையான பின்பற்ற வேண்டும். இதற்கு மாற்றுவதற்காக ஆங்கில மொழியில் சில கட்டளைகளைக்கொண்ட “சேர்பியற்றி மொழி” (Assembly Language) அறிமுகமானது.

சேர்ப்பியற்றி மொழி எந்தீர் மறைக்கிடப்பட்டிரும் எனிதாக இருந்தது. சேர்ப்பியற்றி மொழியை கணனிக்கு புரியக்கூடிய எந்தீர் மறை குறிக்கு மாற்றுவதற்கு சேர்ப்பியற்றி (Assembler) என்ற “மொழிபெயர்ப்பான்” பயன்படுத்தப்படுகின்றது. இந்த சேர்ப்பியற்றி மொழியிலும் பெரிய பணிகளுக்கான செய்விளாழுங்கினை அமைப்பது மிகவும் கடினமாகும். இக்குறைபாட்டினை நீவுத்தி செய்ய உருவான மொழிகளே “யார்கமொழிகள்” (High level Languages) இவற்றை எந்தீர் மறை குறிக்கு மாற்றுவதற்கு Compiler, Interpreter போன்றவை பயன்படுத்தப்படுகின்றன. பல தரப்பட்ட உயர்க்கணக்கள் மொழிகள் பாவனையில் உள்ளன. இவற்றில் தற்போது காட்சியிடப்படையிலான கணனி மொழிகளே (Visual Languages) பிரபல்யமாகிவருகின்றன.♦



# Collect your E-Mail in your Pocket

R.Sharmila second year, Faculty of Science.

Many people around the world depend on E-Mail to run their necessity. But they have got some difficulty to catch the E-Mail immediately at their busy world. A good solution for this problem was to find at this portable computer era, a service called 'Pocket Mail'.

Pocket Mail is an electronic device to catch the E-Mail on the fly. It allows the user to pickup messages from any telephone. The acoustic couplers were connected early mobile Computers to the phone System. The couplers are sound devices, they transfer modem tones into a telephone handset. But they are incompatible with today's laptop Modems.

An updated acoustic coupler from "Startup pocket science", is built into 15cm long, 9cm deep and 2cm thick.

Using this device to exchange mail is simple. You just dial the pocket Mail servers toll-free number, press button, and place the phone against a holder under the base of the pocket Mail device with series of sound of signals, the unit sends messages and retrieves Mail waiting on the server. The coupler adjusts to handle all variety of handsets other than Motorola MicroTac.

The first incarnation of the Pocket has a lot of drawbacks.

The displays manufactured by 'Sharp' and 'JVC' are

readable but small. Difficult to type on address list and entering message in the tiny keyboard. The main disadvantage is that the user can communicate only with Pocket Mail's servers; which means Mails have to be sent to an address at 'Pocket Mail.Com'.

Pocket Mail can collect Your messages from other accounts, only if the user's path of Mail through an Internet service provider otherwise the user will have to forward his/her message to the PocketMail account. Most systems can be set up to do this automatically.

Another type of drawback is that transmission is slow and memory is low about 128KB, and cannot read any attachments to the E-Mail the user gets. Anyhow, Pocket Mail is a useful tool for someone. Who needs read mail especially short messages anytime, anywhere and the technology has the potential to get a lot better.

Now cellular phones are introduced which are also capable of doing the work that a Pocket Mail device done. We can connect to Internet and download text based information such as news, weather forecast, stock market details, airline schedules etc, and view them in the display screen of the phone Nokia has introduced such a phone "Nokia 7110" which weights only 141g and can hold up to 1000 persons home address, office address and 5 telephone number in its memory. It can be used in 34 languages and have 35 type of ring tones.♦

## WAVE LOCAL AREA NETWORK (Wlan)

M.Sabesan 3<sup>rd</sup> Year-A Faculty of Science

Wlan differ from the conventional local area Network(LAN) in which, it hasn't use any wire connections. The major advantage of the Wlan is, provides mobility to PC users and also offers flexibility to Laptop users. Each Computer which is connected in the Wlan communicates via waves. Wlan is also a complete, integrated system of hardware and software, extending an existing wired LAN's connectivity. It can create an instant, stand-alone network, Which is a difficult process in conventional wired LAN's.

Lucent Technologies, a market leader in wireless technology, introduced its new Wavelan wireless

solution to Sri Lanka recently. The Minimum range of connectivity is an average 400ft in this system. This range can be extended by using an extra 'booster' interface card with Wlan, users can connect their PC's as far as 5 to 25 miles using a radio connection.

The major disadvantage of wireless links is transmissions are easily tapped or monitored. Lucent technology uses 'Spread spectrum Technology' in Wavelan to guard data communication. If any other operating frequencies clashes with wireless signal then the transmission went to disarray. Anyhow Wavelan is the cost efficient network for financial enterprises.♦

Reference: The Weekend Express, June-19.

# The Intel® Pentium® III Processor

The Pentium® III processor, Intel's most advanced and powerful processor for desktop PC's, at 600, 550, 500, and 450 MHz extends processing power further by offering performance headroom for business media, communication, and Internet capabilities. The Pentium III processor offers great performance for today's and tomorrow's applications as well as quality, reliability, and compatibility from the world's leading microprocessor company. Software designed for the Pentium III processor unleashes the full multimedia capabilities of the processor including full-screen, full-motion video, realistic graphics, and an enhanced Internet experience. As Intel's highest performance processor for desktop computing, the Pentium III processor helps business end users increase their productivity and businesses increase their agility. Pentium III processor-based clients can also help IT organizations use network resources more efficiently, improve security and increase manageability. The Pentium III processor integrates the best features of the P6 microarchitecture processors - Dynamic Execution performance, a multi-transaction system bus, and Intel MMX media enhancement technology. In addition, the Pentium III processor offers Streaming SIMD Extensions -- 70 new instructions enabling advanced imaging, 3D, streaming audio and video, and speech recognition applications. To better experience the power of the Pentium III processor, combine it with technologies from Intel Architecture Labs, including Intel Streaming Web Video software and the Intel Video Phone. The Pentium III processor is supported by today's most popular operating systems. If you plan to run Windows NT\* 4.0 on your Pentium III processor-based system, you may need a driver from Intel that is specially designed for these systems. The Pentium III processor delivers the performance for the next generation of the Internet.

## Special features:

- **Amazing 3D**—The Pentium III processor enables higher polygon counts and advanced lighting effects, which can provide software and

Web sites with more lifelike surfaces, more objects rendered in a given scene, and amazing shadow effects and reflections rendered in real time. This makes for more immersive gaming and entertainment experiences on your PC and more detail and convenience for online shopping. The Pentium III processor extends the power of Intel Web Design Effects (WDE) to create exciting, scalable visual experiences on the Web that avoid bandwidth limitations.

- **Realistic Animation**—The performance of the Pentium III processor enables software developers to incorporate a greater degree of realism and interactivity. Imagine flight simulators with wings that actually flex, driving simulations with suspension that actually works, or gaming characters with fingers that can touch and grasp.
- **Advanced Imaging**—The Pentium III processor can provide better responsiveness with your graphics software by offering increased frame rates, color depths, and image processing algorithms. This means you can work with large, complex images and digital photographs without the wait.
- **Streaming Video**—Because video files tend to be large, all the benefits of the Pentium III processor realized for still imaging are even more important for editing and viewing video. In addition, the performance capabilities of the processor allow for real-time MPEG-2 video encoding and editing and great performance for streaming video—resulting in higher quality video on the Internet.
- **Speech Recognition**—The Pentium III processor can provide greater accuracy and faster response time in new applications that feature this exciting capability. With this performance advance, speech capabilities cross the threshold into real usability for real-time speech Web browsing or word processing.

- **Intel Video Phone**: Intel Video Phone v.3.2 capitalizes on the newest instruction sets in the Pentium III processor to improve the video call experience. Video appears smoother, with larger and crisper images. Calls also scale to the available

# Programming in C++

## 1.0 Introduction – C++ and its place with respect to C :

C++ was designed in the early 1980's by Bjarne Stroustrup and others at Bell labs. C++ was designed as an extension or superset of C and Simula67(a simulation language). Historically speaking , C was an extension of Algol and several other languages including the language B. The concept of C++ was developed in the mid 80s, as an extension to C language. Some early writers began to call this new language "C with classes" which would have been a very descriptive name. However, the language was finally named C++ because it is an increment of C.

The first implementation of C++ were not true compilers. Instead the 'C++' code was rewritten into C with a program called translator. This precompiler was called cfront. Cfront was similar to the C preprocessor which translates all lines of code that begins with # into lines of C code. As a result, the early versions of C++ were not as efficient as C. However , most implementations today are not compilers. That is they translate the code directly into machine code. Today C++ is in general more efficient than C. One of the major differences is that C++ has much stronger data typing than C. C is known as weakly typed language. By this we mean that a variable will not be required to hold its declared data type. For example, it has been common to declare a variable as a char and then switch it back and forth with integral values. This practice flies in the face of the principles of Object Oriented Programming(OOP), the new programming style being advocated. The designers of C++ made sure that the changes of data types for a variable would not be possible because the programmer could get into trouble unnecessarily. C++ still permits the programmer to mix data types within expressions but as you will see later the programmer will be required to explicitly declare the typecast changes. Because of this feature of C++, some C programmers have found that if they run their C code through a C++ compiler it will do a better job of spotting hidden bugs.

## 2.0 C++ Keywords

Like C,C++ is a small language. It only has 49 reserved words which is only a few more than C.

The reserved words are listed below:

asm auto break case char class const continue default delete do double else enum extern float for friend goto if inline int long new operator private protected public register return short signed throw try typeid union unsigned virtual void volatile wchar\_t while

In addition the following are being proposed to be added as keywords:  
and and\_eq bitand bitor compl not not\_eq oror\_eq xor\_eq

However , C++ has a large number of operators second only to APL. This fact may lead the C++ programmer to be tempted to write cryptic code. The C++ programmer should avoid this opportunity. The guiding principle should be readability rather than trying to squeeze out every byte of code as you may have done in C.

Since C++ is a superset of C, the C programmer may be tempted to use the techniques and functions learned in C. This should be avoided and your code should be translated fully into C++ as soon as possible. While this is true, not all your skill in C will have to be forgotten nor will you have to forget all of your procedural programming skills. While C++ has OOP concepts, and not all C++ programs have to include OOP techniques. That is ,C++ has large amount of Non-OOP features. Since many of these features are just extensions of C. That is why we are taking the position that we shall capitalise on the fact that being able to program on C is good place to begin.

C++ was designed to create programs which can get closer to the hardware than C. It was designed as a high level language which implements some of the concepts of OOP. All C programs can be compiled in C++ and all of the C libraries can be used in C++. However the converse is not true . C++ is the language of the immediate future, because C is the time consuming and more error prone in which to code.

Although it is possible to program Windows in non-OOP manner, such an approach is difficult and expensive . Non-OOP Languages like C are not well suited to programming for windows . However C++ has OOP features and is therefore a better tool to use.

Internet bandwidth, giving you a better video phone experience on a broadband Internet connection.

## Common questions about the Intel Pentium III processor :-

**Q: What's new about the Intel Pentium III processor?**

**A:** The Pentium III processor is Intel's most advanced and powerful processor for the desktop PC. Available at speeds of 550MHz, 500 MHz and 450MHz, the Pentium III processor features 70 new instructions and increased processing power that can improve your experience on the Internet and offer superior performance for today's and tomorrow's Web sites and applications.

**Q: Where can I find benchmark information on the Pentium III processor?**

**A:** Pentium III processor benchmark and performance information can be found at: <http://www.intel.com/procs/perf/pentiumiii/index.htm>

**Q: What is the Year 2000 issue? If I buy an Intel® processor-based system, am I guaranteed not to have Year 2000 problems?**

**A:** The transition to the year 2000 could potentially affect any computer system or software application that uses date data. The "year 2000 issue" (sometimes called the "year 2000 bug" or "millennium bug") refers to the fact that some computer systems store the year portion of dates in two-digit form, identifying 1997 as "97," for example. It was common practice years ago for programmers to use this approach because it conserved costly memory space. Intel is carefully looking at how our products function with the date change to the year 2000. From this analysis, Intel is developing a product list that will indicate which Intel® products are "Year 2000 Capable." To obtain year 2000 capability information about Intel products, visit:

<http://www.intel.com/support/year2000/status/index.htm>

For more information, visit Year 2000 Web site at: <http://www.intel.com/support/year2000/>

**Q: Does the introduction of this new Intel processor mean that the Pentium® II processor is being discontinued?**

**A:** While Intel's customers are focused on Pentium III processors and Intel® Celeron™ processors for their new desktop designs, Intel is projecting that

there will continue to be demand for Pentium® II processor-based systems. Intel will continue to ship these processors and expects to fulfill the forecasted demand through 1999.

**Q: Can I upgrade my current Pentium II processor to a Pentium III processor?**

**A:** The Pentium III processor is based on the same architecture as the Pentium II processor (242-contact slot connector and Dual Independent Bus architecture). We designed the Pentium III processor to be logically compatible with Pentium II processor-based systems at identical system bus frequencies. However, there may be other system considerations that need to be taken into account when upgrading a system from a Pentium II processor to a Pentium III processor. The system considerations are posted at: <http://developer.intel.com/design/pentiumiii/design/gd/check.pdf>

**Q: Can I upgrade my Pentium® processor or my Pentium® processor with MMX™ technology PC to a Pentium III processor-based PC?**

**A:** Both the Pentium® processor and the Pentium® processor with MMX™ technology use a Socket 7 bus architecture to connect with the motherboard. The Pentium III processor is based on the new Dual Independent Bus (D.I.B.) architecture to connect to the motherboard. Therefore, the Pentium III processor cannot be used as an upgrade to either the Pentium processor or the Pentium processor with MMX technology. For more information, visit: <http://www.intel.com/pentiumII/specs/sec.htm>

Legal Information © 1999 Intel Corporation.  
For further details: <http://www.intel.com/in>

### Office bearers of the Computer Society university of Jaffna for the current year-

President	:S.Jeyarajan
Secretary	:K.Mayuran
Vice President	:Y.Pratheepan.
Asst.Secretary	: A. Ramanan.
Junier Treasurer	:V.Sasikumar.
Editor	: E.Y.Andrew Charles.

### Members of the Executive Committee

S.Janani  
S.Subashini  
V.Sivagini  
C.Anujah  
V.Umapathy

C++ is the language to learn if you want to be a part of the windows , OS/2, and UNIX program development era . C++ is expected to do for programming in the 1980's . So if you want to be a part of the future in programming this is " the place to be ". If you watch the want ads for programmers, you will notice that there is an increasing demand for C++ programmers.

Knowing C can something be a blessing and at other times it can be a curse to learning C++. This is true because there will be some things that you want will have to unlearn. In particular # define and macros are replaced many times by const and inline respectively. Your C work horses print() and scan() and their associated header stdio.h are replaced by cout and cin their associated header stdio.h are replaced by cout and cin and their associated header file iostream.h . Further you will have to unlearn some of the programming techniques. this is true because C is the procedural language while C++ can be programmed as non-procedural language

## Know your Birth day

To know what day you were born simply execute this simple algorithm: Don't worry what an algorithm is, but just follow the steps:

- Assign each month a number as follows:  
Jan-0, Feb-3, March-3, April-6, May-1,  
June-4, July-6, Aug-2, Sep-5, Oct-0, Nov-3,  
Dec-5
- Take your birth date as: date, month, and year
- Set L to 0, if your year is a leap year set L to 1.  
Yet, if your month is January or February set L to 0 again
- Add the following together date, (year-1900) , (year-1901) div 4, the number assigned to your month, and L and take the result as your dday. Yet if you were born in 1900, your dday would be the addition of date and the number assigned to your month.
- If you get 0 as the remainder when you divide your dday by 7 then your date was a SUNDAY
- If you get 1 it was MONDAY, if you get 2 it was TUESDAY and so on. You won't get more than 6 as the remainder, but if you get 6, it stands for SATURDAY

If you want to try again do it again right from the beginning, but you can continue up to 28.2.2100...beyond that this algorithm would not guarantee your day. Also, it does not guarantee your were born before 1.1.1900.♣

with object oriented programming(OOP) components.

Since C++ is a proper superset of C, There are several ways that C++ could be approached . One approach, which is used in this paper and many textbooks on the subject, is to assume that you already know C. Using this approach, many authors continue to use C techniques, functions and operators . Instead try to use the C++ techniques, functions and operators rather than to intermix them with those that are associated with C only. A second approach to the study of C++ ,which is used in textbooks is to assume that you do not know C. The problem with this approaches that many practicing programmers are currently using C and there is no need to spend time on techniques which are the same in both languages.♣

This is a reprint of the paper by by Eng D.Gunasekera,MSc(English),Ceng, FIEE(UK) published on SRI LANKA ENGINEERING NEWS ,Vol1 March – April 1995 No. 6.

## With best elements from **CTCS** CITY TELECOM AND COMPUTER SERVICE

I.D.D. CALLS, LOCAL CALLS, FAX, E-MAIL  
WORD-PROCESSING, STENCILLING  
“ OVERSEAS CONNECTING SERVICE ”

VAN FOR HIRE  
11, Ramanathan Road      Tel : 2104, 2608, 2676  
University View              Fax : 2104  
Jaffna                      E-MAIL citymo@sltnet.lk

கணவிச் சமூகம் வது கணவி மற்றும் கணவிப் பிரயோகம் பற்றிய அறிவினை பரப்பும் நோக்கினைப் பிரதானமாகக் கொண்டு ஆரம்பிக்கப்பட்ட அமைப்பாகும். இதன் செயற்பாடுகளில் ஒன்றாக இச்செய்திப்பத்திரிகையானது அச்சிட்டு வெளியிடப்படுகின்றது. இப்பத்திரிகைக்கான ஆக்கங்களையும் ஆலோசனைகளையும் உங்களிடமிருந்து எதிர்பார்க்கிறோம்.

ஆசிரியர்  
E.Y.A.சாஸ்ஸ்

Published by the Computer Society of University of Jaffna.

Computer Society,  
University of Jaffna,  
Thirunelveliy,  
Jaffna.

Price Rs.5/=