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Monthly Magazine

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Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various institutions.

We would be very pleased to receive your feedbacks. Please send your feed backs to ksrcas.ishare@gmail.com

By,

Editorial Board

CONTENT

BIG DATA

Mrs.J.Mary Dallfin Bruxella
Assistant Professor, Dept of CS
KSRCAS

Big data is a collection of data sets so large and complex that it becomes difficult to process using on-hand database management tools or traditional data processing applications. The challenges include capture, curation, storage, search, sharing, transfer, analysis, and visualization. The trend to larger data sets is due to the additional information derivable from analysis of a single large set of related data, as compared to separate smaller sets with the same total amount of data, allowing correlations to be found to "spot business trends, determine quality of research, prevent diseases, link legal citations, combat crime, and determine real-time roadway traffic conditions."

DEFINITION

Big data usually includes data sets with sizes beyond the ability of commonly used software tools to capture, curate, manage, and process the data within a tolerable elapsed time. Big data sizes are a constantly moving target, as of 2012 ranging from a few dozen terabytes to many petabytes of data in a single data set. The target moves due to constant improvement in traditional DBMS technology as well as new databases like No SQL and their ability to handle larger amounts of data. With this difficulty, new platforms of "big data" tools are being developed to handle various aspects of large quantities of data.

In a 2001 research report and related lectures, META Group (now Gartner) analyst Doug Laney defined data growth challenges and opportunities as being three-dimensional, i.e. increasing volume (amount of data), velocity (speed of data in and out), and variety (range of data types and sources).

EXAMPLES

1. SCIENCE AND RESEARCH: Decoding the human genome originally took 10 years to process, now it can be achieved in less than a week : the DNA sequencers have divided the sequencing cost by 10 000 in the last ten years, which is a factor 100 compared to Moore's Law.

2. GOVERNMENT: In 2012, the Obama administration announced the Big Data Research and Development Initiative, which explored how big data could be used to address important problems facing the government. The initiative was composed of 84 different big data programs spread across six departments.
3. PRIVATE SECTOR: INFOSYS has also launched the Big Data Edge to analyse the Big data.

ARCHITECTURE

In 2004, Google published a paper on a process called Map Reduce that used such architecture. Map Reduce framework provides a parallel programming model and associated implementation to process huge amount of data. With Map Reduce, queries are split and distributed across parallel nodes and processed in parallel (the Map step). The results are then gathered and delivered (the Reduce step). The framework was incredibly successful, so others wanted to replicate the algorithm. Therefore, an implementation of Map Reduce framework was adopted by an Apache open source project named Hadoop.

TECHNOLOGIES

Big data requires exceptional technologies to efficiently process large quantities of data within tolerable elapsed times. A 2011 McKinsey report suggests suitable technologies include A/B testing, association rule learning, classification, cluster analysis, crowds sourcing, data fusion and integration, ensemble learning, genetic algorithms, machine learning, natural language processing, neural networks, pattern recognition, anomaly detection, predictive modelling, regression, sentiment analysis, signal processing, supervised and unsupervised learning, simulation, time series analysis and visualization.

RESEARCH ACTIVITIES

In March 2012, The White House announced a national "Big Data Initiative" that consisted of six Federal departments and agencies committing more than $200 million to big data research projects.

CRITIQUES OF BIG DATAEXECUTION

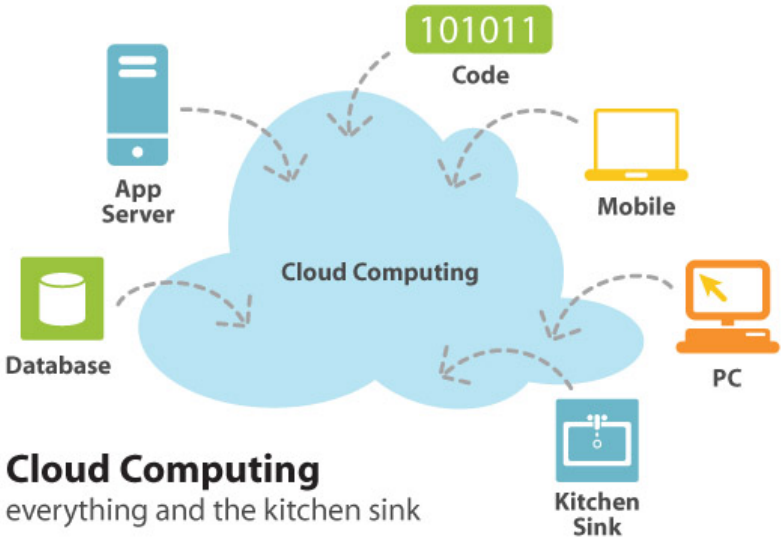
Danah Boyd has raised concerns about the use of big data in science neglecting principles such as choosing a representative sample by being too concerned about actually handling the huge amounts of data. This approach may lead to results bias in one way or another. Integration across heterogeneous

data resources — some that might be considered "big data" and others not — presents formidable logistical as well as analytical challenges, but many researchers argue that such integrations are likely to represent the most promising new frontiers in science.

CLOUD COMPUTING

N.Shanmugapriya. M.Sc.,M.Phil.,
Assistant Professor, Dept.of.Computer Science

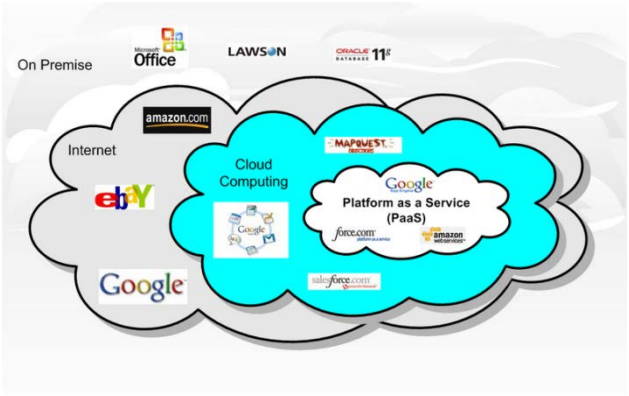
Cloud computing is a technology that uses the internet and central remote servers to maintain data and applications. It is the delivery of computing as a service rather than a product, whereby shared centralized storage resources, memory, software, and information are provided to computers and other devices as a utility (like the electricity grid) over a network (typically the Internet).

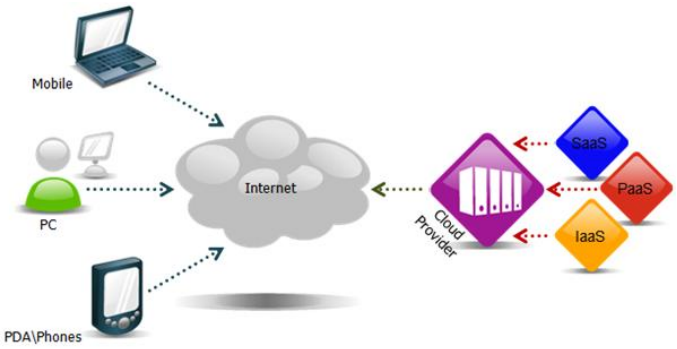


Cloud computing allows multiple users (say customer and company) to use applications without installation and access their personal files at any computer with internet access. The file will never disappear from the cloud unless the user chooses to remove it.

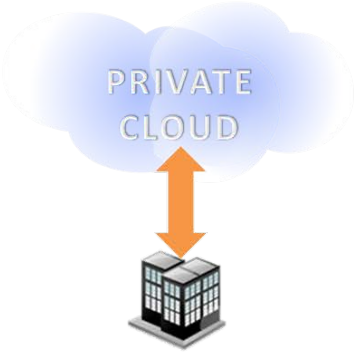
Computer programmers are benefited to create software which is independent of the operating system. End users access cloud based applications through a web browser or a light weight desktop or mobile app while the business software and data are stored on servers at a remote location.

A simple example of cloud computing is Yahoo email, Gmail, or Hotmail etc.



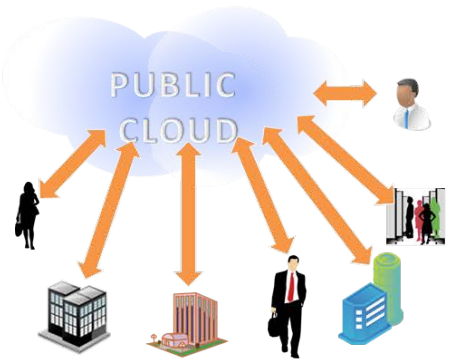


TYPES OF CLOUD COMPUTING



Private Cloud

Community Cloud



Public Cloud

Private cloud

Private cloud is cloud infrastructure operated solely for a single organization, whether managed internally or by a third-party and hosted internally or externally.

Community cloud

Community cloud shares infrastructure between several organizations from a specific community with common concerns (security, compliance, jurisdiction, etc.), whether managed internally or by a third-party and hosted internally or externally. It mostly operated as private cloud.

Public cloud

Public cloud applications, storage, and other resources are made available to the general public by a service provider. Public cloud service providers like Microsoft and Google own and operate the infrastructure and offer access only via Internet (wireless connectivity).

Hybrid cloud

Hybrid cloud is a composition of two or more clouds (private, community or public) that remain unique entities but are bound together, offering the benefits of multiple deployment models.

Benefits Of Cloud Computing

Reduced Cost - It helps keep the cost down for both the users and website owners.

More Storage - They can hold more storage than a personal computer . No up gradation is needed

Mobility - It allows users to connect even without their own computers. It helps the user to work from anywhere in the world as long a internet connection is available.

Shared Resources - A key component of cloud computing is that companies share resources and allows them all access to the resources.

FUZZY LOGIC (FL)

J.RATHI M.Sc.,M.Phil.,Lecturer
Department of Computer Science

WHAT IS MEANT BY FUZZY LOGIC?

- **Fuzzy logic** is a form of many-valued logic or probabilistic logic; it deals with reasoning that is approximate rather than fixed and exact.
- Compared to traditional binary sets (where variables may take on true or false values) fuzzy logic variables may have a truth value that ranges in degree between 0 and 1.
- Fuzzy logic has been extended to handle the concept of partial truth, where the truth value may range between completely true and completely false.

WHERE DID FUZZY LOGIC COME FROM?

➢ The concept of Fuzzy Logic (FL) was conceived by Lotfi Zadeh, a professor at the University of California at Berkley, and presented not as a control methodology, but as a way of processing data by allowing partial set membership rather than crisp set membership or non-membership.

- This approach to set theory was not applied to control systems until the 70's due to insufficient small-computer capability prior to that time. Professor Zadeh reasoned that people do not require precise, numerical information input, and yet they are capable of highly adaptive control.

WHY USE FL?

FL offers several unique features that make it a particularly good choice for many control problems.

- It is inherently robust since it does not require precise, noise-free inputs and can be programmed to fail safely if a feedback sensor quits or is destroyed. The output control is a smooth control function despite a wide range of input variations.
- FL controller processes user-defined rules governing the target control system, it can be modified and tweaked easily to improve or drastically alter system performance. New sensors can easily be incorporated into the system simply by generating appropriate governing rules.
- FL is not limited to a few feedback inputs and one or two control outputs, nor is it necessary to measure or compute rate-of-change parameters in order for it to be implemented. Any sensor data that provides some indication of a system's actions and reactions is sufficient. This allows the

sensors to be inexpensive and imprecise thus keeping the overall system cost and complexity low.

- Because of the rule-based operation, any reasonable number of inputs can be processed (1-8 or more) and numerous outputs (1-4 or more) generated, although defining the rule base quickly becomes complex if too many inputs and outputs are chosen for a single implementation since rules defining their interrelations must also be defined. It would be better to break the control system into smaller chunks and use several smaller FL controllers distributed on the system, each with more limited responsibilities.
- FL can control nonlinear systems that would be difficult or impossible to model mathematically. This opens doors for control systems that would normally be deemed unfeasible for automation.

HOW IS FL USED?

- Define the control objectives and criteria.
- Determine the input and output relationships and choose a minimum number of variables for input to the FL engine (typically error and rate-of-change-of-error).

- Using the rule-based structure of FL, break the control problem down into a series of IF X AND Y THEN Z rules that define the desired system output response for given system input conditions. The number and complexity of rules depends on the number of input parameters that are to be processed and the number fuzzy variables associated with each parameter. If possible, use at least one variable and its time derivative. Although it is possible to use a single, instantaneous error parameter without knowing its rate of change, this cripples the system's ability to minimize overshoot for a step inputs.
- Create FL membership functions that define the meaning (values) of Input/Output terms used in the rules.
- Create the necessary pre- and post-processing FL routines if implementing in S/W, otherwise program the rules into the FL H/W engine.
- Test the system, evaluate the results, tune the rules and membership functions, and retest until satisfactory results are obtained.

LINGUISTIC VARIABLES

- In 1973, Professor Lotfi Zadeh proposed the concept of linguistic or "fuzzy" variables. Think of them as linguistic objects or words, rather than numbers.

- The sensor input is a noun, e.g. "temperature", "displacement", "velocity", "flow", "pressure", etc. Since error is just the difference, it can be thought of the same way.

- The fuzzy variables themselves are adjectives that modify the variable (e.g. "large positive" error, "small positive" error ,"zero" error, "small negative" error, and "large negative" error).

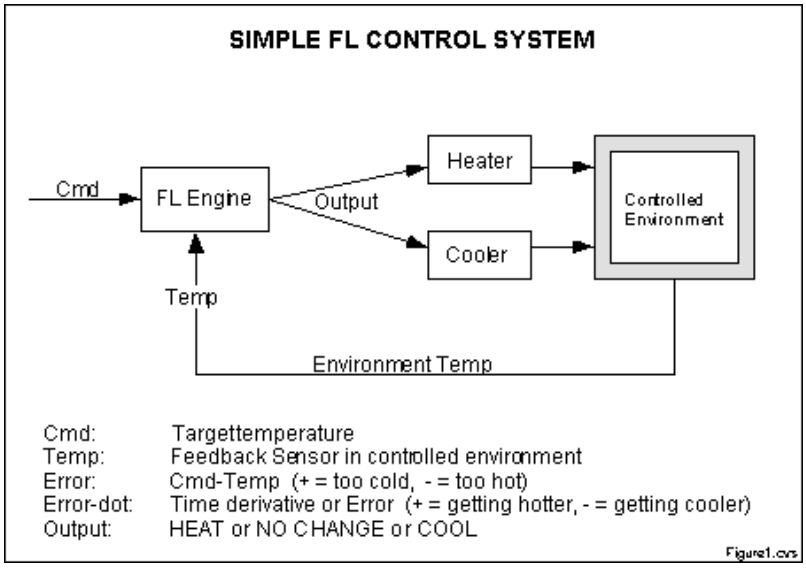
- As a minimum, one could simply have "positive", "zero", and "negative" variables for each of the parameters.

- Additional ranges such as "very large" and "very small" could also be added to extend the responsiveness to exceptional or very nonlinear conditions, but aren't necessary in a basic system

THE RULE MATRIX

- The fuzzy parameters of error (command-feedback) and error-dot (rate-of-change-of-error) were modified by the adjectives "negative", "zero", and "positive".
- The columns represent "negative error", "zero error", and "positive error" inputs from left to right.

- The rows represent "negative", "zero", and "positive" "error-dot" input from top to bottom. This planar construct is called a rule matrix.
- It has two input conditions, "error" and "error-dot", and one output response conclusion (at the intersection of each row and column).
- Rule matrices usually have an odd number of rows and columns to accommodate a "zero" center row and column region.



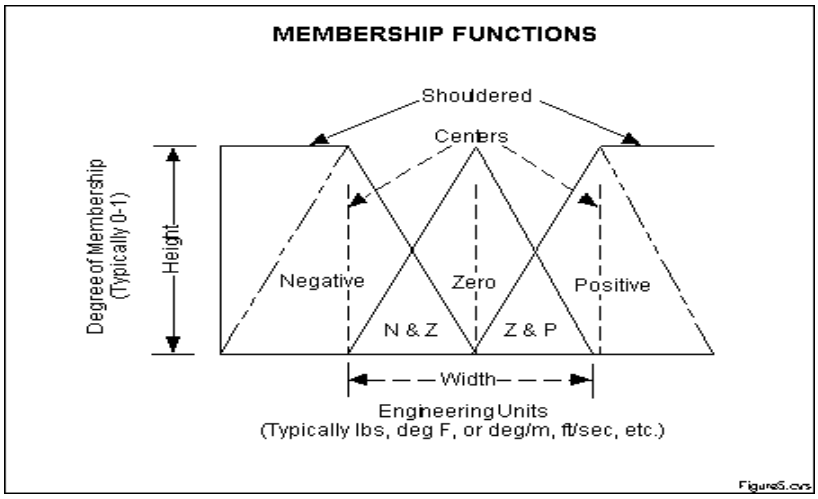
A simple block diagram of the control system.

MEMBERSHIP FUNCTIONS

- The membership function is a graphical representation of the magnitude of participation of each input.

- It associates a weighting with each of the inputs that are processed, define functional overlap between inputs, and ultimately determines an output response.
- The rules use the input membership values as weighting factors to determine their influence on the fuzzy output sets of the final output conclusion.
- Once the functions are inferred, scaled, and combined, they are defuzzified into a crisp output which drives the system.
- There are different membership functions associated with each input and output response.
- Some features to note are:

  - SHAPE - triangular is common, but bell, trapezoidal, haversine and, exponential have been used. More complex functions are possible but require greater computing overhead to implement.. HEIGHT or magnitude (usually normalized to 1) WIDTH (of the base of function), SHOULDERING (locks height at maximum if an outer function. Shouldered functions evaluate as 1.0 past their center) CENTER points (center of the member function shape) OVERLAP (N&Z, Z&P, typically about 50% of width but can be less).



INFERENCING

- The logical products for each rule must be combined or inferred (max-min'd, max-dot'd, averaged, root-sum-squared, etc.) before being passed on to the defuzzification process for crisp output generation. Several inference methods exist.

  - The **MAX-MIN** method tests the magnitudes of each rule and selects the highest one. The horizontal coordinate of the "fuzzy centroid" of the area under that function is taken as the output. This method does not combine the effects of all applicable rules but does produce a continuous output function and is easy to implement.
  - The **MAX-DOT** or **MAX-PRODUCT** method scales each member function to fit under its respective peak value and takes

the horizontal coordinate of the "fuzzy" centroid of the composite area under the function(s) as the output. Essentially, the member function(s) are shrunk so that their peak equals the magnitude of their respective function ("negative", "zero", and "positive"). This method combines the influence of all active rules and produces a smooth, continuous output.

- The **AVERAGING** method is another approach that works but fails to give increased weighting to more rule votes per output member function. For example, if three "negative" rules fire, but only one "zero" rule does, averaging will not reflect this difference since both averages will equal 0.5. Each function is clipped at the average and the "fuzzy" centroid of the composite area is computed.
- The **ROOT-SUM-SQUARE (RSS)** method combines the effects of all applicable rules, scales the functions at their respective magnitudes, and computes the "fuzzy" centroid of the composite area. This method is more complicated mathematically than other methods, but was selected for this example since it seemed to give the best weighted influence to all firing rules.

Haptic Technology

Menaka.V
Assistant Professor,
Dept.of.Computer Science

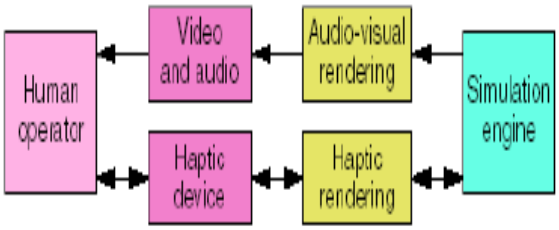
What is Haptics?

Haptic, is the term derived from the Greek word, haptesthai, which means 'to touch'. Haptic is defined as the "science of applying tactile sensation to human interaction with computers". It enables a manual interaction with real, virtual and remote environment. Haptic permits users to sense ("feel") and manipulate three-dimensional virtual objects with respect to such features as shape, weight, surface textures, and temperature.

Haptic Technology

Haptic Technology is any technology interface that either is used by force, vibration or motion or the technology item gives the user the feedback of force, vibration or motion.

Working of Haptic Technology



Characteristics

1) Types Of Information Received

a) Tactile information- information acquired through sensors in the skin.

b) Kinesthetic information-information acquired through the sensors in the joints.

2) Types Of Forces

a) Forces due to object geometry and Forces due to object surface properties, such as texture

and friction.

3) Types of Haptic devices:

a) Devices that allow users to touch and manipulate 3-dimentional virtual object.

b) Devices that allow users to "feel" texture of 2-dimension objects.

Classification

1. Human haptics.
2. Machine haptics.
3. Computer haptics.

Haptic Devices

1. Logitech mouse.
2. Phantom
3. Cyber Glove.
4. Cyber Grasp.

Features

- Ideal for plasmas, large-format LCDs, and projection displays
- Standard sizes available and in stock for 26" to 82" inch sizes
- Functions in landscape or portrait modes
- Annotate and highlight, erase mistakes, save notes, and more
- Select and navigate between computer applications and multimedia sources
- Simple touch of a finger or any pointing device interacts directly with the screen images.
- No coatings. Optics are preserved while providing a protective glass overlay to guard against damage

- Durable, thick steel frame with welded corners completely protects unit and holds the glass securely
- Full mouse functionality(right click also)

Applications

- ⦿ Teleoperators and simulators
- ⦿ Computer video games
- ⦿ Mobile consumer technologies
- ⦿ Research
- ⦿ Medicine
- ⦿ Robotics
- ⦿ Arts and design

Advantages

- ➢ Digital world can behave like the real world.
- ➢ Working time is reduced.
- ➢ Medical field simulators allow would be surgeons to practice digitally.

Disadvantages

- ➢ The precision of touch requires a lot of advance design.
- ➢ Haptics applications require highly specialized.
- ➢ Hardware and considerable processing power and hence its complex.
- ➢ Haptics projects rely on fixed installations of equipment and are not easily portable.
- ➢ Debugging issues.

.NET FRAMEWORK

III CS 'A'

Esther Mwantisi & Valarmathi. S

Microsoft started development of the .NET Framework in the late 1990s, originally under the name of Next Generation Windows Services (NGWS). By late 2000 the first beta versions of .NET 1.0 were released.

Version 3.0 of the .NET Framework is included with Windows Server 2008 and Windows Vista. Version 3.5 is included with Windows 7 and Windows Server 2008 R2, and can also be installed on Windows XP and Windows Server 2003. On 12 April 2010, .NET Framework 4 was released alongside Visual Studio 2010.

The .NET Framework family also includes two versions for mobile or embedded device use. A reduced version of the framework, the .NET Compact Framework, is available on Windows CE platforms, including Windows Mobile devices such as smart phones. Additionally, the .NET Micro Framework is targeted at severely resource-constrained devices.

Overview of .NET Framework release history

Generation	Version number	Release date	Notes	Development tool	Distributed with
1.0	1.0.3705.0	2002-02-13	original version	Visual Studio .NET	N/A
1.1	1.1.4322.573	2003-04-24	first update	Visual Studio .NET 2003	Windows Server 2003
2.0	2.0.50727.42	2005-11-07	rewrite of framework	Visual Studio 2005	Windows Server 2003 R2
3.0	3.0.4506.30	2006-11-06	WCF,WPF,WF	Expression Blend	Windows Vista, Windows Server 2008
3.5	3.5.21022.8	2007-11-19	LINQ	Visual Studio 2008	Windows 7, Windows Server 2008 R2

4.0	4.0.30319.1	2010-04-12	parallel extensions	Visual Studio 2010	N/A
4.5	4.5.50709.17929	2012-08-15	asynchronous programming model	Visual Studio 2012	Windows 8, Windows Server 2012

DESIGN FEATURES

Interoperability

Because computer systems commonly require interaction between newer and older applications, the .NET Framework provides means to access functionality implemented in newer and older programs that execute outside the .NET environment. Access to COM components is provided in the System.Runtime.InteropServices and System.EnterpriseServices namespaces of the framework; access to other functionality is achieved using the P/Invoke feature.

Common Language Runtime engine

The Common Language Runtime (CLR) serves as the execution engine of the .NET Framework. All .NET programs execute under the supervision of the CLR, guaranteeing certain properties and behaviors in the areas of memory management, security, and exception handling.

Language independence

The .NET Framework introduces a Common Type System, or CTS. The CTS specification defines all possible datatypes and programming constructs supported by the CLR and how they may or may not interact with each other conforming to the Common Language Infrastructure (CLI) specification. Because of this feature, the .NET Framework supports the exchange of types and object instances between libraries and applications written using any conforming .NET language.

Base Class Library

The Base Class Library (BCL), part of the Framework Class Library (FCL), is a library of functionality available to all languages using the .NET Framework. The BCL provides classes that encapsulate a number of common functions, including

file reading and writing, graphic rendering, database interaction, XML document manipulation, and so on. It consists of classes, interfaces of reusable types that integrates with CLR(Common Language Runtime).

Simplified deployment

The .NET Framework includes design features and tools which help manage the installation of computer software to ensure it does not interfere with previously installed software, and it conforms to security requirements.

Security

The design addresses some of the vulnerabilities, such as buffer overflows, which have been exploited by malicious software. Additionally, .NET provides a common security model for all applications.

Portability

While Microsoft has never implemented the full framework on any system except Microsoft Windows, it has engineered the framework to be platform-agnostic, and cross-platform implementations are available for other operating systems (see Silverlight and the Alternative implementations section below). Microsoft submitted the specifications for the Common Language Infrastructure (which includes the core class libraries, Common Type System, and the Common Intermediate Language), the C# language, and the C++/CLI language to both ECMA and the ISO, making them available as official standards. This makes it possible for third parties to create compatible implementations of the framework and its languages on other platforms.

Security

.NET has its own security mechanism with 2 general features: Code Access Security (CAS), and validation and verification. Code Access Security is based on evidence that is associated with a specific assembly. Typically the evidence is the source of the assembly (whether it is installed on the local machine or has been downloaded from the intranet or Internet). Code Access Security uses evidence to determine the permissions granted to the code. Other code can demand that calling code is granted a specified permission. The demand causes the CLR to perform a call stack walk: every assembly of each method in the call stack is checked for the required permission; if any assembly is not granted the permission a security exception is thrown.

INTRESTING FACTS OF STEVE JOBS

S.Prema MCA,M.Phil.,
Assistant Professor
Department of CS.KSRCAS

- **Steve was adopted** by Paul and Clara Jobs. Although Steve's biological mom wanted her son to be adopted by college graduates and Paul and Clara were not. They promised Steve would go to college when he grew up.
- Steve **dropped out of college** after one semester to save his parent's money. He did drop-in though for 18 months.
- While dropping in on classes, **he slept on the floors of his friends' places,** turned in coke bottles for 5 cents to use the money to eat with, and hiked 7 miles across town once a week to get a decent meal at the Hare Krishna temple in town.
- Steve's **original aspiration was to become a Buddhist Monk.** After traveling to India with one of his best friends from Reed College. Upon his return with shaved head, he became a Buddhist.
- He **worked** with Steve Wozniak **for Atari game systems** before Apple Computers. They reportedly were paid $5,000 for their work of which he shared $375 with Wozniak.
- We all probably know that Steve Jobs began Apple Computers, Inc., in 1976 with Steve Wozniak in his parents' garage. But **there was a third member, Ronald Wayne.** After two weeks Ronald left for a one time payment of $800 for his share of Apple stock. Reportedly this stock would be worth $22 billion today.
- Steve **lured John Sculley from Pepsi-Cola** to become Apple's CEO in 2003. Coincidently it was John Sculley who then fired Jobs in 2005. Steven would later comment on it saying "the heaviness of being successful was replaced by the lightness of being a beginner again, less sure about everything. It freed me to enter one of the most creative periods of my life."
- Jobs and Wozniak **named the company Apple** because they were huge Beatles fans.
- He had **four children,** one out of wedlock that he at first denounced, but later claimed and went on to have a great relationship with and even named a computer after her.
- Steve **was actually a pescetarian** not a vegan.
- Jobs **stock in Disney had more value than in Apple,** since Steve sold a lot of shares in the 90's and owned less than 1% at the time of his death.
- Steve **had over 300 patents.**

- Jobs **bought Pixar for 5 million** and transformed it with their first movie Toy Story. Jobs was credited as an executive producer on the film Toy Story.
- He **dated John Baez** when he was younger.
- It is rumored that the name of the new **iPhone4s means iPhone 4 Steve.**
- He was **upset that Wozniak was employee number 1** and that he was employee number 2. He protested until he became employee number 0.
- He was **dyslexic.**
- He was **obsessed with type fonts and calligraphy**. Claims that the reason why Apple had different fonts was probably because he dropped into a calligraphy class in college.
- He saw his **first computer at age 12.**

Recover Photos and Pictures from Formatted SD Memory Card

C.Gnanasekaran

II-B.sc (cs)-"A"

Have you ever encountered the following situations?

- Connect your **SD card reader** to computer, the window pops up with message "You have to format SD card before using it". After formatting SD card, all your pictures and video lose.
- During the process of shooting, when open SD card images to manager them, mistakenly press "Format SD Card" button and all your precious images delete.
- Accidently drop down your digital camera, and lose pictures which are saved before.
- Lent your Canon 550D to one of your friends and come back with all your previous photos formatted.

If you didn't make a backup previously, all files including precious photos, favorite songs and video will be lost and can't be accessed. That really makes us frustrated. Fortunately, format doesn't mean all your files miss permanently, they are just not visible but still in SD card which you saved them at. The following article will show you the main features of SD card and how to recover pictures from formatted SD card.

How to Recover Pictures from Formatted SD Card?

Data like the photos or videos present in the **memory card** can be recovered easily using any**data recovery** tool which are usually not free but comes as trial versions.

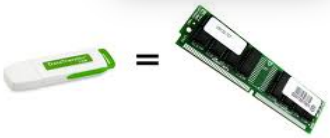
One such tool is **Handy Recovery**, which is designed to restore files accidentally deleted on digital cameras, mobile phones, pocket pc's, mp3 players, mobile communicators, PDA's, handheld computers and other devices that use memory cards.

The program supports data recovery from memory cards manufactured by SanDisk, Kingston, Transcend, Verbatim, Sony, Integral, Panasonic, Toshiba, Olympus, just to name a few, including but not limited to CompactFlash, Memory Stick Duo, Memory Stick Pro, Memory Stick Pro Duo, SD Card, mini-SD, micro-SD, MultiMediaCard MMC, SmartMedia, xD Picture Card.

How to use pendrive as RAM

Dhansingh.V

I-BCA-"A"



REQUIREMENTS FOR VIRTUAL RAM

1)Minimum 2 GB **pen drive** .

2)USB(Universal serial bus) 2.0 or later.

You can use your *pen drive* as RAM(Random Access Memory) in windows . There are two types of memory

1)RAM – Random Access Memory

2)ROM- Read Only Memory

When the system is boot all the data is saved in ROM we can't normally remove data from ROM because it is also called permanent memory of our system.

The Speed of your system totally depends on processor and RAM. When we run any programs like Operating system(windows,linux),movies ,files etc it stores in RAM. If our RAM size is small then it can reduce our system performance and processor work.

To increase your system performance you have two options

1)Buy another RAM and put it into empty RAM slot if available.

2)Make your flash drive(Pen Drive) as Virtual RAM.

Step 1 :

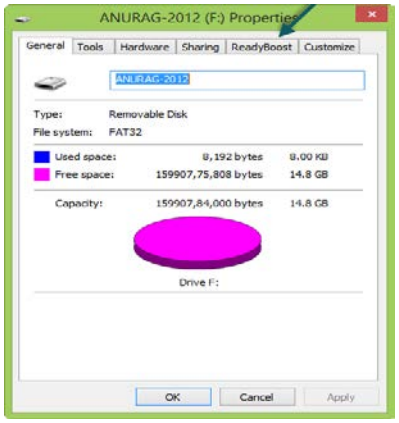
Put pen drive in USB 2.0 port.

Step 2 :

Right click on the pen drive.

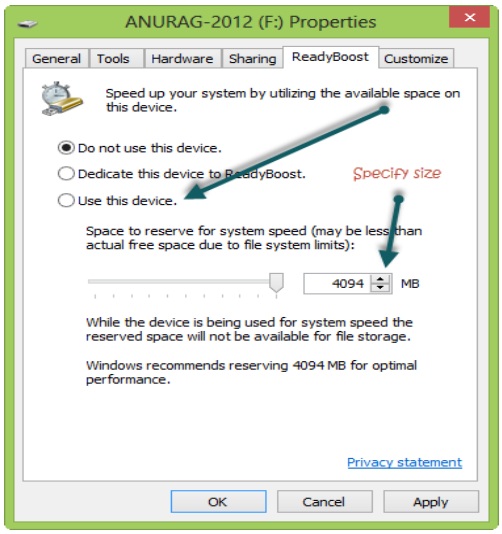
Step 3 :

Go to the ready Boost Tab.



Step 4

Select use this device.



Step 5

Specify your device size for RAM ,4 GB best size.

Now your current running files and programs will occupy the space like RAM.

Interesting facts of computer technology

S.V.Vetrivel.

III-Bsc(cs)-"c"

1. He **owned over 100 pairs of Levi jeans.** Amazon, originally a printed book seller company, now sells more e-books than printed books.
2. The first domain name ever registered was Symbolics.com.
3. Tim Berners-Lee coined the phrase "World Wide Web" in 1990.
4. U.S. President Bill Clinton's inauguration in January 1997 was the first to be webcast.
5. Google uses an estimated 15 billion kWh of electricity per year, more than most countries. However, google generates a lot of their own power with their solar panels.
6. Bill Gates, the founder of Microsoft was a college drop out.
7. Bill Gates house was designed using a Macintosh computer.
8. About 1.8 billion people connect to the Internet, only 450 million of them speak English.

9. In 2012, approximately 17 billion devices (which includes computers, tablets and mobile) connected to the Internet.
10. Sweden has the hightest percentage of internet users, they are 75%.
11. Did you know that Email was already around before the World Wide Web came?
12. Up until the 14th of September, 1995, domain registration was free.
13. One of the world's leading computer and computer peripheral manufacturer Hewlett Packard was first started in a garage at Palo Alto in the year 1939.
14. Google estimates that the Internet today contains about 5 million terabytes of data (1TB = 1,000GB), and claims it has only indexed a paltry 0.04% of it all! You could fit the whole Internet on just 200 million Blu-Ray disks.
15. The prime reason the Google home page is so bare, is due to the fact that the founders didn't know HTML and just wanted a quick interface. Infact, the submit button was a later addition initially; hitting the RETURN key was the only way to burst Google into life.
16. Doug Engelbart had made the first computer mouse in 1964, and it was made out of wood.
17. Every minute, 10 hours of videos are uploaded on Youtube.
18. The world's first computer which was named the Z1, was invented by Konrad Zuse in 1936. His next invention, the Z2 was finished in 1939 and was the first fully functioning electro-mechanical computer.
19. There are approximately 1,319,872,109 people using the Internet.
20. Amongst the most interesting computer facts is, when the first Apple computer which was built by Steve Jobs and Steve Wozniak, it was made by using parts they got for freefrom their employers.
21. While it took the radio 38 years, and the television a short 13 years, it took the World Wide Web only 4 years to reach 50 million users.
22. A program named "Rother J" was the first computer virus to come into sight "in the wild" — that is, outside the single computer or lab where it was created.
23. 'Stewardesses' is the longest word which can be typed with only the left hand.
24. Mosaic was the first popular web browser which was released in 1993.
25. Of the 247 BILLION email messages sent every day, 81% are pure spam.

Cool features of google glass.

Prateepika.V.S
III-Bsc(cs)-"C"

TOITech

Wearable smart-devices represent the next stage in mobile computing and Google Glass is the most hotly-anticipated gadget in that space. It is not an extension of your Android Smartphone or tablet, but is a whole new gadget in itself that can perform various day to day tasks, without you ever moving your hands.

The computing headgear unveiled at a Google launch event in 2012 has created lot of excitement. However, though most have read and heard about the Google Glasses, there are only a few who know what it can exactly do. So, here is a look at seven cool features of Google Glass.

Record videos, take pictures

Just say the word and Google Glass will take a picture or record a video – you will never have to touch the hardware. The photos and videos will be stored on the 4GB flash memory of the device, and can also be shared on social networking websites or emailed.

Show messages

Google Glass will show you text messages as well as emails you receive and allow you to reply to them via voice commands.

Find information

If you are in the habit of Googling things a lot, you will find that your task has been made easier by the new Glass. You simply need to ask a question and the device will pull the answer from the internet. For example, you can ask when Taj Mahal was built or to give you a few photographs of the monument and the device will provide appropriate replies on the small screen in front of your eye.

Show maps

The widely used Google Maps are integrated into Glass, so that users will be able to chart the course of their journey or look up locations or establishments via voice commands.

Live video sharing

Google Glass can show the world what you are seeing – live! If you are attending a family function, your child's school play or a concert, you can share the feed with your friends and family in real-time and make them a part of the experience.

Integrates Google Now

Google Now, the digital voice assistant from the search giant, has been integrated in this device. It will keep track of your daily habits, such as when you leave for office or the route you take. It will give you alternate routes if there is traffic on the way or give you weather updates periodically, among various other functions.

Translate

This is a neat feature that may come in handy when you travel abroad. You simply need to ask Google Glass to translate a phrase or sentence from one language to another and it will speak that out.

ABOUT SAMBA

Ms.R.Nirmala M.Sc., M.Phil., M.C.A.,

Dept of CS

What is samba?

"Samba is an Open Source/Free Software suite that provides seamless file and print services to SMB/CIFS clients." Samba is freely available, unlike other SMB/CIFS implementations, and allows for interoperability between Linux/Unix servers and Windows-based clients.

In other words, Samba is a suite of Unix applications that speak the Server Message Block (SMB) protocol. Microsoft Windows operating systems and the OS/2 operating system use SMB to perform client-server networking for file and printer sharing and associated operations. By supporting this protocol, Samba enables computers running Unix to get in on the action, communicating with the same networking protocol as Microsoft Windows and appearing as another Windows system on the network from the perspective of a Windows client.

Its software that can be run on a platform other than Microsoft Windows, for example, UNIX, Linux, IBM System 390, OpenVMS, and other operating systems. It uses the TCP/IP protocol that is installed on the host server. When correctly configured, it allows that host to interact with a Microsoft Windows client or server as if it is a Windows file and print server.

It is a software package that gives network administrators flexibility and freedom in terms of setup, configuration, and choice of systems and equipment. Because of all that it offers, Samba has grown in popularity, and continues to do so, every year since its release in 1992.

Samba is the standard Windows interoperability suite of programs for Linux and UNIX.

It is Free Software licensed under the GNU General Public License; the Samba project is a member of the Software Freedom Conservancy.

Since 1992, it has provided secure, stable and fast file and print services for all clients using the SMB/CIFS protocol, such as all versions of DOS and Windows, OS/2, Linux and many others.

Samba is an important component to seamlessly integrate Linux/Unix Servers and Desktops into Active Directory environments using the winbind daemon.

Related News

- 13 August 2012 Samba 3.5.17 Available for Download
- 06 August 2012 Samba 3.6.7 Available for Download
- 02 July 2012 Samba 3.5.16 Available for Download
- 25 June 2012 Samba 3.6.6 Available for Download
- 30 April 2012 Samba 3.6.5, 3.5.15 and 3.4.17 Security Releases Available for Download.
- 10 April 2012 Samba 3.6.4, 3.5.14 and 3.4.16 Security Releases Available for Download.
- 20 March 2012 Report: Microsoft SMB2.2 Interop Event
- 12 March 2012 Samba 3.5.13 Available for Download
- 23 February 2012 Samba pre-3.4 Security Issue
- 29 January 2012 Samba 3.6.3 Security Release Available for Download

A Samba server offers the following services:

- Share one or more directory trees
- Share one or more Distributed filesystem (Dfs) trees
- Share printers installed on the server among Windows clients on the network
- Assist clients with network browsing
- Authenticate clients logging onto a Windows domain
- Provide or assist with Windows Internet Name Service (WINS) name-server resolution

Samba is the brainchild of Andrew Tridgell, who currently heads the Samba development team. Andrew started the project in 1991, while working with a Digital Equipment Corporation (DEC) software suite called Pathworks, created for connecting DEC VAX computers to computers made by other companies.

Without knowing the significance of what he was doing, Andrew created a file-server program for an odd protocol that was part of Pathworks. That protocol later turned out to be SMB.

A few years later, he expanded upon his custom-made SMB server and began distributing it as a product on the Internet under the name "SMB Server." However, Andrew couldn't keep that name—it already belonged to another company's product—so he tried the following Unix renaming approach:

```
$ grep -i '^s.*m.*b' /usr/dict/words
```

And the response was:

```
salmonberry
samba
sawtimber
scramble
```

Thus, the name "Samba" was born.

Today, the Samba suite revolves around a pair of Unix daemons that provide shared resources—called shares or services—to SMB clients on the network. These are:

- Smbd → A daemon that handles file and printer sharing and provides authentication and authorization for SMB clients.
- Nmbd → A daemon that supports NetBIOS Name Service and WINS, which is Microsoft's implementation of a NetBIOS Name Server (NBNS). It also assists with network browsing.

Samba is currently maintained and extended by a group of volunteers under the active supervision of Andrew Tridgell. Like the Linux operating system, Samba is distributed as open source software (http://opensource.org) by its authors and is distributed under the GNU General Public License (GPL).

Since its inception, development of Samba has been sponsored in part by the Australian National University, where Andrew Tridgell earned his Ph.D. Since then, many other organizations have sponsored Samba developers, including LinuxCare, VA Linux Systems, Hewlett-Packard, and IBM.

It is a true evidence to Samba that both commercial and noncommercial entities are prepared to spend money to support an open source effort.

Microsoft has also contributed by offering its definition of the SMB protocol to the **Internet Engineering Task Force** (IETF) in 1996 as the **Common Internet File System** (CIFS).

What Can Samba Do for Us?

As explained earlier, Samba can help Windows and Unix computers coexist in the same network. However, there are some specific reasons why we might want to set up a Samba server on our network:

- We don't want to pay for—or can't afford—a full-fledged Windows server, yet we still need the functionality that one provides.
- The Client Access Licenses (CALs) that Microsoft requires for each Windows client to access a Windows server is unaffordable.
- We want to provide a common area for data or user directories to transition from a Windows server to a Unix one, or vice versa.
- We want to share printers among Windows and Unix workstations.
- We are supporting a group of computer users who have a mixture of Windows and Unix computers.
- We want to integrate Unix and Windows authentication, maintaining a single database of user accounts that works with both systems.
- We want to network Unix, Windows, Macintosh (OS X), and other systems using a single protocol.

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- **Dr.T.Devi, HOD of CS, Bharathiyar University, Coimbatore.**
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- **Mr.SureshBabu, HOD of CS, Thiruvalluvar Government Arts College, Rasipuram.**
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Identify the personality

Wait for the answers in the next issue!!!

N. R. Narayana Murthy

Founder
Executive Chairman of the Board

Narayana Murthy is the Executive Chairman of Infosys Limited, a global software consulting company headquartered in Bangalore, India. He founded Infosys in 1981, served as the CEO during 1981-2002, as the Chairman and Chief Mentor during 1981-2011, and as the Chairman Emeritus during August 2011-May 2013. Under his leadership, Infosys was listed on NASDAQ in 1999.

Mr. Murthy articulated, designed and implemented the Global Delivery Model which has become the foundation for the huge success in IT services outsourcing from India. He has led key corporate governance initiatives in India. He is an IT advisor to several Asian countries.

He serves on the boards of Ford Foundation, Rhodes Trust, the Indian School of Business and the UN Foundation. He served as a member of the HSBC board between 2008 and 2012, Unilever board between 2007 and 2010, the Chairman of the International Institute of Information Technology, Bangalore between 2002 and 2012 and the Chairman of the Indian Institute of Management, Ahmedabad between 2002 and 2007. He has also served on the boards of Cornell University, Singapore Management University, INSEAD (Paris), Wharton School and the Graduate School of Business at Stanford University.

Mr. Murthy was listed as one among the “12 greatest entrepreneurs of our time” listed by the Fortune magazine in 2012. The Economist ranked him among the ten most-admired global business leaders in 2005. He has been awarded the Padma Vibhushan by the Government of India, the Legion d’honneur by the Government of France, and the CBE by the British government. He is the first Indian winner of Ernst and Young’s World Entrepreneur of the year award and the Max Schmidheiny Liberty prize. He has appeared in the rankings of businessmen and innovators published by BusinessWeek, Time, CNN, Fortune, India Today, Business Standard, Forbes and Financial Times. He is a Fellow of the Indian National Academy of Engineering and a foreign member of the US National Academy of Engineering. He was awarded the 2012 Hoover Medal and the James C. Morgan Global Humanitarian Award 2012 by The Tech Museum, California. He received the 2007 Ernst Weber Medal from the Institute of Electrical and Electronics Engineers, Inc., USA (IEEE). He has about 25 honorary doctorates from universities in India and abroad.