



VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(Approved by AICTE, Affiliated to JNTU, Hyderabad)
KONDAPUR VILLAGE, GHATKESAR MANDAL, RANGA REDDY DISTRICT - 501 301.

VMTW INSIGHT

News Letter

Volume-5

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

“ Inside every large program, there is a small program trying to get out ” - C.A.R. HOARE

IoT, applications to a common man, Discussions regarding the future of IoT in India.

EDITORIAL DESK

Hello!!! We are happy to welcome you all aboard the fledgling 5th edition for the scintillating year 2017. VMTWINSIGHT is the newsletter of the COMPUTER SCIENCE & ENGINEERING which aims to bring forward the buzz from the department in the past few months. The edition demystifies the realms of Computer science & Engineering and also provides insight to the latest technology adopted in the field. Hope our deeds would ignite everyone's life!!!

HOD'S DESK

Dedicated to ensuring great careers for its students. For 5th edition News Letter this means forging deeper industry linkages than ever before, creating a research culture from day one and ensuring seamless education using the best technology available anywhere. The excellent infrastructure, teaching faculty of the best kind of the Department ensuring quality education such as interaction among students, parents and staff, along with a Training and Placement Cell ensures a bright future to its students. The Department of CSE is striving hard towards the goal of providing innovative and quality education with high standard to achieve academic excellence and provides platform for the students to achieve their career goals.

ABOUT DEPARTMENT OF CSE

The Department of Computer Science and Engineering (CSE) was established in the year 2008 with the aim of providing wide-ranging technology education to students from all over the country and thereby creating responsible citizens who would contribute to the betterment of their families, society and nation.

The future of Computing rests here. The department's mission is to value based professional education for a challenging career advance, evolve and enhance Computer Science and Engineering fundamentals to build the intellectual capital of the society. The CSE Department Endeavour's to be an important regional, resource center for the development of Computing and its applications. The department is witnessing a period of exciting growth and opportunity propelled by the growth of technology and its recognition through excellence. CSE boasts a vibrant student body of about 120 undergraduate students.

VISION

To achieve value oriented and quality education with excellent standards on par with evolving technologies and produce technocrats of global standards with capabilities of facing futuristic challenges.

MISSION

M1: To enrich advanced -

knowledge among students for reinforcing the domain knowledge and develop capabilities and skills to solve complex engineering problems.

M2: To impart value based professional education for a challenging career in Computer Science and Engineering.

M3: To transform the graduates for contributing to the socio-economic development and welfare of the society through value based education

PROGRAM EDUCATIONAL OBJECTIVES (PEOS):

PEO1: To acquire logical and analytical skills in core areas of Computer Science & Information Technology.

PEO2: To adapt new technologies for the changing needs of IT industry through self-study, graduate work and professional development.

PEO3: To demonstrate professional and ethical attitude, soft skills, team spirit, leadership skills and execute assignments to the perfection.

PROGRAM SPECIFIC OUTCOMES (PSOS):

PSO1: Foundation on Software Development: Analyze, design and develop efficient algorithms and software applications to deploy in secure environment to support contemporary services.

PSO2: Industrial Skills Ability: Develop software -

solutions using open source environment to deliver quality products for business success.

PSO3: Ethical and Social Responsibility: Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show the understanding of impact of engineering solutions on the society and also will be aware of contemporary issues.

FACULTY TECHNICAL ARTICLE BY

Title Name: **I Cloud**
by **K Bharath Reddy**

STUDENT TECHNICAL ARTICLE BY

Title Name: **Ipv6 - The Next
Generation Protocol**
by **SHIVHARI KAUSHAL**

GUEST LECTURES ON

- Transaction Processing in Database Management Systems
- Software Engineering

TECHNICAL SEMINAR ON

“ INTERNET OF THINGS ” Department has organized a technical seminar on “IOT”. for 4th year CSE Students, in co-ordination with V INDRANI.

RESEARCH PUBLICATION

Title Name : **PROPOSED TECHNIQUE
TO ANALYZE OPERATING SYSTEM
IMPLICATIONS OF FAST, CHEAP,
NON-VOLATILE MEMORY**

Authors : **K.Bharath Reddy, D.Swaroop,**

INTERNSHIP

NAME OF ORGANIZATION : **COIGN**

NUMBER OF STUDENTS : **4**

DURATION : **3 MONTHS**

LOCATION : **HYDERABAD**

Cont...

Faculty Technical Article : Title - iCloud

Written By **K Bharath Reddy**

INTRODUCTION

Apple introduced iCloud in iOS5 as a service to allow applications to store data on Apple's servers and have it synchronized across all devices used by the same person (via their Apple ID). It also has a backup component. This document describes how to use some of the iCloud APIs provided by Apple to store and retrieve data from their servers, with C# samples for storing small key-value data pairs and for storing documents. It also discusses how iCloud Backup can influence the design of your application.

iCloud Backup

While backing up to iCloud isn't a feature that is directly accessed by developers, the way you design your application can affect the user experience. Apple provides iOS Data Storage Guidelines for developers to follow in their iOS applications. The most important consideration is whether your app stores large files that are not user-generated (for example, a magazine reader application that stores hundred-plus megabytes of content per issue). Apple prefers that you do not store this sort of data where it will be backed-up to iCloud and unnecessarily fill the user's iCloud quota. Applications that store large amounts of data like this should either store it in one of the user directories that is not backed-up (eg. Caches or tmp) or use `NSFileManager.SetSkipBackupAttribute` to apply a flag to those files so that iCloud ignores them during backup operations. This article introduced the new iCloud feature included in iOS 5. It examined the steps required to configure your project to use iCloud and then provided examples of how to implement iCloud features. The key-value storage example demonstrated how iCloud can be used to store a small amount of data similar to the way `NSUserDefaults` are stored. The `UIDocument` example showed how more complex data can be stored and synchronized across multiple devices via iCloud. Finally it included a brief discussion on how the addition of iCloud Backup should influence your application design.

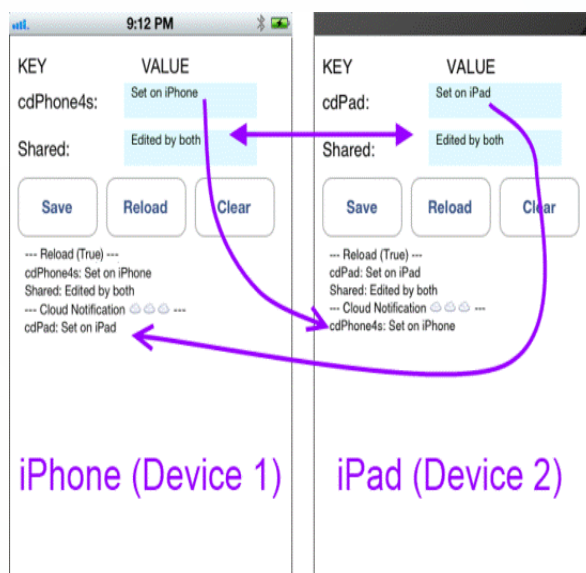
Photostream

Photo Stream is a service supplied with the basic iCloud service which allows users to store the most recent 1,000 photos on the iCloud servers up to 30 days free of charge. When a photo is taken on a device with Photo Stream enabled, it is automatically uploaded to the iCloud servers; from there, it is automatically pushed to the rest of the user's registered devices. The service is also integrated with -

Apple TV, allowing users to view their recent photos wirelessly on their HDTV. With Photo Stream, you can take a photo on one iOS device and it automatically appears on all your other devices, including your Mac or PC. Import new pictures to your computer from a digital camera, and iCloud sends copies over Wi-Fi to your iPhone, iPad, and iPod touch. You can even view recent photos on your big-screen TV via Apple TV. There's no syncing, no email attachments, no file transfers. Your pictures are just there — on whichever device you happen to have handy. Take a photo on an iOS device. Or import a photo from your digital camera to your computer. iCloud automatically pushes a copy of that photo over any available Wi-Fi or Ethernet connection to the Photos app on your iOS devices, iPhoto or Aperture on your Mac, and the Pictures Library on your PC. You can even view your Photo Stream album on your Apple TV. So you can show off your shots to friends and family from whichever device you're using at the time. 1000 of your latest photos. With you all the time. iCloud manages your Photo Stream efficiently so you don't run out of storage space on your iPhone, iPad, or iPod touch. If you have Photo Stream enabled on your iOS device, every single photo you take appears in a special Photo Stream album that holds your last 1000 photos. You can delete any photos you don't want from the Photo Stream. 1 To touch up a photo or keep a favorite shot permanently, simply save it to your Camera Roll. iCloud stores new photos for 30 days, so you have plenty of time to connect your iOS device to Wi-Fi and

Conclusion

Keeping a complete set of your photos on your Mac is as simple as turning on Photo Stream in iPhoto or Aperture. Every new photo you take appears in a Photo Stream album just as it does on your iPhone, iPad, and iPod touch. But since your Mac has more storage than your iOS device, it automatically imports every picture from your Photo Stream into your photo library so you can edit, delete, and share the ones you want. Want to get the photos you've taken on your point-and-shoot or DSLR camera into your Photo Stream to view on all your other devices? The photos you import to your library from a camera or SD card are automatically uploaded to your Photo Stream. If you have a PC, you can auto-import and upload pictures, too. Just turn on Photo Stream, grab a camera, and start shooting. Make your photos a big deal with Apple TV. With Photo Stream and Apple TV, you can view your recent photos on your HDTV for some truly entertaining reality television. 2 So you can, say, take pictures during your daughter's softball game, then watch a photo play-by-play with the family gathered around the big-screen TV



Student Technical Article : Title - **Ipv6 - The Next Generation Protocol** Written By **SHIVHARI KAUSHAL**

INTRODUCTION

The Internet is one of the greatest revolutionary innovations of the twentieth century. It made the 'global village utopia' a reality in a rather short span of time. It is changing the way we interact with each other, the way we do business, the way we educate ourselves and even the way we entertain ourselves. Perhaps even the architects of Internet would not have foreseen the tremendous growth rate of the network being witnessed today. With the advent of the Web and multimedia services, the technology underlying the Internet has been under stress.

It cannot adequately support many services being envisaged, such as real time video conferencing, interconnection of gigabit networks with lower bandwidths, high security applications such as electronic commerce, and interactive virtual reality applications. A more serious problem with today's Internet is that it can interconnect a maximum of four billion systems only, which is a small number as compared to the projected systems on the Internet in the twenty-first century.

Each machine on the net is given a 32-bit address. With 32 bits, a maximum of about four billion addresses is possible. Though this is a large a number, soon the Internet will have TV sets, and even pizza machines connected to it, and since each of them must have an IP address, this number becomes too small. The revision of IPv4 was taken up mainly to resolve the address problem, but in the course of refinements, several other features were also added to make it suitable for the next generation Internet.

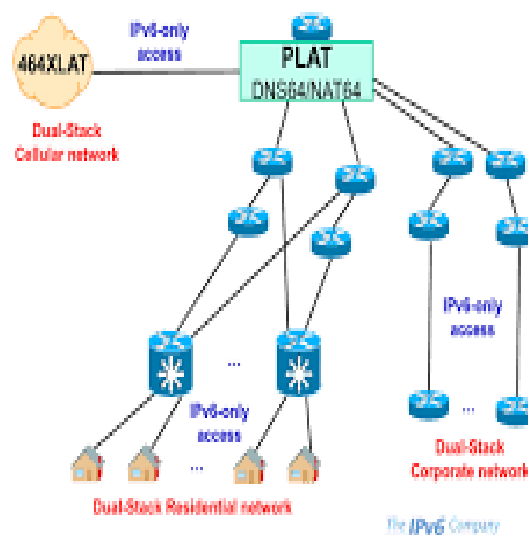
This version was initially named IPng (IP next generation) and is now officially known as IPv6. IPv6 supports 128-bit addresses, the source address and the destination address, each being, 128 bits long. IPv5 a minor variation of IPv4 is presently running on some routers. Presently, most routers run software that support only IPv4. To switch over to IPv6 overnight is an impossible task and the transition is likely to take a very long time.

However to speed up the transition, an IPv4 compatible IPv6 addressing scheme has been worked out. Major vendors are now writing softwares for various computing environments to support IPv6 functionality. Incidentally, software development for different operating systems and router platforms will offer major jobs opportunities in coming years. However to speed up the transition, an IPv4 compatible IPv6 addressing scheme has been worked out. Major vendors are now writing softwares for various computing environments to support IPv6 functionality. Incidentally, software development for different operating systems and router platforms will offer major jobs opportunities in coming years.

IPv4 and IPv6 Comparison

IP version	IPv4	IPv6
Deployed	1981	1999
Address Size	32-bit number	128-bit number
Address Format	Dotted Decimal Notation: 192.0.2.76	Hexadecimal Notation: 2001:0DB8:0234:ABCD: 0123:4567:8901:ABCD
Number of Addresses	$2^8 = 4,294,967,296$	$2^{128} = 340,282,366,920,938,463,463,374,607,431,768,211,456$
Examples of Prefix Notation	192.0.2.0/24 10/8 (a "0" block = 1/256th of total IPv4 address space = $2^8 = 16,777,216$ addresses)	2001:0DB8:0234::/48 2600:0000::/12

IPv6-only access Networks



An IPv6 address

(in hexadecimal)

2001:0DB8:AC10:FE01:0000:0000:0000:0000

↓ ↓ ↓ ↓ |
2001:0DB8:AC10:FE01:: Zeroes can be omitted

0010000000000001:0000110110111000:1010110000010000:1111111000000001:
0000000000000000:0000000000000000:0000000000000000:0000000000000000

TECHNICAL TALK

Guest Lecture on Transaction Processing in Database Management Systems by **Dr.T.Thammireddy**, HOD, CSE, GITAM University. on 22-12-2016.

He is very well explained the principles of transaction management, Concurrency Control, Serialization and read and write controls for transaction Processing

Guest Lecture on Software Engineering by **Dr. C Shri Nagesh**, Trainer, INFOSYS.

On 21/12/16. He took an expert lecture on Software Engineering Fundamentals wherein he highlighted novelty of software engineering in life cycle of software product development, he explained various aspects related to use of software engineering.



He focused on:

- | | |
|---------------------------------|----------------------------------|
| 1. Requirement Specification | 09. Introduction – The Software |
| 2. Software Testing | 10. Lifecycle |
| 3. Cohesion and Coupling | 11. Requirements Collection |
| 4. Software Architecture | 12. The Planning Game |
| 5. Software Quality | 13. Responsibility-Driven Design |
| 6. Modeling Behavior | 14. Software Validation |
| 7. User Interface Design | 15. Requirement Analysis |
| 8. Modeling Objects and Classes | |

TECHNICAL SEMINAR ON 'INTERNET OF THINGS'

Areas of discussion were:

- | | |
|-------------------------|----------------------------------|
| 1. Basics of IOT | 4. Trends and Characteristics |
| 2. Importance of IOT | 5. Future development in IOT |
| 3. IOT based Smart city | 6. Enabling technologies for IOT |

Students spoke on “IoT at a glance” and highlighted the scope of the topics, its applications, future impact and spoke about several courses and job opportunities in that area. The session had an interactive QA session wherein the students quizzed him on several issues ranging from the basics, technology aspects of IoT, applications to a common man.

Discussions regarding the future of IoT in India and abroad took place between the students and the speaker. Queries were regarding the involving of devices in IoT like sensors, network, and connectivity and so on. They are also added peoples use IoT word as per their convenience. Hardware people think that only connecting devices to Internet means IoT or only wireless sensors network means IoT, on the other end software people think that only app. development or software means IoT.

One particular query was regarding the possible penetration of IoT in rural India. The presentation of the lecture was excellent, with the lecture organized into slide showing methodical divisions in the IoT area, such as the technical spectrum, the marketing issues on IoT and so on. The presentation contained several videos which caught the attention of the students and made it very effective.

IoT has a bright future for at least another 20 years and the focused and determined professional in the area can make it to the top and grow with the field.

