



QIS INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTU, Kakinada)

(AN ISO 9001: 2015 Certified Institution)

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CSE DEPARTMENT NEWS LETTER

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TECHNO-FOCUS

2016-17

April to June

Principal's Message



I am happy to note that the editorial board brings out newsletter for the period April to June 2017. It is great to find a considerable number of participants in co-curricular and extracurricular activities which certainly prove that our staff and students are adequately equipped and possess necessary skill-sets to bring such laurels to the institution.

Dr G. Lakshmi Narayana

HOD's message



Am very happy that our Computer science and engineering is releasing Newsletter. It is a platform to bring out the hidden talents of students and faculty. The major strength of the department is a team of well qualified and dedicated faculties who are continuously supporting the students for their academic excellence. We have arranged several guest lectures and workshops for our 2nd, 3rd and 4th year students in this semester. The department has already applied for the NBA accreditation. I hope the NBA committee will be visiting our department in the coming semester. So let us work together for the achievement of this goal. I would like to thank all my colleagues for their tireless efforts to help the department progress at a very steady pace.

Mr. T.V.Subrahmanyam

Department of Computer Science and Engineering

The Department of Computer Science & Engineering was started in the year 2008. With an intake of 60, now total strength of the department is 480. The college conducts the examinations and the degree is awarded by JNTUK Kakinada. University incorporates latest developments in Basic Computer Science, Programming, Application development, Communication, Data mining and warehousing and allied fields in a dynamic fashion so that the student is exposed to the latest technological advancements during the course of study.

Vision of the Department

To produce highly knowledgeable computer science and engineering professionals comprising of technical skills & competence to meet the global requirements embedding with research, ethical values and societal commitment.

Mission of the Department

- Impart quality education in computer science and engineering through innovative teaching and learning methodologies.
- Conduct industry ready skill development programs to bridge the gap between academia and industry to produce competitive software professionals with research and lifelong learning.
- Inculcate team work, ethical values to make them socially committed professionals.

Program Educational Objectives (PEOs)

PEO 1: Graduates will have solid foundation in fundamentals of computer science and engineering required to solve computing problems and create innovative software products and solutions for the real life problems.

PEO 2: Graduates will have technical competence and skills to use modern and cost-effective tools and technologies and have extensive and effective practical skills in computer science and engineering to pursue a career as a computer engineer.

PEO 3: Graduates will have attributes like professionals with world class academic excellence, ethics, best practices, values, social concerns, lifelong learning and openness to other international cultures to meet the global needs.

PEO 4: Graduates will have managerial and entrepreneur skills with cross-cultural etiquettes, leading to a sustainable competitive edge in R&D and meeting societal needs.

Placements

The following final year students of our college got placed in various organizations.

S.No	Name of the Student Placed	Enrollment No	Name of the Employer	Appointment Letter Reference number with Date
1	GUDIPUDI PRINCY LATHA	13MA1A0503	Idea Labs, Hyderabad	2/4/2017
2	INUPAKUTHIKA JOGULAMBA TRIPURA	13MA1A0504	Icool Technologies, Hyderabad	2/4/2017
3	MANNEM VENKATA SRAVYA	13MA1A0505	BHARAT MATRIMONY, Chennai	12/4/2017
4	NARNE GNANESWARI	13MA1A0506	Icool Technologies, Hyderabad	2/4/2017
5	V HYNDAVI	13MA1A0511	Hexaware Solutions, Hyderabad	10/9/2017
6	SAMANTHULA PRASANNA KUMAR REDDY	13MA1A0516	Enspire Technologies, Chennai	12/4/2017

Technical Articles

TELEMATICS

THE FUTURE OF CAR NAVIGATION SYSTEM Imagine being able to find the cheapest bargain at Wal-Mart, order lunch at McDonalds, and find the quickest route from McDonald's to Wal-Mart without taking your eyes off the road, or your hands off the steering wheel? Today's automobile navigation systems don't have this kind of advanced functionality. Yet these kinds of possible scenarios are not too-far off especially with globalization and advanced technologies. It is not a question of if, but when, currently available commercial Telematics systems will be redesigned for the consumer market. Even though automobile technology has come off over profound levels, we still want for more. The current globalization scenario and competitions with equals have made us want for more. Telematics seems to be the best option for the automobile navigation system with the technicians of United States already working on it. Moreover, Research in this field is open to almost all branches of engineering and technology, especially Mechanical, Electrical and Electronics and CSE/IT. This is because the ultimate working of this system involves ideologies and basics from all the three branches. Advanced GPS-based Telematics technology is primarily deployed in commercial fleet management applications. Some of the U.S. largest companies save money by using Telematics

to monitor fuel consumption, vehicle maintenance, and driver safety. What began as a Fleet Management System to Save Fuel is Providing the Foundation for Telematics Car Technology. Telematics technology easily integrates with other systems. In addition to monitoring fuel consumption, driver safety and vehicle maintenance, Telematics-related software enhances business productivity and expands mobile communications. An article by Chris Brown (July 2008) titled "The Future of In-Car Communications" carries an insider summary of an interview with Erik Goldman, President of Hughes Telematics, who predicts advanced, interactive GPS car technology will be commonplace by 2015. According to him, automobiles will eventually have a fully-customizable personal web portal that provides a broad array of services. Furthermore, almost all activities or more which we can do with a pc and internet can be facilitated inside an automobile as such. And researchers aim that such a development will be a renovation in future of Automobile Technologies. The introduction of Voice Recognition system corroborates the basis of the fact that Telematics has already come into play. The newest version of Hughes Telematic's voice recognition software became part of the first release of Mercedes "mbrace" technology found in all 2010 or newer Mercedes-Benz models. Mbrace features integrated GPS-based emergency response, anti-theft tracking, navigation assistance, vehicle locator, vehicle info, real-time weather and traffic, plus a concierge service to book flights or go shopping. And I assure you, this is just a beginning. By 2015, it is expected that spell bounding innovations and technologies pertaining to automobiles will mesmerize consumers in a way they wouldn't even have imagined automobile to be. The most successful Telematics systems in the consumer car market will be systems that match value-added features with an easy to use interface. Consumer demand and consumer preference will consequently guide future Telematics development and ease-of-use will become a primary selling point in new models.

5G – Technology

If we look back, we will find that every next decade, one generation is advancing in the field of mobile technology. Starting from the First Generation (1G) in 1980s, Second Generation (2G) in 1990s, Third Generation (3G) in 2000s, Fourth Generation (4G) in 2010s, and now Fifth Generation (5G), we are advancing towards more and more sophisticated and smarter technology.

What is 5G Technology?

The 5G technology is expected to provide a new (much wider than the previous one) frequency bands along with the wider spectral bandwidth per frequency channel. As of now, the predecessors (generations) mobile technologies have evidenced substantial increase in peak bitrate. Then — how is 5G different from the previous one (especially 4G)? The answer is — it is not only the increase in bitrate made 5G distinct from the 4G, but rather 5G is also advanced in terms of —

- High increased peak bit rate
- Larger data volume per unit area (i.e. high system spectral efficiency)
- High capacity to allow more devices connectivity concurrently and instantaneously
- Lower battery consumption
- Better connectivity irrespective of the geographic region, in which you are
- Larger number of supporting devices
- Lower cost of infrastructural development
- Higher reliability of the communications

As researchers say, with the wide range of bandwidth radio channels, it is able to support the speed up to 10 Gbps, the 5G WiFi technology will offer contiguous and consistent coverage — “wider area mobility in true sense.”

Open Shift

OpenShift is a cloud development Platform as a Service (PaaS) hosted by Red Hat. It's an open source cloud-based user-friendly platform used to create, test, and run applications, and finally deploy them on cloud.

OpenShift is capable of managing applications written in different languages, such as Node.js, Ruby, Python, Perl, and Java. One of the key features of OpenShift is it is extensible, which helps the users support the application written in other languages.

OpenShift comes with various concepts of virtualization as its abstraction layer. The underlying concept behind OpenShift is based on virtualization.

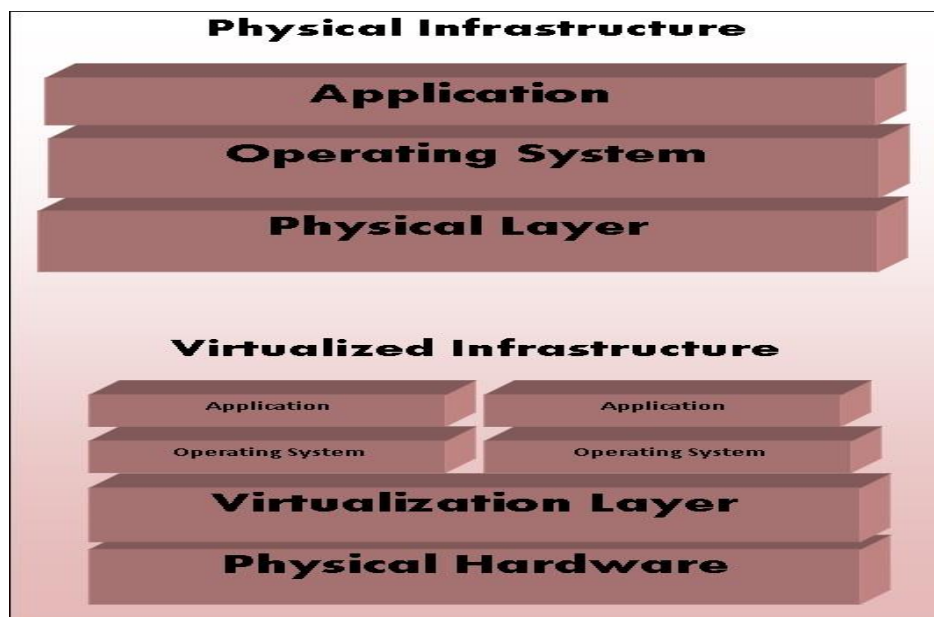
Virtualization

In general, virtualization can be defined as the creation of a virtual system rather than physical or actual version of anything starting from system, storage, or an operating system. The main goal of virtualization is to make the IT infrastructure more scalable and reliable. The concept of virtualization has been in existence from decades and with the evolution of IT industry today, it can be applied to a wide range of layers starting from System level, Hardware level, to Server level virtualization.

How It Works

It can be described as a technology in which any application or operating system is abstracted from its actual physical layer. One key use of the virtualization technology is server virtualization, which uses a software called hypervisor to abstract the layer from the underlying hardware. The performance of an operating system running on virtualization is as good as when it is running on the physical hardware. However, the concept of virtualization is popular as most of the system and application running do not require the use of the underlying hardware.

Physical vs Virtual Architecture



OpenShift is a cloud-enabled application Platform as a Service (PaaS). It's an open source technology which helps organizations move their traditional application infrastructure and platform from physical, virtual mediums to the cloud.

OpenShift supports a very large variety of applications, which can be easily developed and deployed on OpenShift cloud platform. OpenShift basically supports three kinds of platforms for the developers and users.

Infrastructure as a Service (IaaS)

In this format, the service provider provides hardware level virtual machines with some pre-defined virtual hardware configuration. There are multiple competitors in this space starting from AWS Google cloud, Rackspace, and many more.

The main drawback of having IaaS after a long procedure of setup and investment is that, one is still responsible for installing and maintaining the operating system and server packages, managing the network of infrastructure, and taking care of the basic system administration.

Software as a Service (SaaS)

With SaaS, one has the least worry about the underlying infrastructure. It is as simple as plug and play, wherein the user just has to sign up for the services and start using it. The main drawback with this setup is, one can only perform minimal amount of customization, which is allowed by the service provider. One of the most common example of SaaS is Gmail, where the user just needs to login and start using it. The user can also make some minor modifications to his account. However, it is not very useful from the developer's point of view.

Platform as a Service (PaaS)

It can be considered as a middle layer between SaaS and IaaS. The primary target of PaaS evaluation is for developers in which the development environment can be spin up with a few commands. These environments are designed in such a way that they can satisfy all the development needs, right from having a web application server with a database. To do this, you just require a single command and the service provider does the stuff for you.

Why use OpenShift?

OpenShift provides a common platform for enterprise units to host their applications on cloud without worrying about the underlying operating system. This makes it very easy to use, develop, and deploy applications on cloud. One of the key features is, it provides managed hardware and network resources for all kinds of development and testing. With OpenShift, PaaS developer has the freedom to design their required environment with specifications.

OpenShift provides different kind of service level agreement when it comes to service plans.

Free – This plan is limited to three gears with 1GB space for each.

Bronze – This plan includes 3 gears and expands up to 16 gears with 1GB space per gear.

Silver – This is 16-gear plan of bronze, however, has a storage capacity of 6GB with no additional cost.

Other than the above features, OpenShift also offers on-premises version known as OpenShift Enterprise. In OpenShift, developers have the leverage to design scalable and non-scalable applications and these designs are implemented using HAproxy servers.

Features

There are multiple features supported by OpenShift. Few of them are –

- Multiple Language Support
- Multiple Database Support
- Extensible Cartridge System
- Source Code Version Management
- One-Click Deployment
- Multi Environment Support
- Standardized Developers' workflow
- Dependency and Build Management
- Automatic Application Scaling
- Responsive Web Console
- Rich Command-line Toolset
- Remote SSH Login to Applications
- Rest API Support
- Self-service On Demand Application Stack
- Built-in Database Services
- Continuous Integration and Release Management
- IDE Integration
- Remote Debugging of Applications

Puzzle Corner

The story of four elopements says that four men eloped with their sweethearts, but in carrying out their plan were compelled to cross a stream in a boat which would hold but two persons at a time. It appears that the young men were so extremely jealous that not one of them would permit his prospective bride to remain at any time in the company of any other man or men unless he was also present.

Nor was any man to get into a boat alone, when there happened to be a girl alone on the island or shore, other than the one to whom he was engaged. This feature of the condition looks as if the girls were also jealous and feared that their fellows would run off with the wrong girl if they got a chance. Well, be that as it may, the problem is to guess the quickest way to get the whole party across the river according to the conditions imposed. Let us suppose the island to be in the middle of the stream.

Now, tell how many minimum number of trips would the boat make to get the four couples safely across in accordance with the stipulations?


Solution:





Answer: 17 trips - complying with the conditions that no young lady was to be in the company of any gentleman unless her fiance was present, and no man was to be alone in a boat, if any young lady was left alone, except the one to whom he was engaged.

Describing the young men as A, B, C, D, and their respective brides by a, b, c, d; the 17 trips of the boat can be completed as follows . . .

	Shore	Island	Over
1	ABCDabcd	--	--
2	ABCDcd	--	ab
3	ABCDd	--	a
4	ABCDcd	b	a
5	CDcd	b	ABa
6	BCDcd	b	Aa
7	BCD	bcd	Aa
8	BCDd	bc	Aa
9	Dd	bc	ABCa
10	Dd	abc	ABC
11	Dd	b	ABCac
12	BDd	b	ACac
13	d	b	ABCDac
14	d	bc	ABCDa
15	d	--	ABCDabc
16	cd	--	ABCDab
17	--	--	ABCDabcd

How to Reach QIS, Ongole, Andhra Pradesh, India.



	Nearest Airports- Vijavada, Chennai, Bangalore, Hyderabad
	Nearest Port - Chennai
	Nearest Railway Station- Ongole
	Nearest Bus Station- Ongole

- Ongole to Vijayavada-148 K.m
- Ongole to Guntur- 112 K.m
- Ongole to Hyderabad - 345 K.m
- Ongole to Vizag 500 K.m
- Ongole to Kurnool - 258K.m
- Ongole to Nellore- 128K.m
- Ongole- Tirupati- 281K.m
- Ongole to Chennai- 308 K.m
- Ongole to Bangalore- 510 K.m

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