SRM VALLIAMMAI ENGINEERING COLLEGE

COMPUTER SOCIETY OF INDIA

STUDENT BRANCH

MAGAZINE - 2021

VOLUME - I ISSUE - III

LimeLight

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About SRMVEC CSI-SB :

SRM Valliammai Engineering College Student Branch was started in the year 2007. For the past 14 years, SRMVEC organised various events and contributed many technical articles to CSI. It is one of the most active student branches of CSI. It has received the 'Best Accredited Student Branch Award' for four consecutive years since 2015 at Annual CSI Convention from Computer Society of India. Currently there are more than 370 Student members in the student branch.

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PREFACE

It gives us great pleasure to release the third issue of volume one ‘LimeLight’. The SRMVEC CSI-SB members have been enthusiastic to show their talents. This magazine gives desired opportunity and platform to publish the students’ thoughts and creativity. We strongly believe that the purpose of the knowledge is fulfilled only when it is transferred to another person. In this manner this magazine would serve as a collection of knowledge. With the technology growing leaps and bounds day by day, it is very important for the people to be aware of the on-going development in the technology. We appreciate every who stood with us in this venture.

Regards
SRMVEC CSI-SB Team

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EVENTS

Technical Meme Contest

The SRM Valliammai Engineering College Computer Society of India Student Branch organized a competition ‘Master Minds’. There were around 20 students participated and the registration was open till 27th January, 2021. The creativity and innovative ideas of the students were showcased in this technical meme contest. The memes submitted were evaluated based on creativity, humor, uniqueness and originality. The top 5 creative images were merited and posted in SRMVEC CSISB instagram page. **Gokul S, Jagadish Dhanraj Tideke, Muthamiz Sekvan J, Harini C, Balasubramanian Kalyan** won the first five places in the contest.

Quitude – 2021 (Aptitude Contest)

The SRM Valliammai Engineering College Computer Society of India Student Branch organized a QUITUDE – 2021 Aptitude contest on 27thFeburary, 2021. More than 80 candidates participated in the contest. The contest was a timed online test that tested the candidates on their aptitude and logical reasoning skills. This helped the candidate to anticipate the question in competitive examinations. The top performers are **Sri Priya K**, Sairam Institute of Technology ,**Devi Shree M**, Sairam Institute of Technology, **K Snega** - SRM Valliammai Engineering College, **Roopesh Kumar G** - Adhiparasakthi Engineering College, **Harishankaran B** - SRM Valliammai Engineering College. The top performers were awarded with certificate of merit.

EVENTS

Women's Day Special Webinar Women In Working World

The SRM Valliammai Engineering College Computer Society of India Student Branch organized a Women's day special webinar Women in Working World on 8th March, 2021 (6.00 pm to 7.00pm). More than 35 candidates attended the webinar. The speakers were **Miss. Maheshwari Mohan,** Senior Technical Associate, Maveric Systems and **Miss. Sadhana Sundar,** Senior Technical Associate, Maveric System. The candidates got to know about what women face in the workplace and also the speakers suggested tips to overcome the hardships they might face in the future. The students got the opportunity to speak out their opinions and ideas about women in workplace. Everyone enjoyed the session as it was interactive.

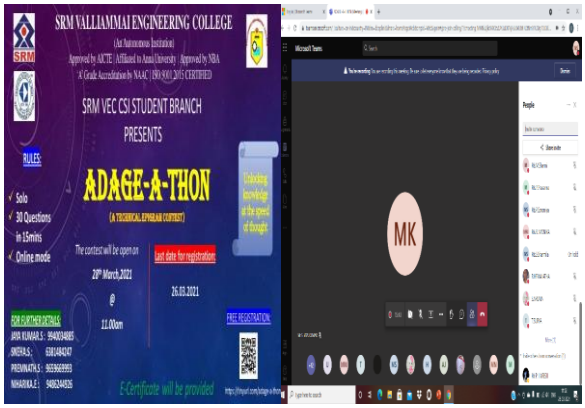
Motion Graphics

The SRM Valliammai Engineering College Computer Society of India Student Branch organized a competition 'MOTION GRAPHICS'. More than 25 students registered. The registration was open till 19th March 2021.In this contest we have asked to make an animated video related to the given topics like Robotics, Artificial Intelligence, Social Media and you, Wi-fi and Environmental protection. The creativity and innovative ideas of the students were showcased in this contest. The results were evaluated based on the innovation, creativity, knowledge on the topic. The first five places was won by **Zynab. M** – Sri Sairam Engineering College, **Ayswariya. S** - SRM Valliammai Engineering College, **Bijjam Srilekha** – Panimalar Institute of Technology, **Thomas. A** – Loyola College, **Dharini. P** - St. Joseph's College of Engineering.

EVENTS

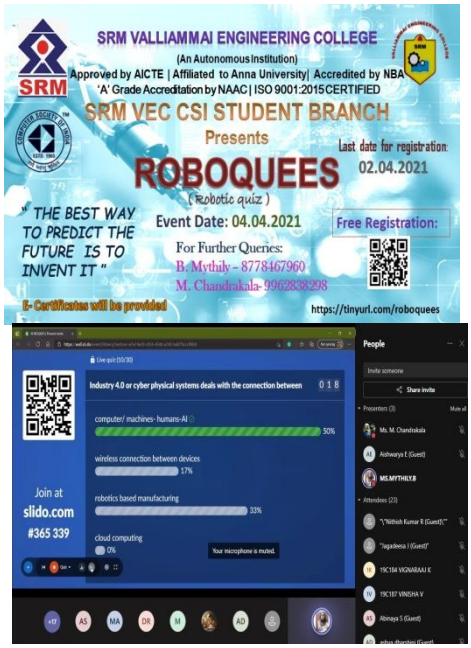
Adage – A – Thon

The SRM Valliammai Engineering College Computer Society of India student branch organized a competition ‘ADAGE-A-THON’. More than 30 students participated in the competition. The registration was open till 26th March 2021 and the event was held on 28 th March 2021. In this contest more than 30 interesting and creative questions were put forward to the participants. Most of the questions in the event like epigram, rearrange, spot the error were MCQs which encourages the students to particpated eagerly. The creativity and innovative ideas of the students were showcased in this contest. The evaluation was done based on the highest marks. The first five places was won by **Utkarsh Girdhari Saboo** – SRM Kattankulathur University, **Ayaan Gouse** - SRM Valliammai Engineering College, **ANTO JOEL V** – **Francis Xavier** Engineering College, **Sai Sunitha G** – SRM Valliammai Engineering College, **Sivaram Narayan** - Sahrdaya College of Engineering and Technology.



Roboquees

The SRM Valliammai Engineering College Computer Society of India Student Branch organized a robotic quiz competition ‘ROBOQUEES’. More than 150 students registered in the competition. The registration was open till 2ndApril 2021. The event was conducted on 4th April 2021 as two slots and three winners were selected for each slot based on MCQ marks and the timing. The MCQs were based on Robotics and AI. The winners were **Jagdeshwar.P** (SRM Valliammai Engineering College ,**R.Parthasarathy** (SRM Valliammai Engineering College), **Kumutha Nandhini B** (Coimbatore institute of technology), **V. Vinisha** (St. Joseph's College Of Engineering), **Shree Ruthi Rakshana R** (Coimbatore institute of technology) , **Jagadeesan J**(SASTRA University).



An Analytical Study On Cloud Computing

ABSTRACT

Cloud computing has come from the age since amazon's rollout of the first of its kind of cloud services in 2006.Cloud computing is developed rapidly in this upcoming generation and has excellent promising technology. Cloud computing isa internet based computing where it can share many information resources and portable devices in which the software are provided to terminals. It is the combination of grid computing and distributed computing. It's aim is to build and forecast sophisticated service environment with low cost computing entity.

INTRODUCTION

Cloud computing is on high demand. Cloud computing is especially used in data storage and storage and computing the power. It is used in IT industry in the development of hardware to software. The core concept of cloud computing is to reduce burden for the users. Eventually it is used in the wide variety of devices including PC's, laptop, smartphones etc. It is popular among business people and students for their productivity, speed, performance, etc. Some companies provide cloud services which helps the users to create application and store files and those data can be accessed through internet. cloud computing can be used in both in private sector and public sector.

CLOUD COMPUTING

Cloud computing is named as such the information is being accessed and found remotely in cloud as virtual space. Public cloud server provide services over the internet for free, but private cloud server only provide services to certain number of people. There is also hybrid server which combines both public sector and private sector.

TYPES OF CLOUD COMPUTING

1) SOFTWARE AS A SERVICE(SAAS)

SAAS is also known as "On Demand Software" .It is a software model in which all the services are hosted by a cloud server. These services are end- users in which they does not want to install any software on their devices to access the services.

Figure 1 : SAAS services

It provides various buisness startup to start the buisness. This services includes enterprise resource planning(ERP), customer relationship management(CRM), billing and sales. SAAS also provide

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various social networking sites as public server because for this convience and handles all the general public information. SAAS provide pricing based on monthly fee or a annual subscription to access buisness functionality at low cost. They are offered one to many model means for single instance of application is shared by multiple users.

2) INFRASTRUCTURE AS A SERVICE (IAAS)

IAAS is also known as "HARDWARE AS A SERVICE(HAAS)". It allows customer to outsource the infrastructure such as servers, networking, processing, storage, virtual machine and other resources. These resources use on internet for pay-as-per model. It allows customer to access via internet.

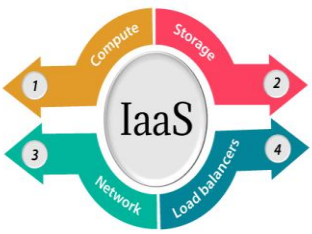

Figure 2 : IAAS services

IAAS also provide the following services:-

1)COMPUTING - Computing acts as a server in virtual processing units and main Memory for the end users.

2)STORAGE - IAAS provide many storage process as they have only one end in User services. It provides backup storage for storing files.

3)NETWORK - Network as a service(NAAS) provides networking component such as router , switches and bridges for virtual memory system.

4)LOAD BALANCES - It provides load balancing capability for the infrastructure layer

3) PLATFORM AS A SERVICE(PAAS)

Platform as a service provides a runtime environment. This allows programmer to easily create , test, run and deploy web applications. In this PAAS we can easily apply the services provide on pay-as-per use basis. So there is no need to worry about infrastructure management. PAAS includes server , storage and networking infrastructure. It also includes middle ware development tools, database management system , business intelligence as their platform to support web life cycles .

Figure 3: SAAS services

DEPLOYMENT MODEL OF CLOUD COMPUTING

1)PUBLIC CLOUD

It is also called as external cloud . In this public cloud the clouds are

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available for the general public sectors which is being created and stored in the third party servers. In this service infrastructure which belong to service provider which manage administrator to provide offers like they can manage for free or pay-as-per use basis via internet. This public cloud has low privacy concerns .

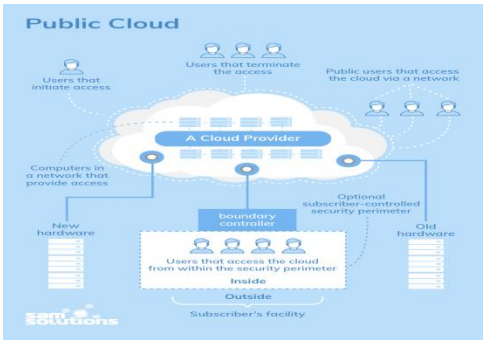

Figure 4: Public Cloud

ADVANTAGES OF PUBLIC CLOUD

1)HASSLE FREE INFRASTRUCTURE

Though cloud computing is a third party server the infrastructure of cloud is convenient and you doesn't need to develop any software and maintain that because the server itself provide you those things and the setup for this is uncomplicated.

2) HIGH SCALABILITY

Cloud has a low cost and convenient to use . It can be easily extended and has a capability to increase the requirements.

3) REDUCED COST

They are having two ways to use their infrastructure. They can be either free of cost or pay-per-use terms . so you don't want to invest your hardware or software .

2) PRIVATE CLOUD

It is also called as internal cloud. There is not much difference between public cloud and private cloud. In private cloud there can't be easily accessible to all other companies or cloud servers. They can have only one specific company to own a private cloud. Compare to public cloud , private cloud has more wider opportunities for customizing the infrastructure of the companies environment . multiple public cloud servers providers include amazon, IBM, cisco, dell and red hat.

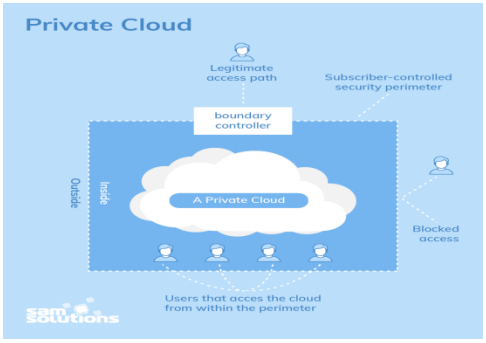

Figure 5: Private Cloud

ADVANTAGES OF PRIVATE CLOUD

Flexible development and high scalability which allows companies to customize their infrastructure in their own requirements with enhanced security, privacy and reliability.

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3) COMMUNITY CLOUD

This is also called as group cloud . A community cloud model is largely the private one where there is only one difference is that the set of users ,where only one company can access their cloud with similar background in which it can easily access their infrastructure related to community cloud. In all participating organization it have uniform security privacy and performance requirements . A centralized project development in community cloud can managed and share the user infrastructure and cost must be shared by all the users.

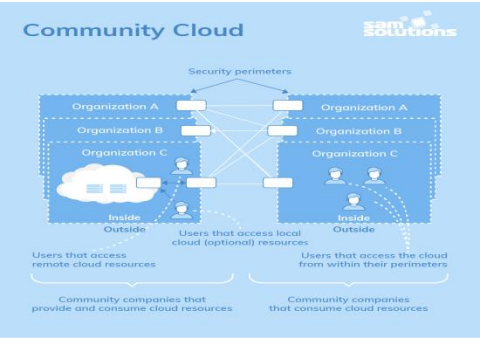

Figure 6: Community Cloud

ADVANTAGES OF COMMUNITY CLOUD

1. The cost of community cloud is much lower when compared to other cloud.
2. Lot of improvement have done to improve security, privacy and reliability.
3. Easy to share all the data's of cloud and their collaboration

4) HYBRID CLOUD

A hybrid cloud is also called a mixed cloud. This is the combination of above mentioned three clouds namely (public, private and community). It allows other company to mismatch the requirements and select what requirements suits to them and fix them. The hybrid cloud deployment model not only safeguard but also controls important assets in both cost and resource in a effective way.

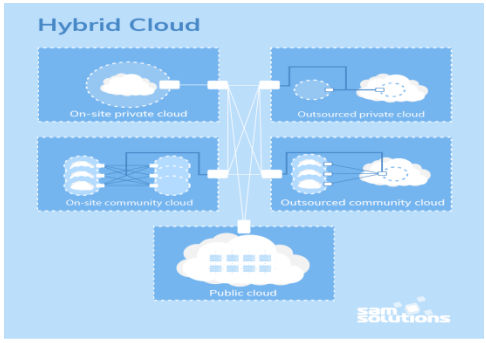

Figure 7: Community Cloud

ADVANTAGES OF HYBRID CLOUD

1. Improved security and privacy
2. Enhanced scalability and flexibility
3. Reasonable price

IMPLICATIONS AND ISSUS OF CLOUD COMPUTING

Cloud computing is a new word but the concept behind this is very old. Cloud computing is a internet based computing where shared resources software and information are provided to computers. Since cloud computing is internet based it has major implications and issues .

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1) Security

Cloud computing security consists of set of policies, controls and procedures to safeguard all the data which is stored in cloud. This is mainly used to regulate and protect customer wishes and their cloud privacy also. Cloud security can exactly be the customer needs and configured among with their business. The way that cloud security is delivered will depend on individual provider on the cloud security provider. Cloud security is much more important as data centers and business processing, selecting right security to the cloud will make your business move on the best in future.

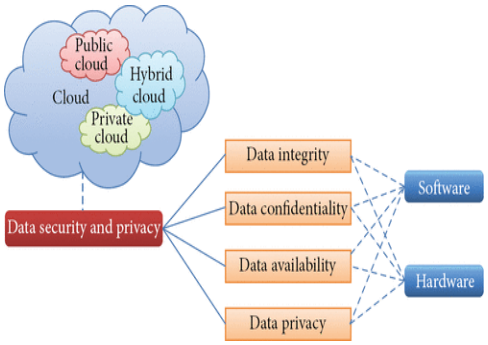

Figure 8: Issues of Cloud Computing

2) Reliability

Cloud computing is reliably flexible and more scalable and cost reliable . It is very hard to imagine more infrastructure in cloud computing which is flexible. In most use cases they can save a considerable amount by migrating their cloud due to pay only for cloud. This can make the cloud server more slow and become damaged .The pay only for pricing concept is reverse of IT infrastructure and can quickly spiral out of control.

3) Performance

Cloud computing performance plays a vital role all over success of cloud computing. It is very important for today's demanding business requirements . cloud adoption business has performance obstacles and there are many suggestions given to overcome this obstacles

CONCLUSION

Cloud computing is one of the core platform for computer science and information technology in this present world. There is no doubt that cloud computing may turn into emerging development in future. For cloud computing it provides profitable lies in economical scale with high profit and income. Many challenges have overcome to solve the issues arrises during the cloud computing. This computing also tells us about the cloud evolution and many services and development models may be this become trend in future. This computing era is to solve and prevent the existing issues and implications for maximum necessity required.

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The Value Of Remote Patient Monitoring And The Powerful Impact On Future Telemedicine

INTRODUCTION

You know reimbursement has really improved from center for medicine services for chronic care management and remote patient monitoring in the last few years. Telehealth waivers during covid really accelerated the adoption of remote patient monitoring and its reimbursed for both chronic and acute condition.

EVOLUTION

The evolution of remote monitoring is really quite remarkable in a

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large part has been driven by the consumer. electronics market. As we know so much of what we do in our lives today in our society has been driven by companies like google Microsoft, apple, and so on and they are wirelessly connecting training enabling video linking and analyzing our patients and this is what's been behind remote monitoring it really is the end points that the patients or the members or the consumers have driving information and this was the purpose of remote monitoring and it goes way back to around 2000 or before. But we really saw it emerge in full form around 2015.

DIFFERENT FORMS

Telemedicine came about in three different forms in, where the traditional form of telemedicine such as rural clinic, emergency care, telescope, radiology, all happened and started around 2000 and have been maturing since then. This concept of live video visits straight to the customer or the members or the patient's phone came in full force in 2015 and the newest form came in 2018. This is really the form of remote patient monitoring and its very different from the others. Its asynchronous, it involves a lot of patient generated health data.

It typically has people screening the data and how you move the data and analyze it is very important and all three forms of telemedicine work together but I certainly feel that in the future and many feels that remote monitoring has enormous potential to really dominate the field of telemedicine and provide longitudinal interactions for primary care subspecialty care, post-acute care, and that's why its so exciting is the potential of it.

HOW IT WORKS

In remote monitoring has a lot of different features you can ask survey queries for post-acute care or research. You can push educational videos that patients watch when they are ready to this is what you do after discharge, this is how you take this infusion, this is what it's like to come see in clinic there's even a help button please call me back they can enter self-entered data such as weight or blood pressure or glucose level you can even do video calls but again its primarily designed to be asynchronous and its scalable and really meant to be commoditized as well in large part driven by consumer electronics.

REMOTE MONITORING

It's like an air traffic control tower the monitoring systems don't really care what type of plane or how many members or where the plane is going it's trying to coordinate all this and provide hypertension monitoring to primary care post-acute copd monitoring looking at

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congestive heart failure management for a payer. So, it's really multi faced and meant to be giant asynchronous care coordination team.

REMOTE MONITORING TECHNOLOGY

Behind all the remote monitoring was the evolution of the technology in being able to use multiple different forms of technology. The monitoring can bring your own device it can have tablets or it can have kits so there's range from your own phones or tablets or computers that a patient or a member might buy to a tablet they might have or one you could ship them or you can design kits that come pre packaged in a box that might have a blood pressure, or a pulse rate at a scale. They open up the box they turn it on they have a miniature clinic at home it communicates with a hospital or a clinic using cellular networks. Again it meant to be easy asynchronous at home and mobile but again the goal here is to have a very easy way for patients or members to interact with their devices.

REMOTE MONITORING CLINICAL WORKFLOW

More than the technology is the clinical workflow how do you drive monitoring and this is where monitoring really has been growing up in the last decade. It's the business need its how you tie it together how you design the clinical workflow interfaces with doctors, nurses, care management team. Primary care some specialty care and you have to look at the clinical and business need and to try to trigger who needs to be on the program how do you enroll them because if you put everybody on the system your call center could become overwhelmed with the amount of volume that comes in and then you have a pathway is it a bring your own device or do you send them a kit. The kit is more controlled its more expensive and its more equipment you have to get back the bring your own device also may be less expensive more self-directed but it might be difficult for them to set up but each one has its own pulses and minuses in amongst all of this technology is a call center of experts who should be watching and can be watching the data and managing some of the logistics and technical problems but developing pathways or clinical programs is important so it's a very scripted meaningful experience.

REMOTE MONITORING OPERATIONS

Behind all this your technology your clinical design, its really this whole operational model that supports it and as you will see that this design of a platform as a service is very important and how do you bring it all together and the

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platform as a service model is a very effective one to use it has a centralized operational team. There's data flow, vendor, hardware, and there's much that goes into this but the goal is when you take this to the front lines of your prayer care management team or your clinical team is to make the interface with the complexity of this is simple as possible its like getting in your car turning it on and driving you don't want to know about the engine the transmission and the type of electrical systems it has you just want to turn it on and drive it but there's a lot that goes into this platform which really was evolving up until the covid era there are many pieces to these platform the durable medical equipment marketing the legal implications has been evolving the last decade and really worked extensively trying to get this platform as a service model together to make it simple and effective for people to use and the consumer electronics are really enabling this fundamentally as time went by.

CONCLUSION

Remote patient monitoring systems are especially useful because they let the patients live their life while at the same time afford constant medical attention. The need for visiting the clinic is pushed to only deserving cases. Offline or online RPM devices are effective.

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Programming Language

INTRODUCTION

A programming language is a notational system created to interact between human begin and machine. The notations can be understood both human and machines. The programming language has syntax and the elements have semantics.

TYPES OF PROGRAMMING LANGUAGES:

There are different types of programming languages like:

- C
- C++
- Java
- Python

C language

C program is successor to programming language.It is first designed by Dennis Ritchie and developed by Dennis Ritchie and Bell Labs and released in the year 1972.It has been applied to reimplementing the kernel of the UNIX programming language.In the year 1980 the C language became popular and it is being used worldwide as a programming language.

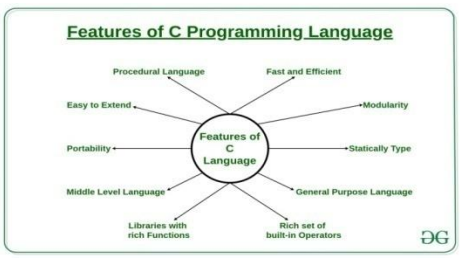

Figure 1 : Features of C Programming

C is a procedure language, and it has been developed to compile low –level access to memory and the languages constructs the map efficiency to machine instructions. It has been found used in applications coded in assembly language.Applications that includes operating systems and so many application software's for computer that ranges from supercomputers to PLC and embedded systems.

C++

C++ is also a programming language created by Bjarne strousstrup and c++ is just an extension of c programming language. Now the language has object-oriented,generic, and functional features and low-level memory manipulation has also been added. It has been almost implemented as a compiled language. It has been available on many platforms like Free Software Foundation, LLVM, Microsoft, Intel, Oracle and in IBM.

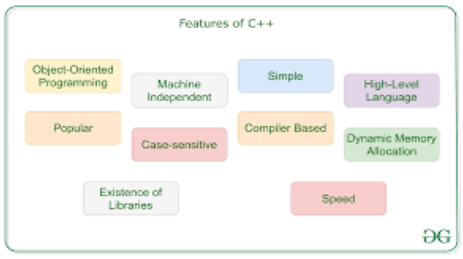

Figure 2 : Features of C++ Programming

C++ was designed with an orientation towards system programming and embedded. C++ is a has also been found useful in many other contexts, with key strengths being software infrastructure

Programming Language

and resource applications, including desktop applications, video games, serves, (ex: e-commerce, web search, database), and performance critical applications like telephone switches and space probes.

Java

Java it is a multi-paradigm: generic, object oriented programming language (class based), imperative and reflective. Java is designed by James Gosling and it is developed by oracle corporation. It is first appeared on May 23,1995 i.e. 25 years ago.

Figure 3 : Features of Java

Java is class based programming language that is designed to some implementation. It is a general-purpose programing language intended to let application developers write once run away(WORA) means complied java code can run on all platforms that support Java without the need for recompilation. The applications present in Java are compiled to bytecode that can run on any Java Virtual Machine(JVM). The syntax of Java is similar to C and C++ programming language but has some fewer low-level facilities either of C and C++.

Python

Python is a multi-paradigm: object-oriented, procedural(imperative),functional, structured, reflective. It is designed by Guido Van Rossum and it is developed by python software foundation and it is first appeared on February 1991,i.e, 30 years ago.It is working on OS like Linus, macOS, windows 8 etc..

Figure 4 : Features of Python

Python is a dynamically-typed and garbage-collected. It also supports programming paradigms, including structured, object-oriented, and functional programming. Python is often described as “batteries included” language due to its standard library. Python is a combination of reference counting and cycle-detecting garbage collector for memory management. Unlike other languages, it does not use curly brackets to delimit block, and semicolons after statements are allowed but are used rarely.

Programming Language

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Fundamentals Of Cloud Computing

Abstract

Cloud computing is the recent emerging technology becoming one of the keywords of the IT industry. Cloud computing is typically defined as a type of computing that relies on sharing computing resources rather than having local servers or personal devices to handle applications. In cloud computing, the word cloud is used as a metaphor for 'the Internet,' so the phrase cloud computing means "a type of Internet-based computing," where different services – such as servers, storage and applications – are delivered to an organisation's computers and devices through the Internet.In this article let's discuss about the basics of cloud computing.

Cloud Computing Definition

Cloud computing is mainly to deliver, on demand computing services which includes storage, database, software, Hardware and intelligence via internet which offers faster innovation, flexibility over resources and economic on scale. It is mainly based on pay as you go basis. This on demand delivery of IT resources is to order and receive your package on time irrespective to the size of the file. Pay as you go is a network based pricing strategy where the customers pay for what they want and what they use on transaction basis.

Benefits

We need not need to buy servers any more, or updating applications or operating systems, or decommissioning and disposing of hardware or software when it is out of date, as it is all taken care by the supplier. Think about IT resources cloud computing is a big shift from the traditional way businesses. The benefits

Fundamentals Of Cloud Computing

•will be varying for each and every cloud providers but the fundamental benefits are

1.Cost

It reduces the capital expenses of buying hardware, software also other major expenses which we spent on other physical server. It reduces the cost that IT experts spent for managing the infrastructure

2.Speed

Most of the cloud computing services provides self service and on demand, so large amount of resources can be ordered or received on time that too with a single click. It is so flexible for all kind of business. clouds deployment occurs in minutes, the time taken decreases and the speed increases so the completion of work gets faster

3.Global Scale

cloud can be used by anyone at any place. The main benefit of cloud is its ability to scale elastically. The computing power, storage, bandwidth or the geographic location isn't a matter when cloud computing service is considered. Even many members could access the same cloud server at the same time but that's not going to affect it. You could instantly access globally without any interruption.

4.Security

Cloud offers a set of terms and policies which strengthen the security posture. Using cloud, helps you to secure posture. Using cloud, helps you to secure and protect the documents and other important information of your businesses. The Companies protective details were kept secured with cloud computing.

5.Reliability

Cloud computing keeps a backup for each and every data that we make. whenever we tend to loose a particular data due to any kind of disaster or any issue, recovery and continuing the business will be easier and less expensive because the data is available in multiple redundant sites on Cloud provider network.

6.Performance

The cloud computing services are regularly upgraded to the latest version of the cloud which is faster and uses the hardware efficiently. This is more useful for single corporate datacenter because it reduces the network latency for any kind of application. Since the speed is higher the time taken will be less so the performance will be good.

7.Productivity

On site datacenters require lot of "racking and stacking". Hardware setup, time consumption and other management needs were removed for IT teams so they could spend their time only for improvising their business goals.

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Fundamentals Of Cloud Computing

CHARACTERISTIC OF CLOUD COMPUTING

1,Available on demand
2.Accessible from a network
3.Resource pooling
4. Elastic stability
5.Measured services
6.Service level agreement
7.Multitentancy

TYPES OF CLOUD COMPUTING

There are three different ways to deploy cloud service:

1.PUBLIC CLOUD

Public cloud were owned and operated by the third parties cloud service providers which deliver their computing resources over the internet. In this model allusers can access a large pool of computing power over the internet. In a public cloud all hardware, software and other supporting infrastructure is owned and managed by cloud provider. We could access and managed the public cloud using a web browser. It is often used for less sensitive applications because they have enough space capacity that they can easily cope if any particular customer needs more resources. Its comparatively not more secure because of third party accessibility. g-mail is an example for public cloud. Public cloud is for making them available to anyone who wants to use or purchase them. They may be free or sold on-demand, allowing customers to pay per usage according to the CPU cycles, storage or bandwidth they consume. Using public cloud the companies can save themselves from expensive costs like purchasing, managing and maintaining on premises hardware and application. Every employee of an company can access the same application irrespective to the branch or type of an office using the device of their choice as long as they could access their internet. But security is concerned private and hybrid cloud is secured than public cloud. Public cloud offers multi tenancy.

2.PRIVATE CLOUD

A private cloud is a computing service which is offered either by internet or internal network or to the selected users unlike public cloud. Its also called as internal or cooperate cloud. How to use a specified hardware configuration and specification on our needs, can be resolved by the introduction of the private cloud which fetches the hardware as per the requirements of an application. The private cloud means using a cloud infrastructure only for one customer or a dedicated organization and making a condition that not to share with others. This is mainly includes self- service, scalability and elasticity with the additional control and customization available from dedicated resources over a computing infrastructure hosted on premises. The private cloud provides high level security and privacy for

Fundamentals Of Cloud Computing

the organization. There are many Companies that offers the private cloud
the companies that offers private cloud services. Private cloud offers single tenancy because the data is been shared to single organization or company which is stored in the cloud. In private cloud the data centre location is inside the organizing network not on the public network or on the internet. For the cloud service provider the organization has to have their administrators inside the organizations where the private cloud is to be accessed it from. The organization offers the hardware, it buys all physical servers on which the cloud is built. This makes the private cloud more expensive. if we take expenses under consideration hardware and network must be provided by the organization that is the company which is requesting for the infrastructure and hence it becomes expensive for the client. If the organization is looking for the need of private service they have to look for companies like VMWARE, DELL, ORACLE, CISCO. Private cloud is more secure and safe.

3.HYBRID CLOUD:

The main reasons for choosing hybrid cloud include disaster recovery planning and the desire to avoid hardware when expanding their existing data centre.how to handle high peak traffic this problem is resolved by introducing hybrid cloud with this you could manage the high peak traffic cloud. hybrid cloudmeansit's a combination of private cloud and public cloud based on the purpose and requirement. Itsbased on cloud native approach. There are many companies that offers the hybrid cloud services that is dedicated to a particular company or an organization. In that IBM is one of the companies that offers private cloud services. In hybrid cloud, the data stored in a public cloud is multi- tenant and the data stored in private cloud is kept safe and private witch is single tenant. If you take it here the data's which the client wants to keep safe he could put under the private else client keeps under the public cloud service. Both hybrid and public cloud service comes under multi tenancy. When exposure is taken under consideration in case of hybrid cloud if the service running on private cloud, administration can be accessed only by the organization if the service is public cloud service then anyone can access the service running on a public administration. In hybrid cloud when data centre location is private its inside the organization network if its public anyone could access using any network or internet. In Cloud service provider organization operates the private cloud whereas the cloud service provider manages the public cloud it is that the user can be outside the organization to access the public cloud and inside the organization to access the private cloud. The organization provides the hardware for the private cloud whereas the cloud service provider provides all the hardware infrastructure for the public cloud. In case of expenses the pricing is

Fundamentals Of Cloud Computing

between intermediate between the public and private since the organization must provide hardware and network for private cloud if they want private cloud then it services that is dedicated to a particular company or an organization. Dell is one of becomes expensive whereas if they want to access public cloud then the cloud service provider does all the installation for the cloud so the cost is moderately fair. If the organization is looking for the need of hybrid service they have to look for companies like amazon, hp, google and Microsoft.

DEPLOYMENT

Cloud deployment refers to the enablement of SaaS (software as a service), PaaS (platform as a service) or IaaS (infrastructure as a service) solutions that may be accessed on demand by end users or consumers. A cloud deployment model refers to the type of cloud computing architecture a cloud solution will be implemented on. Cloud deployment includes all of the required installation and configuration steps that must be implemented before user provisioning can occur.

TYPES OF CLOUD SERVICES:

There are three types of cloud services:

- IAAS[Infrastructure as a service].
- PAAS[Platform as a service].
- SAAS[Software as a service].

1. IAAS[Infrastructure As A Service]

Users who are incapable affording hardware or other resources have the like data, middleware, runtime and also the ability to create their own application can use the service provided by the cloud. IAAS is also known as Infrastructure As A Service. This IAAS provides four type of resource mainly data storage, servers, virtualization, network. Since we are using virtual environment, multiple users can access simultaneously. This service Can be accessed by system administrative. Therefore this service mainly on computing architecture and infrastructure.

2. PAAS[Platform As A Service]

This service is made up of a programming language execution environment, an operating system. A web server and a database. Encapsulate the environment where users can build compile and run their programs without worrying of the underlying infrastructure. In this model, you manage data and the application resources are managed by the vendor. The service can be accessed only the by members of the company. The example google app engine, Heroku,force.com.

3. SAAS[Software As A Service]

SAAS is an independent platform. We don’t need to install the software on your PC. It runs a single instance of the software. Itsan On Demand service. pays

Fundamentals Of Cloud Computing

per use of application software to users. Its available for multiple end users. cloud computing is comparatively very cheap. Computing resources were managed by the vendor. Its accessible via a web browser or lightweight client applications. As said this service can be accessed by end users the example are G-mail, play store, google docx.

CHALLENGES FACED BY CLOUD:

There are many challenges faced by the cloud but mainly faced 10 challenges were listed below:

- Security issues
- Cost management and containment
- Lack of resources/expertise
- Governance/Control
- Compliance
- Managing multiple clouds
- Performance
- Building a private cloud
- Segmented usage
- Adoption
- Migration

CONCLUSION

In this article, we saw about cloud computing and various characteristics of it. Since cloud computing has many types, it provides various facilities which can be utilized accordingly by knowing their benefits and range of services provided by them. Also the challenges faced by the cloud computing has also been discussed, this is what we need to focus on because upcoming technologies have made sure that they can overcome any type of problems faced in cloud computing. Only thing is that it takes time while learning and understanding the process involved thoroughly then making it to work on the world stage. So the developers needs a plenty of knowledge related to cloud computing and related sources. Thus we should also take part in developing cloud services which is seen as an important source for computing.

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Digital Literacy

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O Z M O N I T O R B A A E P J D P F R N Z O W H
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Z E F O V P H A R D W A R E J W O E W X Q I J W
L C I R E M U N A H P L A U Y X C G T I O F V U

- Alphanumeric
- Charts Columns
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- Database
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- Email
- Firewall
- Format
- Hardware
- Input
- Internet
- Intranet
- Logon
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- Word processing
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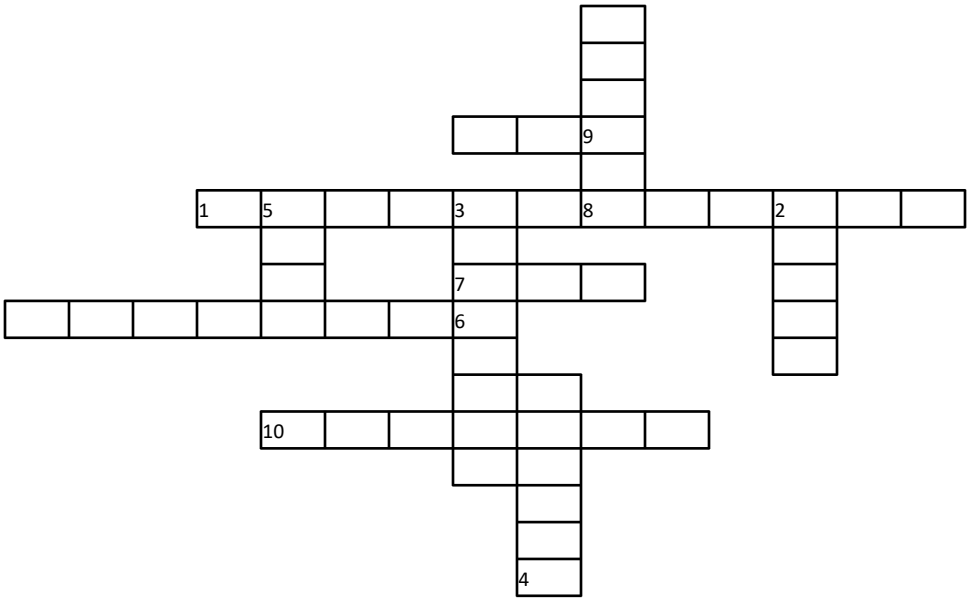


* Answer will be revealed in the next issue.

Questions :

Up to Down :

2. Types of machine learning
3. Data about data
5. Number of primary keys that a table can have

Down to Up :

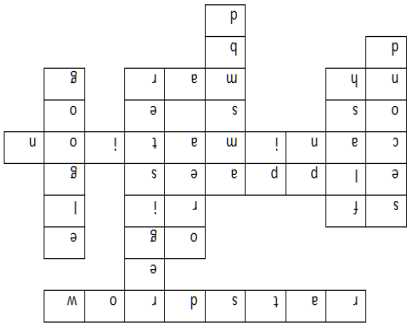
4. DBMS is a type of _____software
8. An algorithm in encryption is called

Left to Right :

1. Father of AI
10. Number of rounds in Data Encryption Standard algorithm?

Right to Left :

6. Drives are also known as
7. How many types of capacitive touch sensors in IoT?
9. The protocol used to provide security to e-mails?



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