SRM VALLIAMMAI ENGINEERING COLLEGE

COMPUTER SOCIETY OF INDIA
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VOLUME – III ISSUE –I

LimeLight

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About SRMVEC CSI-SB :

SRM Valliammai Engineering College Student Branch was started in the year 2007. For the past 15 years, SRMVEC has 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 first issue of volume three '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 knowledge is fulfilled only when it is transferred to another person. In this manner, this magazine would serve as a collection of knowledge. With technology growing leaps and bounds day by day, people need to be aware of the ongoing development in technology. We appreciate every who stood with us in this venture.

Regards
SRMVEC CSI-SB Team

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EVENTS

Quiz-O-Phil

The SRM Valliammai Engineering College Computer Society of India Student Branch organized the **'Quiz-O-Phil'** event. In this event more than 145 students have registered and more than 60 students have participated. The event was conducted on 09th July 2022**.** In this event, we have given 30 mcq questions where each questions carries one-two marks, the participants should answer all the question within given with the given timing limitation.
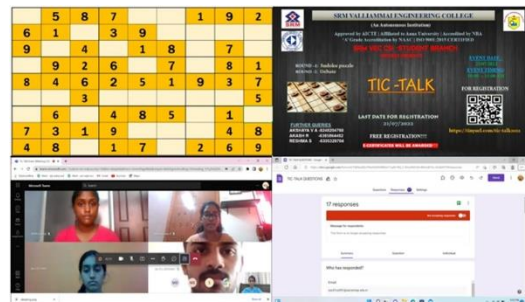
The winners are of the event:

1. Ramesh MM - Srm Valliammai Engineering College
2. Thangavel P - Mepco Schlenk Engineering College
3. Harini V - Gobi Arts And Science College

The event ended in grand success due to the guidance of CSI Student Branch Counsellor **Dr. M. Senthil Kumar** (Associate Professor, Department of CSE), who supported us in coordinating the event.
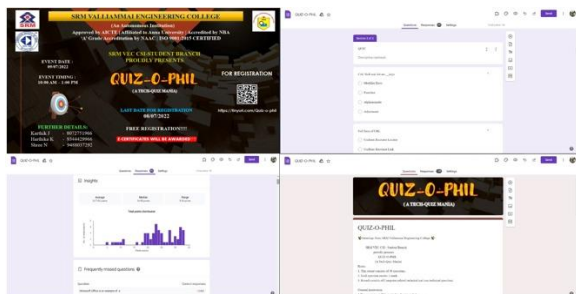
TIC – TALK

The SRM Valliammai Engineering College event. **"TIC-TALK "event,** more than 45 students have registered and more than 17 have participated in the event. The event was conducted on **23 July 2022.** The event had two rounds; The first round consists of a sudoku puzzle. One has to complete the puzzle without any redundancy in given time, in case of an mistake the candidate may not be eligible for the next round, the second round is debate.

The Winners are:

1. **JANANI.A.M**CSE department, Sri Sairam Engineering college

2. **DEJASWAROOBA.B-** CSE department, SRM Valliammai Engineering College ,

EVENTS

3.SHREENITHI T V - CSE department, Sathyabama Institute Of Technology.

The event ended in grand success due to the guidance of CSI Student Branch Counsellor **Dr. M. Senthil Kumar** (Associate Professor, Department of CSE), who supportedus in coordinating the event.

Tech – O – Tangle

The SRM Valliammai Engineering College, Computer Society of India Student Branch organized '**Tech – O – Tangle'** event. In this event 242 students from different colleges have registered and more than 90 students have participated the event. The event was conducted on **7th August 2022**. In this event, we have given 30 questions in which each question had 2 subdivisions and the two subdivisions contain the same answer. The answers are given in clustered form in which the participant should select the correct answer. Each answers carried two marks.

The winners of the event are:

1. Vaishnavi Devi R - SRM Valliammai Engineering College
2. Sri Harshini N - Avinashilingam Institute for Home Science and Higher Education for Women
3. 3.Abdul Athif A -St. Joseph's Institute of Technology

The event ended in grand success due to the guidance of CSI Student Branch Counsellor **Dr. M. Senthil Kumar** (HOD, Department of CYS), who supported us in coordinating the event.

DECIPHER 101

The SRM Valliammai Engineering College Computer Society of India Student Branch organized the **'Quiz-O-Phil'** event. In this event more than 200students have registered and more than 100 students have participated. The event was conducted on **14th August 2022**. In this event, we have given 15 questions where each questions carries one-two marks, the participants should answer the entire question within given with the given timing limitation.
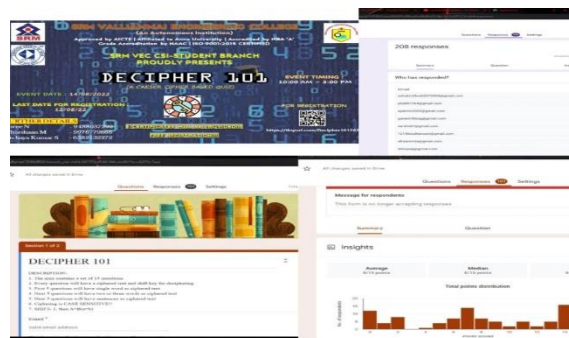The winners of the event:

1. Kanagavalli - Dmi College Of Engineering.
2. Muthaiah V - Srm Valliammai Engineering College.
3. Devi R - Adhiparasakthi Engineering College.

EVENTS

The event ended in grand success due to the guidance of CSI Student Branch Counsellor **Dr. M. Senthil Kumar** (Associate Professor, Department of CSE), who supported us in coordinating the event.

IOT and Cyber Security - "The Tomorrow"

Abstract

As time rolls by, making the living of human lives more sophisticated becomes the goal of technological research and development. Hence Internet Of Things (IOT) comes in handy here. IOT becomes the ultimatum of technological inventions today. Then to withstand the large amount of data received with the IOT functions, cloud storage is introduced, since there is a large amount of data that needs to be stored for the better functioning of IOT, the security of the data collected comes into concern.The IOT generates large data package for Cloud Computing, and it's easier to travel through the Internet. It is a part of a collaboration and its works in IoT that can be used tos tore its data. It initiates to represent the ongoing development for the next generation of IoT smart service application.

Hence the boom of cybercrime and the respective cyber security departments to address the issues in recent days.

Introduction

First, let us get a piece of basic knowledge and the name cause of IOT and cyber security for the understanding of this paper. Cloud of Things (CoT) is a combination of Internet of Things (IoT) with Cloud Computing. It allows remotely monitoring, managing and control the IoT enabled devices that are highly performance by the cloud based IoT application platforms.

IOT - Internet Of Things – as the name suggests, is the connection of physical devices, software, and the internet to collect, process, store, and display any form of data from simple text to high-resolution

IOT and Cyber Security - "The Tomorrow"

Fig:- 1.1 Working of IOT

Fig:- 1.2 Working of cyber security

video data.

CYBER SECURITY - It's also called information technology security or electronic information security. It is the process or procedure to secure the digital assets, systems, and programs from the digitally initiated cyber-attacks which may result in theft of data, manipulation or modification of data, extortion, etc.

Working of IOT

Sensors/Devices: collecting all complexities of data. Ex: smartphones

Connectivity: sending the collected data to a storage

Data Processing: performing the required process Ex: temperature calculation

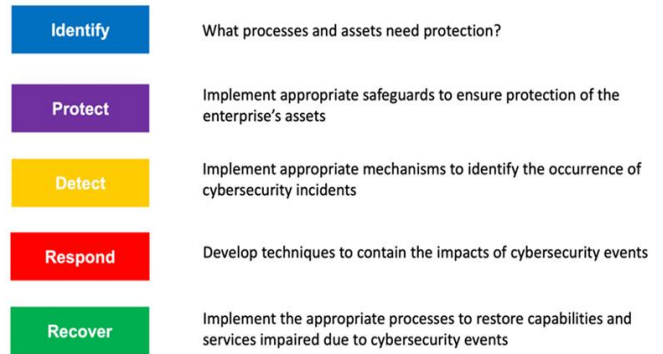User Interface: made available to the user here. Example: CCTV live footage

Working of Cyber Security

Cyber security encompasses technologies, processes, and methods to defend computer systems, data, and networks from attacks. It ensures the above mentioned processes in the figure.

Applications of IOT

IOT applications in day-to-day life include smart toothbrushes, voice-recognized light sensors, smartwatches, and smart doors. Monitoring crop fields and pesticides, and predicting climate gives an upper hand to IOT in agriculture. Ingestible Micro-Bio-Electronic Device, Continuous Glucose Monitoring (CGM), and Mood-aware IoT are a gem in healthcare sectors. It also helps in transport and supply chain enhancement and the building of smarter cities. It also assists in attaining better solutions in the enterprise environment.

IOT and Cyber Security - "The Tomorrow"

Applications Of Cyber Security

Preventing operational interruptions such as interrupting power could even lead to loss of lives in the case of a hospital environment. Preventing the loss of sensitive data, the absolute necessity of good cyber security practices has been noticed globally. The applications of cyber security can be seen as application security, network security, data security, end-user education, IOT and ICT security, and internet security. Most organizations and governments are now willing to invest more time and money to improve cyber security measures.

Economic impact of IOT

The economic and social impact of IOT seems to be only approximate and not a certain value. There is an $840 billion market for technological developments in agricultural fields. $3,7 trillion is spent on optimization and invention of factory equipment to make the work environment more comfortable and to increase production. $2.4 trillion is an estimation of the implementation of IOT in the automation industries. Its total impact will be around $3-$11 trillion by 2022.

Economic Impact Of Cyber Security

It is predicted that market growth will be accelerated at a CAGR (Compound Annual Growth Rate) of 13.4% which seems to be $376.35 billion by 2029 concerning the current market of $126 billion.

The incremental growth of the market in the years 2009 – 2014 seems to be $11 billion. According to the experts, 63% of the growth in the market will be from the side of the service sector over the upcoming years. One of the main factors in the growth of cyber security in the market seems to adoption of the hybrid model in recent years.

Challenges Faced

IOT - With large-scale data collection, along comes the need to manage it effectively and to protect it from data loss and manipulation. Gathering data is useless if processes are not in place to sanitize, organize, and process it.

CYBER SECURITY - The increasing variety of cybercrimes, outdated hardware, insider threats, managing cryptocurrency, unavailability of the latest software, and piracy are the big challenges in the development of cyber security.

Overcoming The Challenges

IOT – change passwords often and choose strong passwords, update IOT devices regularly, don't rely solely on the cloud for storage, and look for different storage methods. Avoid universal plug-and-play features. Use secondary networks for better security.

CYBER SECURITY – connect to a virtual private network (VPN) if required, set up firewalls and antivirus software

IOT and Cyber Security - "The Tomorrow"

We must have a backup measure for worst-case scenarios. Avoid open networks and public Wi-Fi and beware of phishing and spoofing attacks.

Futuristic Overview

IOT – some of the future predictions from the IOT development are Artificial Intelligence (AI), Advanced Machine Learning (AML), Internet Of Robotic Things (IORT), Augmented and Virtual Reality (AR &VR), Big Data, 5G Network, etc.

CYBER SECURITY – cloud security, smarter security, Security Of Things (SOT), Resilience and Recovery, Perimeter less world, Data Security, and Shift Left are some of the upcoming developments regarding cyber security.

Conclusion

The purpose of this paper moving along two topics is that the main concern for both IOT and CYBER SECURITY seems to be a single element that is "DATA". Hence the storing and protection of it lies as the priority for both. Our evolution will eventually lead us into a world of automation which is inevitable without either of the two i.e., IOT or CYBER SECURITY.

Thus, concentrating on making a safer and more sustainable digital environment will be a crucial responsibility. Hence if there is a tomorrow, it is known that IOT and CYBER SECURITY will be the heart and brain of tomorrow.

Reference links:

1. https://en.wikipedia.org/wiki/Internet_of_things2.

2. https://www.oracle.com/in/internet-of-things/what-is-iot/3.

3. https://www.cisco.com/c/en_in/products/security/what-is-cybersecurity.html4.

4. https://www.comptia.org/content/articles/what-is-iot-cybersecurity

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Big Data Analytics

Prelude:

The use of variety of highly advanced techniques to manifold big data which enables the organization to store classify ,process ,access huge amount of structured/unstructured/semi-structured data of different sizes ranging from terabytes(1,024 GB) to zettabytes(10 21 Bytes). This includes data from various sources too.

.

Big Data:

Large, complex data which needs to be protected, processed and diversified by AI in (Artificial Intelligence) in real time is called a big data. Classical data storage tools are incapable of storing big data.

Categorization:

Analytics of big data is classified into 4 types based on its work:

➤ Descriptive
➤ Diagnostic
➤ Predictive
➤ Prescriptive

• **Descriptive**:

It is used to create, encapsulate and tabulate data into reader-friendly transcripts.

• **Diagnostic:**

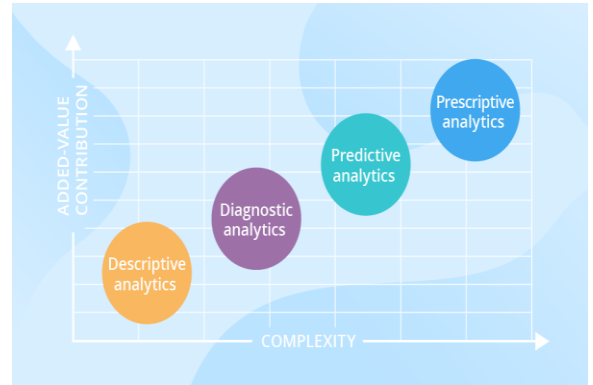It is used to find the root cause and rectify the problems associated with big data processing.

Fig:- 2.1 Graphical representation

• **Predictive:**

The utilization of advanced and modern-day strategies including statistics and data mining in order to predict the future outcome thus the risks can be predicted and corrected beforehand.

• **Prescriptive:**

The process of providing efficient admonition to the user system during the act of choice making is called prescriptive analytics and it uses AI.
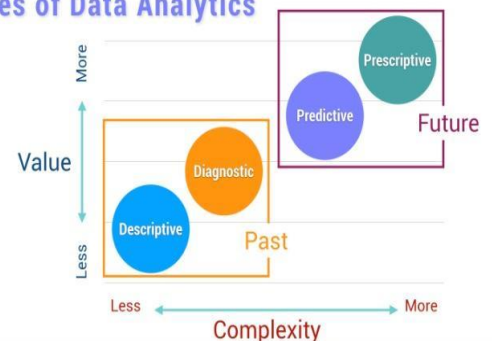

Fig:- 2.2 Types of analytics

Big Data Analytics

Big Data Analytics Tools:

The process of big data analytics can be carried by adapting any one of the following tools:

1.R-Programming
2.Hadoop
3.Talend
4.Spark
5.Cassandra
6.Apache Strom
7.OpenRefine etc.

These tools not only save time but also help in data mining.

Advantages Of Big Data Analytics

•Efficiency is improved
•Data encryption to a certain level
•Agility is improved
•Production rise
•Helps in decision making
•Reduction of risks

Disadvantages

On contradiction to the benefits there are certain downfalls of big data analytics, they are:

•Not fully accurate
•Failure in masking data
•Executed only in certain level
•Prone to misuse of data
•Patent and copy right not well focused
•Not useful for short term process
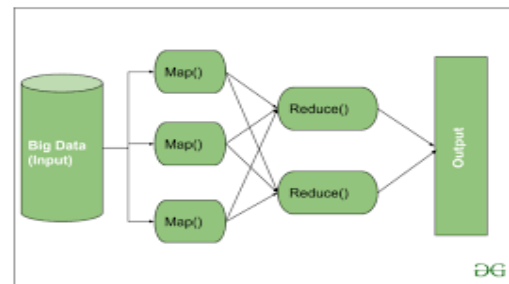•Complex and involves technical knowledge

Fig:- 2.3 Architecture

Architecture Of Big Data Analytics

For the secured flow of data 6 layers of data architecture is provided by the data analytic tools. As shown in the figure. They increase encryption and efficiency.

Places Where It Is Used

1.In banking sector
2.In commercial areas
3.Education
4.Business
5.marketing
6.health care
7.media
8.entertainment
9.E-commerce
10.Research

Differences Between Data Science And Big Data

Big data is the collection of huge volumes of data whereas data science is a field which uses concepts similar to data mining and big data analysis

Big Data Analytics

Data science provides, extracts and provide information about huge sets of data and it's heterogenous whereas, big data includes all the varieties of data's and all its formats.

Skills Required To Become A Big Data Analyst

•Communication and skill of visualization of data
•Basics of data science must be well familiar
•Mathematics and statistics are the heart of big data analyzing
•Machine learning and programming
•Problem solving skills
•Real time processing skills
•Knowledge about data analytic tools like Hadoop ,etc.

Referred Links:

1. https://www.ibm.com/analytics/big-data-analytics
2. https://www.simplilearn.com/what-is-big-data-analytics-article
3. https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-big-data-analytics/
4.https://www.analyticssteps.com/blogs/top-10-big-data-analytics-tools
5. https://www.dataversity.net/brief-history-big-data/
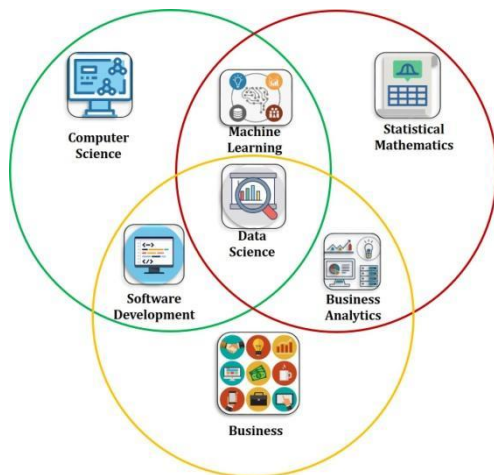
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Fig:- 2.4 Skills required

The Bug Bounty

Introduction:

A Bug is a Vulnerability or a weakness in websites and applications, which leads to data theft or some modification in the application program, to detect these bugs the bug bounty program started which the security professionals use to report the bugs and get bounties. Bug bounty program was started in 1983 at first it was used to find the bugs in the versatile real-time executable operating system. On October 10, 1995, the Netscape communication corporation launched a program Netscape Navigator 2.0 beta browser then it named bug bounty. bugs were also known as errors and defects, the bugs were classified on their severity and rewarded according to it. Many companies have their bug bounty program in which they provide a bounty for finding bugs on their product. there are two mainstream platforms named Hacker-one and Bug-crowd where they registered with multiple companies and addressed the vulnerabilities and then resolved the issue.

Fig:-3.1 Bug

Evolution Of Bugs
• Errors – mistakes that found by a developer during coding

• Defect- variation /deviation of software found by the tester during testing of the products
• Bugs- when a defect is found after the product is released

Why Do Programs Have Bugs?

Majorly these Bugs occur due to human errors during the coding and development of the product and overconfidence of people, Improper tester, the requirements of the client were not fulfilled, and due to miscommunication.

Types Of Bugs

1. Critical- it can cause the entire resources of the program which means that the attacker can get full access to functionality and another process cannot proceed until the bug was fixed

2. High- this vulnerability has some higher severity such as the user data can be exposed such as allowing to modify the program utilities

3. Low- It leads to some unexpected behaviour of Web results, doesn't make higher vulnerable to the product such Clickjacking on a site used to modify the website interface
The bounty was provided based on the severity of the bug reported.
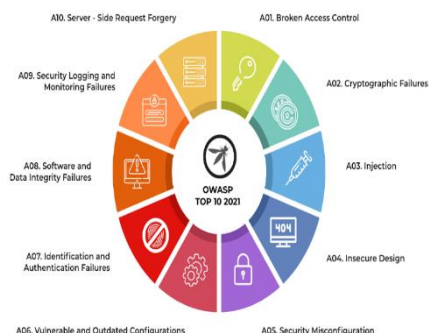
The Bug Bounty

Fig:-3.2 Top bugs

Top Bugs Leads To Exploitation:

1. Sensitive data exposure- accessible of sensitive data which should not be accessed except by the authorities.
2. Cross-site-scripting- the attackers use to inject vulnerable scripts into the input field on the websites and it gets reflected on the site.
3. Subdomain takeover- here attacker takeover the subdomains of the target (*.target) and use their services which can cause business risk for the target.
4. Broken-access-control- we were bypassing the controls of the web application and viewing or modifying another account without their permission or by changing in URL.
5. Privilege Escalation- a person has a privilege for some access then he attacks to get some higher privileges it is somehow related to access control bypassing.
6. Authentication Bypass- here the attacker uses to bypass the authentication such as in the case of OTP creating an account on another information and bypassing the OTP

7. Open Redirect- attacker makes the user redirect to a vulnerable site that can be a phishing link that loads like a real site if you enter your credentials then the attacker capture your credentials and the page will redirect to the original site.
8. Remote code injection- Remote code injection usually occurs due to downloading malicious malware by the host the attacker injects the vulnerable to get remote access.

9. Server-Side Request Forgery- here the target of the attacker is the server, modify the data in the server and URL to get access to the internal data

10. SQL Injection- a method where the attacker injects some vulnerable SQL queries to get access to a web application database or modify the database or gather information about the target.

Bug Bounty:

Bug bounty is a process of finding bugs in the software or websites. Product vendors pay bug hunters for finding vulnerabilities on their products, so the hacker can earn money through bug bounty. The bug hunters submit a report on the vulnerability that existing on their products (like applications, websites). The report must contain essential information with POC (proof of concept) regarding vulnerability then it was fixed by the company that owns the product.

The Bug Bounty

Bug Bounty Hunting Platforms

There are some bug bounty platforms used by many companies nowadays. The top platforms are listed below.

1. HackerOne - https://www.hackerone.com/
2. Bugcrowd - https://www.bugcrowd.com/
3. Cobalt - https://www.cobalt.io/
4. Synack - https://www.synack.com/

Conclusion

The main motive of this paper is give a clear insight in to the topic "BUG BOUNTY". We have given a brief about the bugs and its intervention in a process or a program and a job opportunity in the same platform which will lead to a better secure environment.

References:

1. https://en.wikipedia.org/wiki/Security_bu
2. https://www.rapid7.com/fundamentals/vulnerabilities-exploits-threats/
3. https://infosecwriteups.com/security-bugs-are-fundamentally-different-than-quality-bugs-9eb8f8663089

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IDE And Use Of Android Studio

Introduction

Android Studio acts as an IDE designed specifically for Android development. It serves as an integrated platform for Google's Android Operating system. We come across a lot of applications in our daily life that serve different purposes. It makes use of enhanced tools and helps us in making smart and efficient programs and is easy.

Integrated Development Environment:

An IDE plays the role of providing a platform for developers to build applications

IDE And Use Of Android Studio

applications to combine the logical section of the problem with the Graphical user Interface. An IDE has different components such as Source code editor, Local build automation and Debugger.

Source Code Editor:

This particular tool is used to help developers to write source code and check for specific bugs as the program is being developed. It helps the user to

understand the concept behind the syntax.

Local Build Automation:

The more the machines communicate with each other, the less error-prone is the software. It provides scope for users to converse in an efficient manner.

Debugger:

This is normally used to check for errors in a particular segment of the code and helps in correcting them. In other words, they give the exact location of the bug that has been interrupting the execution of the mechanism.

Why Do Developers Use Ide's:

An IDE gives appropriate space for the developers to create new applications in a quick way as it does not

depend on manual configuration and maintains consistency. This also helps in saving time and reduces the scope of errors showing up. IDE is very compatible with most frameworks and provides beginners a much comfortable platform. Since there is only a single Graphical user Interface in use, developers can execute actions without the need to switch between applications.

Examples of IDEs include **NetBeans, Eclipse, IntelliJ, and Visual Studio**.

There are many complex IDE's that are difficult to interpret and makes beginners lose interest in working with the available tools. This paves way for the developers to use shortcuts and achieve their goals instead of working in a genuine manner.

Popular Kinds Of Ide's:

There are many different open-source IDE software options in the Software development industry. They are different in multiple aspects. Some of the aspects are:

THE NUMBER OF SUPPORTED LANGUAGES: Some IDE's use a single language and serve only to special frameworks. EG: IntelliJ.

IDE And Use Of Android Studio

Some other IDE's support many languages at once. EG: Eclipse IDE

Supported Operating Systems:

A developer's OS might have a certain impact on the usability of a particular IDE. Some IDE's are not compatible with a given OS whereas some IDE's are specifically designed for a said OS. Android studio is used for developing android apps but can be downloaded in windows, Linux and other operating systems
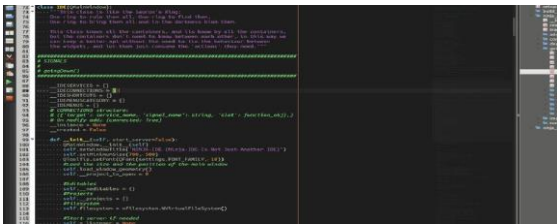

Fig:- 4.1 IDE

Android Studio:

Android Studio was developed by Google with JetBrains providing adequate assist in order to establish a perfect standard for android app development. Since its introduction to the technological world in 2013, it has served as the root cause for the development of many amazing applications.

The concept of automation is being clearly explained and implied in this IDE. It makes the process of code refactoring easier and helps to implement forward and reverse engineering.The introduction of Android to human lives has enhanced human lives in various manners. From the introduction of social media platforms, educational applications to using the same android Platform to play various games, Technology has come a long way. Android apps with customizable logos and User interfaces has been trendy for quite some time. Particularly in India, a country where the population is very high, the amount of people who actually possess an android phone is immensely high. Android was projected to be the new face of technology until the introduction of iOS

Fig-4.2 Mobile Activity

Conclusion:

Android studio has played an integral part in app development and has been dominating the market for a long period of time. An Android app developer

IDE And Use Of Android Studio

\is said to have complete knowledge of web development languages such as HTML and CSS, Backend computing and other programming languages. To understand the use of Android studio, one must completely learn the basics of User interface and how to establish them. Technology never stops enhancing. And that's the same we need!!

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Defending Tomorrow

Introduction:

Today an individual can receive any form of information through a click of a button. As the technology develops, the methods for malicious attack are also developed along the way. The ways of exploitation has grown with the cyber security and cyber terrorism**.** growth of technology and cyber security.

Here we are going to have a brief about of technology and cyber security. Here we are going to have a brief about security and cyber terrorism**.**

Defending Tomorrow

Purpose:

Here we have provided information about cyber security and cyber terrorism. The charts explaining the statistics and brief studies of the journal and papers regarding cyber terrorism have referred and given an output here on my perspective here.

Trends of Cyber Security:

Cyber Security leads a critical role in the area of data technology. There are many threats in cyber security. The pie chart below depicts the major attacks that are initiated with malicious intent are listed below
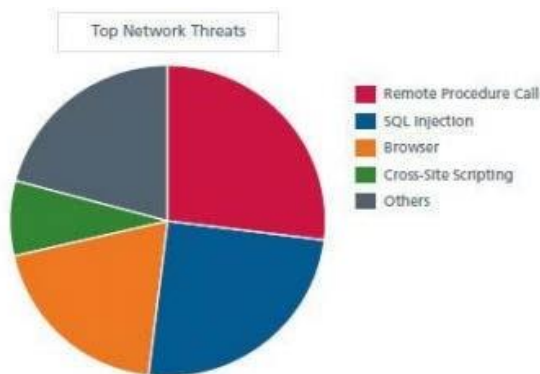

Fig-5.1 Trends of cyber security

Web Servers:

There are many information are leaked while searching in the web servers. There are many phishing sites available in the web servers if an user enters the details in the phishing site all the data are collected by the hackers who created that phishing web.

Web Servers:

There are many information are leaked while searching in the web servers. There are many phishing sites available in the web servers if an user enters the details in the phishing site all the data are collected by the hackers who created that phishing web servers.

Mobile Networks:

The risk of assaults on web applications to separate information or to circulate malicious code perseveres. Cybercriminals convey their code using good web servers, In any case the user should be alerts while using the mobile networks which is main source for leaking the information of the users, So mobile network plays a major role in the cyber security.

Role Of Social Media In Cyber Security:

Social media has turned into a lifestyle for some individuals. Development of the social media is the trap like concepts because the people in the social media leak their information without their knowledge. It has replaced email and telephone requires a ton of us..

Defending Tomorrow

PCs, cell phones, and different gadgets are priceless assets, Individuals can do this in various ways, including the utilization of social media or networking sites.

Cyber Terrorism:

The term "terrorism" refers the illegal utilization of power or vulnerability against people in order to threaten an administration from the malicious site, It stays vital issues of the present society. This terrorism is totally a different one and the impact of this cyber terrorism creates fear among the people.

Solutions:

Some solutions regarding cyber security and cyber terrorism describe here: Cyber Security Techniques Some techniques can use to improve cyber security.

- Using the VPN
- Updating the application
- Maintaining the firewall
- Security and patch management
- Auditing the security measures
- Using of proxy servers
- These are the some measures can be implemented to avoid the cyber-attacks and safe guard the users data.

Conclusion:

Hers we can arrive at conclusion the future based on Cyber security hence making a safer environment is as much important as inventions in the cyber security field if there is tomorrow cyber security will be sun rise.

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Cloud Computing And Iot

Introduction:

One of the successful components that improve the Internet of Things is Cloud Computing. Cloud Computing includes servers, storage, database, networking, software, analytics and intelligence. It performs data backup, disaster recovery, and business continuity and les expensive on the cloud network system. The user can't directly active management and it is an on-demand of highly availability of computer system resource, especially data storage and computer power. It is a part of a collaboration and its works in IoT that can be used to store its data. The IoT (Internet of things) promotes communication between the collective network of connected devices and the cloud technology. The IOT generates large data package for Cloud Computing, and it's easier to travel through the Internet

Working

The Internet of Things (IoT) is a system of interconnected of mechanical device. The infrastructure of Internet Cloud Computing that helps in IoT to generates the large amount of data and maintain the multiple copies of the data to reduce the instance of data backup and system data threads. The Cloud is a centralized part of the server that contains computer resources to be accessed by the system whenever it's needed.

Role Of Cloud Computing In Iot:

IoT and Cloud Computing complement to each other, while IoT is a penetrate mainstream technology and marketplace, it creates a huge amount of big data. It builds an integration from a storage solution to accessing data. The cloud is a controller of IoT that is used to solve the business needs of data driven. An agile platform is used to develop the meaningful IoT application that is provided by the cloud technology for better data devices over the Internet. The cloud plays a major role in IoT for communication facilitators with its powerful APIs. By developing IoT application, cloud computing and IoT enables portability and interoperability to across the network of different cloud setups.

Types Of Cloud Storage In Iot:

There are four main types of cloud computing storage, they are:

Cloud Computing And Iot

Private Cloud:

It is very secure and scalable. Its environmentally sole dedicated to a single end user or group, and its firewall runs through the environment. When the IT infrastructure given to a single customer then all clouds become private cloud with completely isolated access. It is very expensive when it's compared to other clouds storage. It's suitable for large enterprises and greater user control.

Public Cloud:

It is very easily scalable, affordable, and reliable. Its environment is typically created from IT infrastructure that is not owned by the end user. When its environments are partitioned and redistributed to multiple tenants then all cloud become public clouds. Public cloud providers use the bare-metal IT infrastructure that can be abstracted and sold as IaaS (Infrastructure-as-a-Service) or the cloud platform develop a public clouds and its sold as PaaS (Platform-as-a-Service). or the cloud platform develop a public clouds and its sold as PaaS (Platform-as-a-Service). It has zero maintenance and suitable for individual users and mid-size companies.

Hybrid Cloud:

It is an easy customization and very secure, affordable and scalable. The multiple environments can create a single IT environment connected through a local area network (LAN), wide area network (WAN), virtual private networks (VPNs). It is suitable for small and mid-size companies.

Community Cloud:

It has limited set of organisations or employees to sharing their cloud computing service environment. It is used to protects the data in the same as the other clouds services doing. It is very secure, affordable and scalable. It's suitable for financial, health, and legal or compliance companies.

Internet Connectivity:

The cloud can be accessed the data, first its need internet connectivity. If there is any internet shortage, you won't be able to access your data on the internet.

Migration:

When you are migrating from one cloud technology to another, it is transferring a large amount of data from one another clouds system. This migration process happens, it has less time consuming and prone to human error.

Cloud Computing And Iot

Environmental Concerns:

The cloud computing has reduced carbon footprint, even though it does not mean that a complete green platform occurs

A company can implement three different IoT cloud Platforms,.

IaaS (Infrastructure-as-a-Service):

This is a cloud computing Service, where new project rent or lease servers that are compute and stored in the cloud.

Ex: Amazon Web Services (AWS).

PaaS (Platform-as-a-Service):

A third-party server provides computing platform through the user, then it allows to create a customized cloud application tailored to their basic individual needs.

Ex: Oracle Cloud.

SaaS (Software-as-a-Service):

When the user can pay the rent for the service and get access to use their application, without any installation, updating and/or setups.

Ex: Google Cloud.

Cloud Of Things:

Cloud of Things (CoT) is a combination of **Internet of Things (IoT)** with **Cloud Computing.** .

. It allows remotely monitoring, managing and control the IoT enabled devices that are highly performance by the cloud based IoT application platforms. It initiates to represent the ongoing development for the next generation of IoT smart service application. The IoT object will process and analyses which it can be generated a large amount of data in the cloud in order to outcome important information, that is very sensitive information used by many other smart service applications.

Benefits Of Iot Cloud:

1.People can used wide range of network device to gain access in cloud computing resources such as mobile devices, tablets, computer, laptops, etc.

2.Iot cloud computing reduce their infrastructure costs and their capacity and scalability.

3.It supports new business opportunities and business continuity for developing youngsters.

4.It takes less time and effort to implement with IoT cloud solutions.

Disadvantages:

1. It takes risk of data confidentiality to be access at all times of use.

2. It only depends on internet connection only that may take low server problems.

Cloud Computing And Iot

3. Its very compliance to access the level of security in cloud service.

4. It has potential security threats and technical problem.

Conclusion:

In that conclusion, the Internet of Things with the combination of cloud computing to make fundamental changes in the human life of mechanism, especially that how data can be accessed, stored, used, analysed, and managed in the cloud technology.

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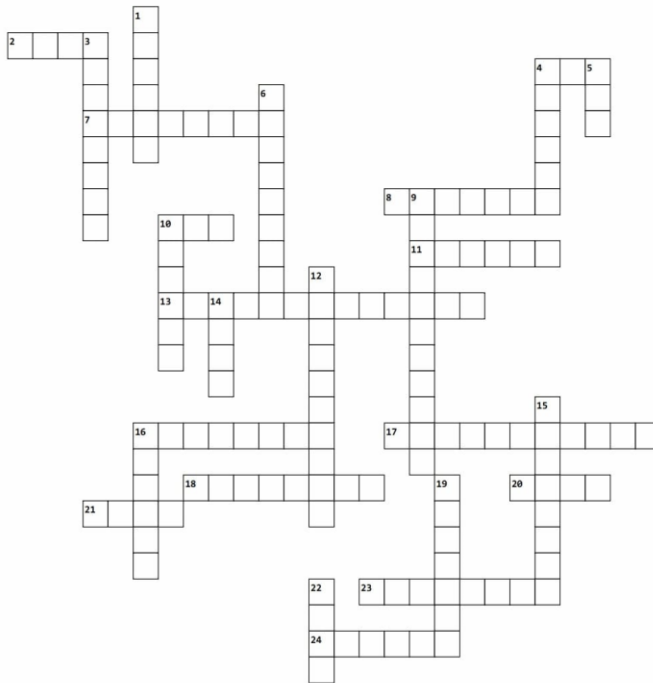harthika.ak@gmail.com

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Word Fun

*Answer will revealed in the next issue.

Across:

2. networking technology.
4. carries out the functions of a computer
7. device for reading books
8. designed to harm computer
10. world Wide Web
11. unauthorized copying of music.
13. using technology to harm others
16. physical parts of a computer
17. receiving data.
18. theft person assumes the identity of another
20. use limitation to copyright.
21. website used to find information.
23. computer programs.
24. electronic mail.

Down:

1. data in computer.
3. global computer network.
4. packet of data sent to a browser.
5. address of a website.
5. address of a website.

9. software created for tasks
10. video camera for computer
12. text,audio,animation,images.
14. website that is regularly updated, like a journal.
16. when your computer is broken into without permission.
19. security certificate certificate given to websites.
22. science, technology, engineering, and math.
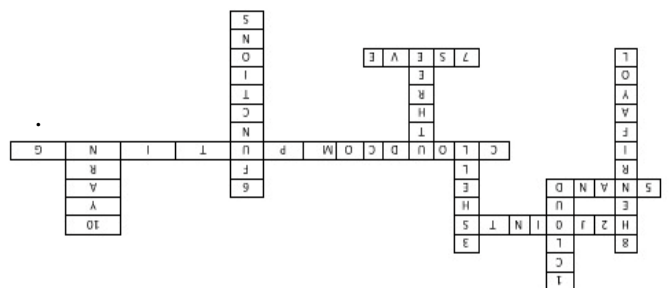
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