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CYBER SECURITY ISSUES AND CHALLENGES

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ABSTRACT
Cyber world is the area of interconnected computer networks in the cyber space. In such a cyber world the security of data and information is essential, such a way the safeguarding of information and data available physical or virtual which deals with the cyber space is called as cyber security. Cyber security involves safeguard of information from intruders like hackers and crackers. Hackers and crackers are the unauthorised intruders into the data. There are many categories of hackers depending on their effect on others and their intention of hacking. Other than hacking there are other cyber problems like identity theft where one changes his/her identity as another person in order to earn or escape from criminal records. Some other issues are the anonymous ransom ware issues in which a virus is spread into a system through messages and it blocks the files to be accessed by the owner itself. Such hackers then demand for money in the form of bit-coins to provide the owners with the key to get accessed with the files again

Keywords: What is cyber world?
What is cyber security?
What is hacking?
Types of hackers
Cyber theft
Identity theft.

1. CONTENT

What is cyber world?
World of inter connected computer networks in cyber space is called as cyber world.

Cyber space is the environment in which communications over computer networks occurs. The parent term of cyber space "cybernetics", derived from the ancient Greek word "kybernetes".

Now a day's cyber spaces have expanded its hands over a large area because of the usage of internet in mobiles. Therefore cyber space is the field which involves any electronic devices which can access internet.

What is cyber security?
Cyber security is the body of technologies, processing and practices designed to protect networks, computers, programs, and data from attack, damage or unauthorized access.

It literally means the security of data of the cyber space physically or virtually.

Hacking
Hacking doesn't stand alone, it has three major sections.
- Hacking
- Cracking
- Ethical hacking

Hacking refers to an unauthorized user who intrudes into the data without the permission and authentication of the owner of the specific data.

Hackers are of many types
- Black hat hackers
- White hat hackers

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- Grey hat hackers
- Red hackers
- Script kiddies
- Blue hackers
- Green hackers
- Brown hackers

Black hat hackers
Black hat hackers are those individual with extensive computer knowledge whose purpose is to breach or bypass internet security. Black hat hackers are also known as dark-side hackers. The term "black hat" comes from old westerns where the bad guys wore black hats and the good guys wore white hats.

White hat hackers
White hat hackers also intrude into the security systems but they find the weakness of the security and instead of performing malicious attacks and theft, they expose the security flaws in such a way as to alert the owner that there is such a breach so that they can fix it before a black hat hacker can take advantage of it.

Grey hackers
Grey hackers are a combination of both white hat hackers and black hat hackers. They neither take the information and data nor help the organisation with indicating the flaws, they just hack systems for fun and to seek attention from the black hat hackers or the media.

Red hat hackers
Red hat hackers are the vigilantes of the hacker world. They are similar to white hat hackers. The halt black hat hackers but are dangerous because instead of reporting about the black haters they shut down the systems of them completely by uploading virus.

Script kiddies
The script kiddies do not care about hacking. These just copy codes available on net or use you tube videos and upload virus which are commonly DOS or DDOS. They are anonymous and just flood an IP with a lot of information so that it collapses due to the strain.

Blue hat hackers
If a script kiddie takes revenge over someone, he/she might transform into the blue hat hackers. They use the hacking space for vengeance and not more that.

Green hat hackers
They are the hacker but are unlike to script kiddies, they care and strive hacking. They are often flamed by the hacking community for asking many questions.

Brown hackers
They are the group of hackers who strive only on hacking and do it for business purpose.

Cracking
Cracking is mostly performed by black hat hackers. Crackers are similar to hackers but they hack the data and modify it according to their wish to create a downfall in the reputation of any organisation or they crack for illegal earnings.

Ethical hacking
Ethical hackers are certified white hat hackers who hack for safety purpose with the authentication and permission. Most of the ethical hackers serve for the police department. Many organisations pay an ethical hacker to find out the weakness and flaws in their security. Ethical hackers are the highly paid in the hacker world on who no complains are filed for hacking.

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Cyber theft

Theft of data and information available in the cyber world with the help of any electronic device is called as cyber theft. Cyber theft may either be virtual or physical; it depends on the data and the format of the data. Most of the cyber theft are virtual which is been practiced by the hacker world. Physical theft investigations come under the IPC acts whereas the virtual theft will be handled by the IT act. The IT act was notified on 17 October 2000. It is the primary law in India dealing with cyber crime and electronic commerce. It is based on the United Nations Modern Law on Electronic Commerce (UNCITRAL Model) recommended by the General Assembly of United Nations by a resolution dated 30 January 1997.

Identity theft

Identity theft is the most commonly summoned case in the cyber world next to hacking. Identity theft is the deliberate use of someone else's identity. Identity theft is mostly practiced to gain any financial degree of a third person using his/her identity or it is used to create a fake identity for the thief to escape in the cyber world from being caught for his theft. The disadvantage is for the owner of the identity because he will be notified and summoned under the IT act or the IPC act considering the vulnerability of the crime. Identity theft mostly deal with physical transactions of money through banks or ATM's by creating a fake credit or debit card with the information about the owner without the knowledge of the owner. Identity theft in virtual world or the cyber world deals with the fake ID created on the name of another person who is physically available or just an imaginary character to perform cyber crime anonymously or an untraceable identity. Section 66D of the IT act, 2000 deals with cheating by personating using computer or computer device, which brings within its ambit fake social media profiles. According to this whomever, by means for any communication device or computer resources cheats by personating, shall be punished with imprisonment of either description for a term which may extend to three years and shall also be liable to fine which may extend to one lakh rupees.

2. CONCLUSION

Technology has emerged into a great level of improvement which has increased the possibilities of unnecessary malfunctions and illegal operations. Unless there is the availability of cyber world and cyber space, the importance of cyber security will not demolish. In the developing technical world the use of cyber security and safeguard of data is also in its zenith. Instead of identifying after it's affected we can protect before it can occur with the help of the concept of cyber security.

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