

Bindu

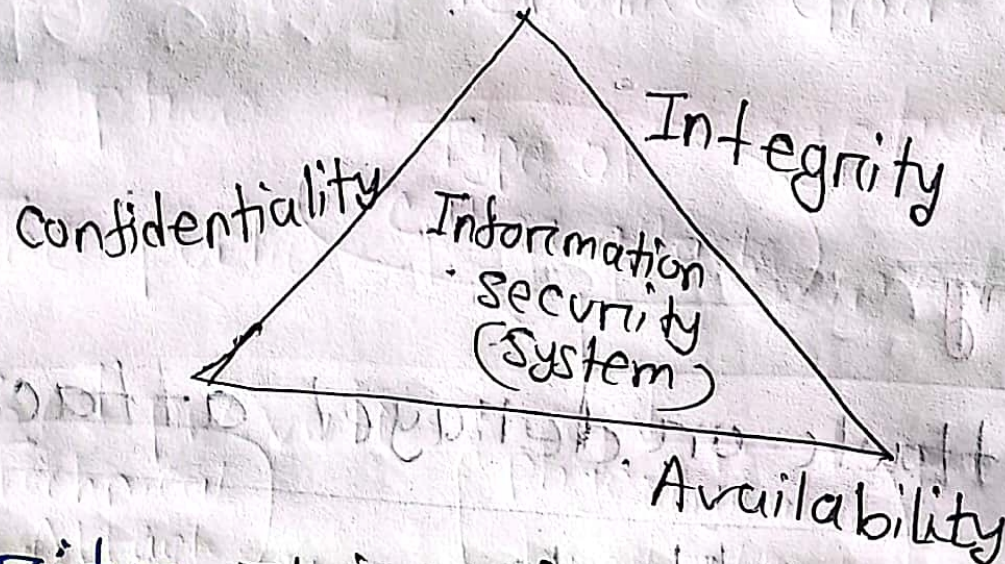
IT-21003

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Assignment  
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## Assignment of class-2

### Security triad CIA



Integrity



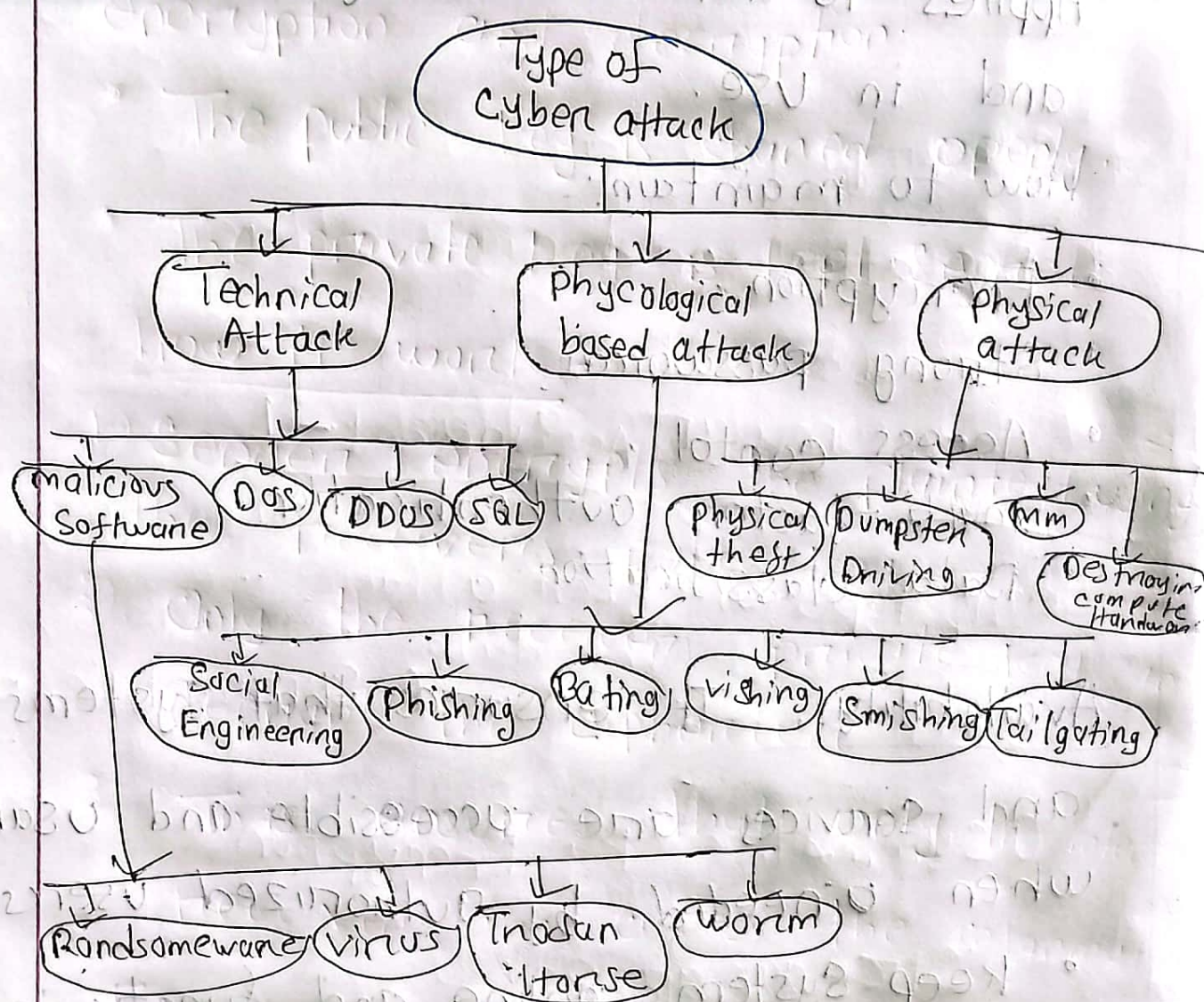


Fig:- Type of cyber attack.

## Symmetric encryption:-

Symmetric encryption is a type of cryptography where the same key is used for both encryption and decryption of data.

### key points:-

- Single key is for both encryption and decryption.
- Faster and less complex than asymmetric encryption.
- Suitable for large amount of data.
- Main challenge:- Securely sharing the key between parties.

### Example of Symmetric Algorithm:-

AES, DES, 3DES, Blowfish and Twofish.



## Asymmetric encryption

Asymmetric encryption is a cryptographic method that uses two different keys - a public key and a private key for encryption and decryption.

- The public key is shared openly.
- The private key is kept secret.

### How it works:

- 1) Sender encrypts the plaintext using the receiver's public key.
- 2) Only the receiver's private key can decrypt the ciphertext.
- 3) This ensures that only the intended receiver can access the information.

### Example of Asymmetric encryption

RSA, ECC, DSA



## Steganography:-

Steganography is the practice of hiding secret information within an ordinary, non-secret file or message to avoid detection.

"The goal is to conceal the existence of the information,

### Key points:-

- unlike encryption, Steganography hides the existence of the message itself.
- Commonly used with images, audio files, videos or text.
- If done properly, no one will even know there is a hidden message.

### How it works:-

- A secret message is embedded inside other file using special techniques.
- The file looks normal to a casual ~~over~~ observer.

- Only someone who knows the method can extract the hidden data.