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DATE: ___/___/_____

VIRTUAL SYSTEMS & SERVICES

ASSIGNMENT NO 2 :

CLOUD SECURITY MECHANISMS

- Identify one cloud-based service you use. Describe one security feature of this service and how it protects your data.

Dropbox is popular cloud-based service used for storing and sharing files across multiple devices. One of the most imp security feature of Dropbox is file encryption, which plays a crucial role in protecting your data.

=> File Encryption in Dropbox:

File Encryption is a process of transforming readable data into secure format that can only be accessed by someone who has decryption key. Dropbox utilizes both at-rest encryption and in-transit encryption to protect the files stored in cloud.

① In-Transit Encryption =>

This ensure that any data being transferred between your device and Dropbox's servers is encrypted using SSL/TLS. This makes it difficult for anyone to intercept or alter the data using transfer.

=> At-Rest Encryption :

Once your files are stored in Dropbox's servers, they are encrypted using 256-bits AES. This ensure that even if an attacker were to gain unauthorized access to Dropbox's servers, they would not be able to read your data without the decryption key.

- How File encryption protects data in Dropbox :

(1) Protection from Data Breaches :

Even if hackers manage to breach Dropbox's infrastructure, they would only encounter encrypted data. Without the encryption key, the data would remain unreadable, reducing the risk of exposing sensitive information.

(2) Secure file Sharing :

When files are shared with others, the encryption ensures that only authorized recipients can view or access the files. This gives users control over who can read their data, even if the files are shared externally.

(3) Compliance with Security Standards :

Dropbox complies with several industry security standards, such as ISO/ IEC 27001 & SOC 2 Type II, which require robust encryption measures to protect user data, ensuring that the service meets high standards of protection.