Information Security

3 objectives of info security

- Info system availability

- Confidentiality of info

- Info integrity

The need

- Vulnerability

- Interconnectivity

- Technological change

Sensitive info

- Needs more security

- Critical info in Decision Making

- Absence of such info affects DM

E.g. Strategic plans e.g. Corporate

Business operations e.g. Detergents

Finances e.g. Balance sheet etc

Principles of info security

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1.Accountability principle

Someone should be made accountable

2.Awareness principle

Concerned people should know

3. Multidisciplinary principle

Techno and non-techno issues should be addressed

Principles of info security

4. Integration principle

Various policies, procedures and practices should be integrated

5. Timeliness principle

Provide for monitoring and timely response

6. Reassessment principle

Periodic reassessment for changing needs

Principles of info security

1 Cost effectiveness principle

Using cost effective measures

1. Societal factors principle

Ethics must be provided

info should flow to legitimate users

Approaches to info security

- Preventive approach

having locks, security guards etc

- Restorative approach

restore data in case of loss
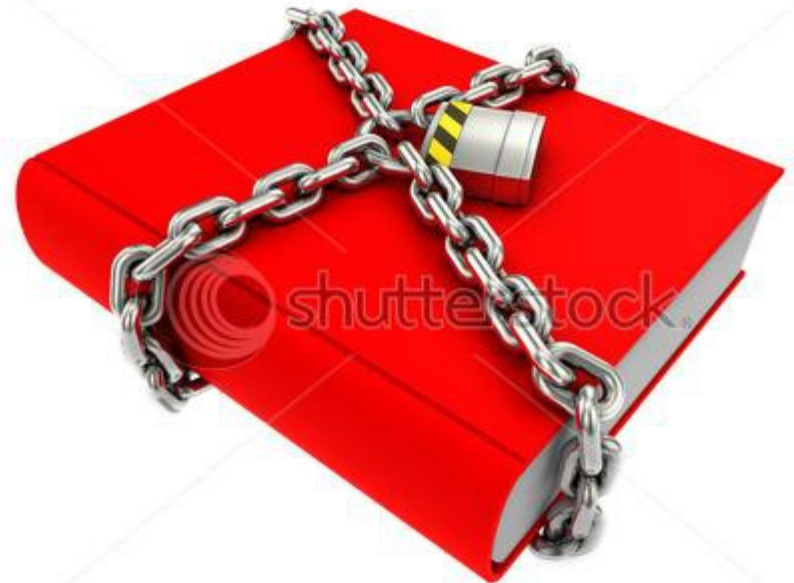
- Holistic info protection

Measures bound by cost.

Info security policy

- Organizations formulate a policy

- Benefits

Computer frauds

- Using a computer to cause prejudice, in the sense of financial and/or reputational damage to a business may be called a computer fraud.

- Covers a number of activities.

Computer frauds

1. Clearly recognizable fraud: debit/credit card

2. Manipulation for financial gain: siphon funds

3. Theft or destruction of confidential info:

4. The use abuse : chat , email, download

5. Hacking: Modification of info, virus

6. S/w piracy : using unlicensed software

The low down on downloading:

37% do not illegally download

63% illegally download

Internet frauds

- Hackers

- Computer virus

- Prevention

  ➤ Making it difficult to do

  ➤ Improving fraud detection methods

  ➤ Setting high ethical standards

  ➤ Reducing fraud losses

Cyber laws

- Legal framework: IT act 2000

- Objectives
  - ✓ Provide legal recognition to E-commerce
  - ✓ Legal recognition to digital signatures
  - ✓ E storage of data
  - ✓ Computer offences and penalties

Cryptography

- Public key, private key

- Concept of control in info system.

Need for control

- ❖ Ensure accurate and efficient data processing

- ❖ Adhere to operationalstdsof organization

- ❖ Overcome system vulnerability

Controls in info system

- A) Operating system controls:

Having passwords and safety

- B)System development controls

- C) Maintenance controls

Program library, password control

- D) data management control : Biometrics

- E) Org structure control

Separation of domains

- F) Computer centre control

Hazards control and recovery plan

- G) network control

Firewall , encryption, avoiding denial of service attack

- H) personal control

passwords and backups