Database system

Database protection

Introduction:

Database security or database protection is the mechanism that protect the database against intentional or accidental threats.

Database security can be considered in relation to the following situations:
- ✓ Theft and fraud
- ✓ Loss of confidentiality
- ✓ Loss of privacy
- ✓ Loss of integrity
- ✓ Loss of availability

Database protection

Security Issue:

Database security is a broad area that addresses many issues, including the following:

Types of security issues are:

- ✓ Legal and ethical issues
- ✓ Policy issues
- ✓ System related issues

Database protection

Threats to Database:

Threat is any intentional or accidental event that may adversely affect the system.

Threat to databases result in the loss or degradation of some or all of the following security goals:

- ✓ Loss of integrity
- ✓ Loss of availability
- ✓ Loss of confidentiality

Database protection

Security Mechanisms

Types of database security mechanism:

- ✓ Discretionary security mechanisms
- ✓ Mandatory security mechanisms

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Control Measures

4 main control measures are used to provide security of data in databases:

- ✓ Access control
- ✓ Inference control
- ✓ Data encryption