A Few DBMS Security Issues
Discretionary Access Controls: Views

Views are a very basic form of DAC.
DAC Features of SQL (1 / 3)

Options to the CREATE USER command:

DAC Features of SQL (2 / 3)

Providing privileges with the GRANT command:

Example(s):
DAC Features of SQL (3 / 3)

What can be GRANTed may be REVOKEd:

Example(s):

Mandatory Access Controls (1 / 3)

Idea: The DBMS has default security procedures that must be followed.
Mandatory Access Controls (2 / 3)

The Bell–LaPadula Model (1974)

Mandatory Access Controls (3 / 3)

Bell-Lapadula enforces two restrictions on security classes (class) assigned to a subject (S) and an object (O):
A Special Case: Statistical DBMS Security

Restriction: Users may ask aggregate queries only

Example(s):

Example(s):
A Common DBMS Attack: SQL Injection (1 / 5)

A portion of the roster of teams registered for the 2009 ACM North Central Programming Contest at Lincoln, NE:
The attack:

Example(s):
A Common DBMS Attack: SQL Injection (4 / 5)

Example(s):

A Common DBMS Attack: SQL Injection (5 / 5)

Preventing Injection Attacks: