

Security Engineering

→ Application

Reusable Components

↳ k 1.65

Middleware

DBMS

Generic shared spoo (↳ news, email)

OS

Application Security

Infrastructure Security

Asset - resource w/ value
needs protection

Exposure ~ risk

Vulnerability → something
alterable

Threat (practice)

Attack → mechanism (how)
↳ vulnerability

Control (fix)

Controls — ensure
attacks are
unsuccessful

(Fault avoidance)

Controls — detect
& repel attacks

(Fault detection & recovery)

Users authenticated
using name/password

Client-server system
using a web browser

(update)
Information editable web
form

passwords:

users
set
weak
pwds

users
tricked
out
of pwds

client-
server:

cache
controls

SS

~~DOS~~

Forms:

lack of input-
validation control

Layered Protection

Authentication / verification -
Encryption
@ web layer

DBMS

Schema