Security Issues

- An OS associates a set of privileges with each process

- Typically a process that executes on behalf of a user has the privileges that the OS recognizes for that user

- Highest level of privilege is referred to as adminstrator, supervisor, or root access

- A key security issue in the design of any OS is to prevent, or at least detect, attempts by a user or malware from gaining unauthorized privileges on the system and from gaining root access

System Access Threats

Intruders

- Often referred to as a hacker or cracker

Classes:
• Masquerader • Misfeasor • Clandestine user

- Objective is to gain access to a system or to increase the range of privileges accessible on a system

- Attempts to acquire information that should have been protected

Malicious Software

- Most sophisticated types of threats to computer systems

Categories:

• those that need a host program (parasitic)
  • viruses, logic bombs, backdoors
• those that are independent
  • worms, bots

- Can be relatively harmless or very damaging