
COSC1112/1114: Operating Systems Principles

Tutorial 11 (week 12)

1. The access-control matrix could be used to determine whether a process can switch from, say, domain A to domain B and enjoy the access privileges of domain B. Is this approach equivalent to including the access privileges of domain B in those of domain A?
2. Consider a computer system in which “computer games” can be played by students only between 10 P.M. and 6 A.M., by faculty members between 5 P.M. and 8 A.M., and by the computer center staff at all times. Suggest a scheme for implementing this policy efficiently.
3. Discuss the strengths and weaknesses of implementing an access matrix using access lists that are associated with objects.
4. Discuss the strengths and weaknesses of implementing an access matrix using capabilities that are associated with domains.
5. What is the need-to-know principle? Why is it important for a protection system to adhere to this principle?