

# **OS Tutorial 5 2023.**

Week starting 16 October 2023

## **Question 1.**

List two ways a system could use to determine which disk blocks are free. Give advantages of each way.

## **Question 2.**

What is contiguous allocation? Name one advantage and one disadvantage of contiguous allocation.

## **Question 3.**

What is the difference between a hard link and a symbolic link? Give an advantage of each one. How does a symbolic link work?

## **Question 4.**

Three different protection mechanisms that we have discussed are capabilities, access control lists, and the UNIX rwx bits. For each of the following protection problems, tell which of these mechanisms can be used.

- (a) Ken wants his files readable by everyone except his office mate.
- (b) Mitch and Steve want to share some secret files.
- (c) Linda wants some of her files to be public.

## **Question 5.**

Discuss some of the issues that can mean that even the best system design cannot guarantee invulnerability to malicious attacks.

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