IS3313: Continuous Assessment

Essay 3

Answer the following question:

1. (a) Distinguish between processes and threads and explain their relationships in multi-core high-performance computing architectures.

    (20 Marks)

    (b) Explain how processes and threads are created in modern operating systems such as Windows **OR** UNIX and indicate how process and thread objects are managed during this activity.

    (30 Marks)

    (c) Outline with a diagram the key elements of Kernel Synchronization (KN) and describe how a spinlock functions as part of KS. Provide two advantages and two disadvantages of spinlocks.

    (50 Marks)

Submit a 1,800 word (at maximum) essay as part of your answer. All essays must be submitted on Blackboard by midnight on the 9th of January 2019.

Required Format:
-   Maximum of 1,800 words (excluding references and cover page).
-   All external sources of information must be referenced (Harvard referencing style).
-   Font - Times New Roman size 12.
-   Spacing - 1.5.

Cover page to include the following:
-   Student Name
-   Student Number
-   Class
-   Course Code
-   Lecturer Name