**NATIONAL UNIVERSITY OF COMPUTER & EMERGING SCIENCES  
KARACHI CAMPUS**



**PROJECT PROPOSAL (Section E)**

**OPERATING SYSTEM**

**TITLE:**

Determine the most efficient programming technique out of the following three: Serial, OpenMp, and Multi-threading (pthreads).

**GROUP MEMBERS:**

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**INTRODUCTION:**

In this project, we aim to discover the most efficient technique which is done by executing programs of which each contain an array, with unsorted elements, and using a timer to record the sorting time of each technique.

**METHODOLOGY:**

Thread library will be used to implement multithreading functionalities, and the algorithm chosen by user will be broken down into different threads and processes such as insertion sort, selection sort and cocktail shaker sort. Also, OpenMP will be used along with the serial programming which is of course sequential programming. Using the time library, the time taken for execution of each technique will be compared and hence the most efficient technique could be found out.