Bachelor of IT (Computer Science)
Assignment 1
CAB301 - Algorithms and Complexity

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1 Algorithm Design

1.1 FirstComeFirstServed Method

This method is used to schedule jobs using the first come first served algorithm. It achieves this by sorting the jobs in the job collection by their arrival time and then adding them to the schedule in the order they were sorted.

ALGORITHM *FirstComeFirstServed()*
// Let (n) be count
// Returns a new array of jobs sorted by their arrival time
$A \leftarrow J.ToArray()$
for $i \leftarrow 0$ **in** n - *1* **do**
    for $j \leftarrow 0$ **in** n - *2* **do**
        if $A[j].arrivalTime > A[j+1].arrivalTime$
            $temp \leftarrow A[j]$
            $A[j] \leftarrow A[j+1]$
            $A[j+1] \leftarrow temp$
return A

2 Analysis

2.1 Jobs ADT

2.2 JobCollection ADT

2.3 Scheduler ADT

3 Testing

3.1 Jobs ADT

3.2 JobCollection ADT

3.3 Scheduler ADT