|  |  |
| --- | --- |
|  | **University of Jeddah (UJ)**  College of Computer Science and Engineering (CCSE)  Department of CS & AI |

**CCCS 225 Operating Systems**

**Assignment 3**

10 Marks :: PLO S1 CLO 2.1

|  |  |
| --- | --- |
| **Student Name:** | Raneem Alomari |
| **Student ID:** | 2006352 |
| **Section:** |  |
| **Date:** |  |

**Problem:** Given memory partitions of 100 KB, 500 KB, 200 KB, 300 KB and 600 KB (in order), how would each of the **first-fit**, **best-fit** and **worst-fit** algorithms place blocks of 212 KB, 417 KB, 112 KB and 426 KB (in this order)?

Process 1 212KB

Process 2 417KB

Process 3 112KB

Process 4 426KB

|  |
| --- |
| 100KB |
| 500KB |
| 200KB |
| 300KB |
| 600KB |
| **OS** |

|  |  |  |
| --- | --- | --- |
| **first-fit**  first hole big enough | **best-fit**  smallest hole big enough | **worst-fit**  largest hole big enough |
| |  |  | | --- | --- | | 100KB |  | | 500KB | Process 1 | | 200KB | Process 3 | | 300KB |  | | 600KB | Process 2 |   Process 4 must WAIT | |  |  | | --- | --- | | 100KB |  | | 500KB | Process 2 | | 200KB | Process 3 | | 300KB | Process 1 | | 600KB | Process 4 | | |  |  | | --- | --- | | 100KB |  | | 500KB | Process 2 | | 200KB |  | | 300KB | Process 3 | | 600KB | Process 1 |   Process 4 must WAIT. |

Which algorithm makes the most efficient use of memory?

Best fit .