YAŞAR UNIVERSITY FACULTY OF ENGINEERING

COMP 3323 Operating Systems Laboratory Sheet

LAB 9:

Best fit Algorithm

This method keeps the free/busy list in order by size – smallest to largest. In this method, the operating system first searches the whole of the memory according to the size of the given job and allocates it to the closest-fitting free partition in the memory, making it able to use memory efficiently.

This algorithm first searches the entire list of free partitions and considers the smallest memory block that is adequate. It then tries to find a memory block which is close to actual process size needed.

Write a program for this algorithm for a given number of processes and memory size

Take note of efficiency of your search algorithms*: The algorithm requires you to search for an appropriate memory block to accommodate the new process. You should pay careful attention to your data structures and search algorithms. For instance, keeping the list of memory block sorted by size and using binary search to search for a hole might improve efficiency of your best-fit algorithms.*

To implement the algorithm, any search efficient algorithm/data structure is OK. Explain all design decisions, the data structures and search algorithms used clearly in a COMMENTs