

Mini Project 2

Memory Allocation using Segmentation

I. Inputs :

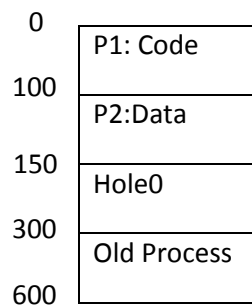
- 1- User inputs total memory size
- 2- User inputs holes starting address and size.
- 3- User inputs Processes one by one.
- 4- User inputs for each process
 - a. Number of segments
 - b. Name and size of each segment(Example: P1 : 3 segments ... Code: 50 , Data: 200, Stack:100)
- 5- User inputs the method of allocation (first fit or best fit).

II. Scenario to be done:

- 1- Allocate segments using allocation methodology.
- 2- If one segment or more of a process can not fit in any hole you should generate a message to state that this process does not fit.
- 3- De-Allocate a process (The user chooses a process to de-allocate, you should deallocate all segments of this process and consider their spaces holes to be used later and add to them to any neighboring holes)
- 4- Initial between holes spaces are considered old processes and user can choose to deallocate one of these old processes

III. Output:

Your output is a drawing representing memory allocation as shown in below figure



IV. BONUS:

- 1- Worst fit option
- 2- External compaction: shuffling memory contents to place all free memory (holes) together in one large block
- 3- Error checking on inputs
- 4- Any extra non required useful addition to the project

V. Other Notes:

- 1- You MUST deliver a Desktop application executable.
- 2- You MUST provide a GUI Layer.
- 3- A user can use the GUI to insert inputs without reading instructions (GUI must be user friendly)
- 4- There is no limitation on number of processes or holes or memory size
- 5-** Due date : Saturday 4 May 2019 (We will post slots for receiving the projects but you should be done by this date)