

REPORT

Memory Contiguous Allocation Simulator



Provided by:

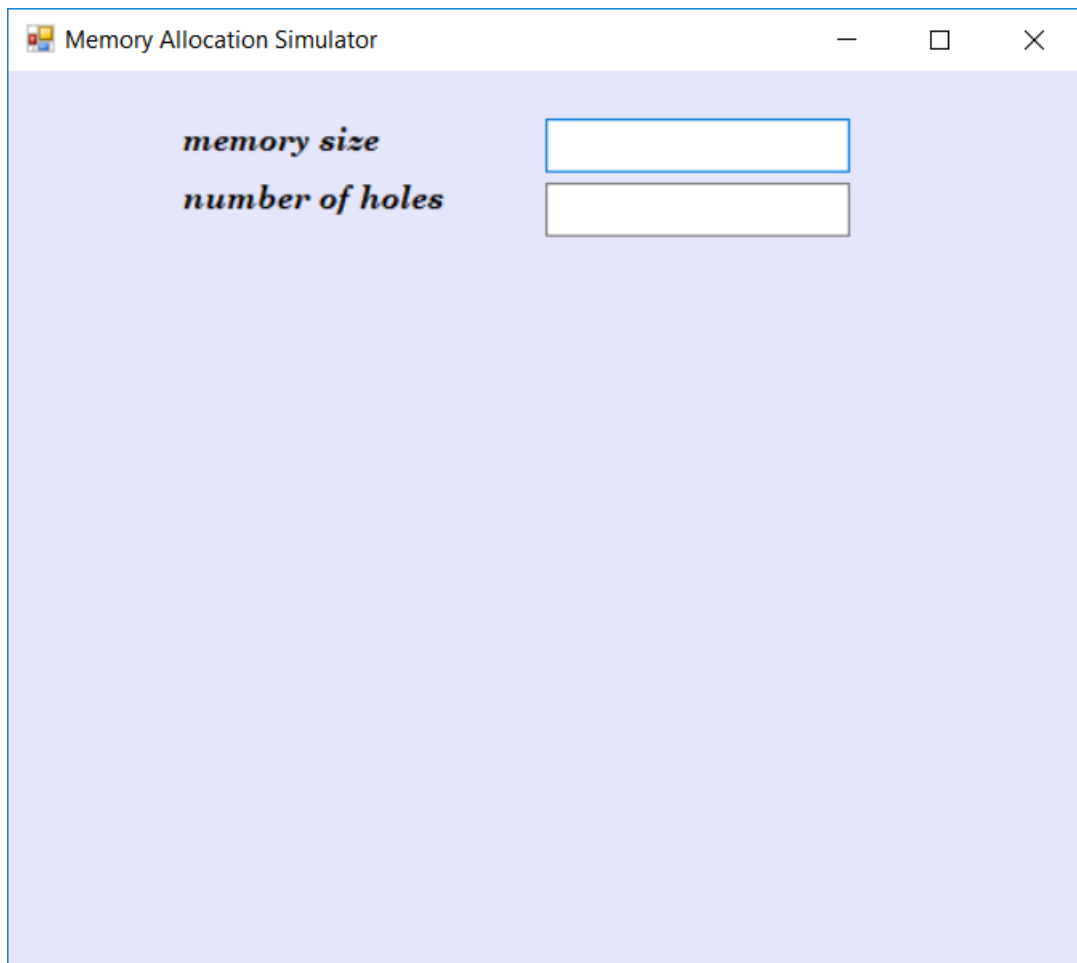
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Contents:

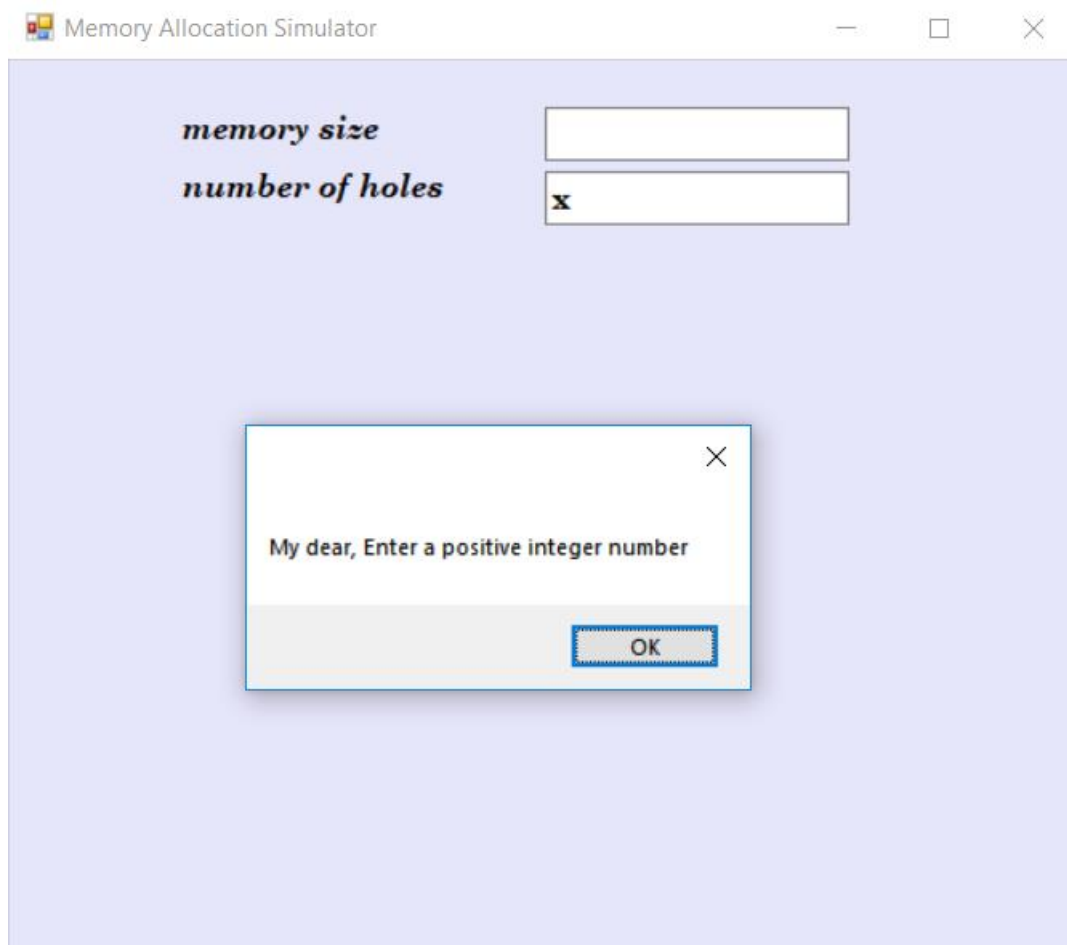
- 1-Filling info about memory
- 2-Filling holes info
- 3-Starting simulation
- 4-How to allocate/deAllocate processes
- 5-**Compaction** and waiting list.

1. After running the .exe file, enter memory size and number of holes.



The screenshot shows a window titled "Memory Allocation Simulator". The window has a light blue background. On the left side, there are two labels: *memory size* and *number of holes*. To the right of these labels are two empty text input boxes. The first input box is aligned with the *memory size* label, and the second input box is aligned with the *number of holes* label. The window has a standard Windows title bar with a minimize button, a maximize button, and a close button.

Both should be positive integer numbers greater than zero; otherwise an error message will appear.



After filling required information you can click fill processes to enter your processes info and start simulation.

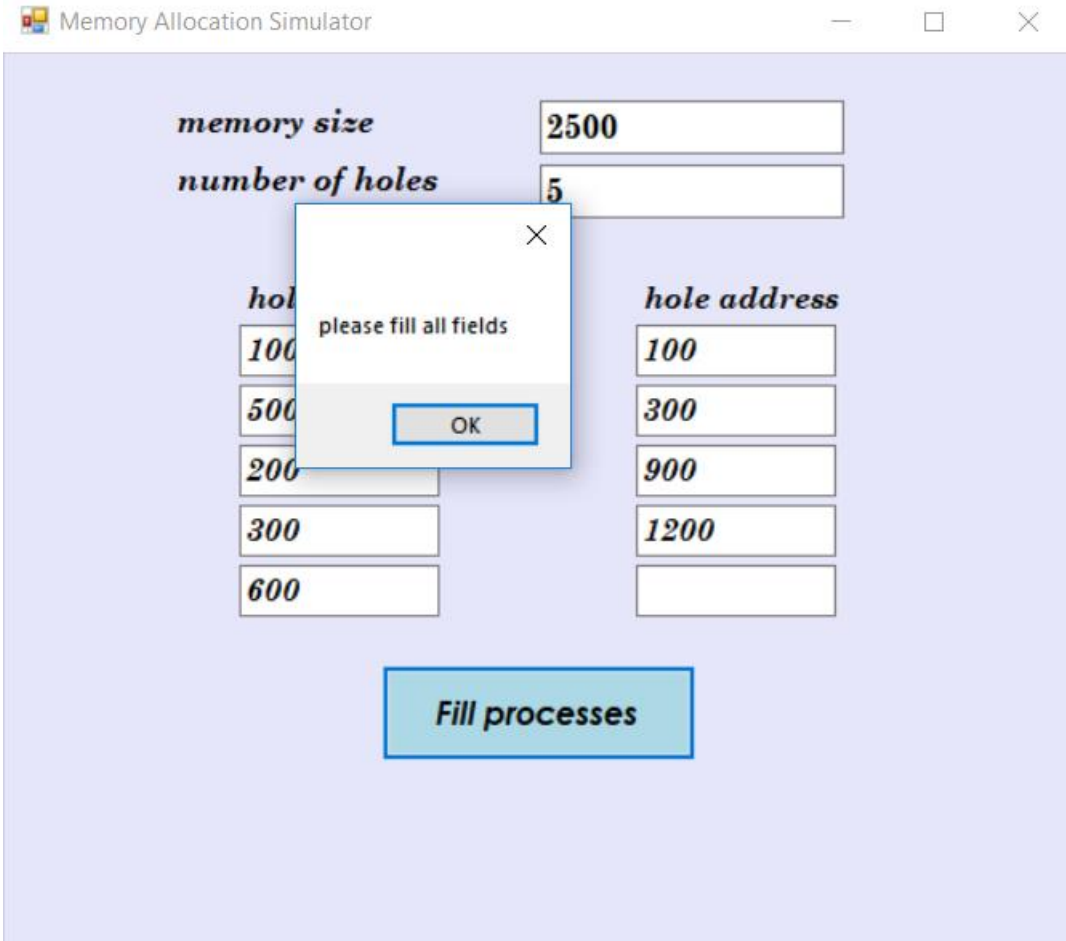
Memory Allocation Simulator

memory size

number of holes

<i>hole size</i>	<i>hole address</i>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

All fields should be filled; otherwise an error message will appear.



The image shows a window titled "Memory Allocation Simulator". It contains several input fields and a button. An error message dialog box is displayed in the center, stating "please fill all fields" with an "OK" button.

memory size

number of holes

hole size

100
500
200
300
600

hole address

100
300
900
1200

Fill processes

please fill all fields

OK

All sizes should be positive integers greater than 0 and addresses should be positive integers; otherwise an error message will appear.

The screenshot shows the 'Memory Allocation Simulator' window. At the top, there are input fields for 'memory size' (2500) and 'number of holes' (5). Below these, there are two columns of input fields for process details. The left column has fields for '200', '300', and '600'. The right column has fields for '900', '1200', and 'cx'. An error message dialog box is displayed in the center, stating: "hole address" must be zero or positive number. The dialog box has an 'OK' button. At the bottom of the window, there is a blue button labeled 'Fill processes'.

Process	Size	Address
1	200	900
2	300	1200
3	600	cx

Holes sizes and addresses should not overlap; otherwise an error message will appear.

Memory Allocation Simulator

memory size 2500

number of holes 5

process address

200	900
300	1200
600	500

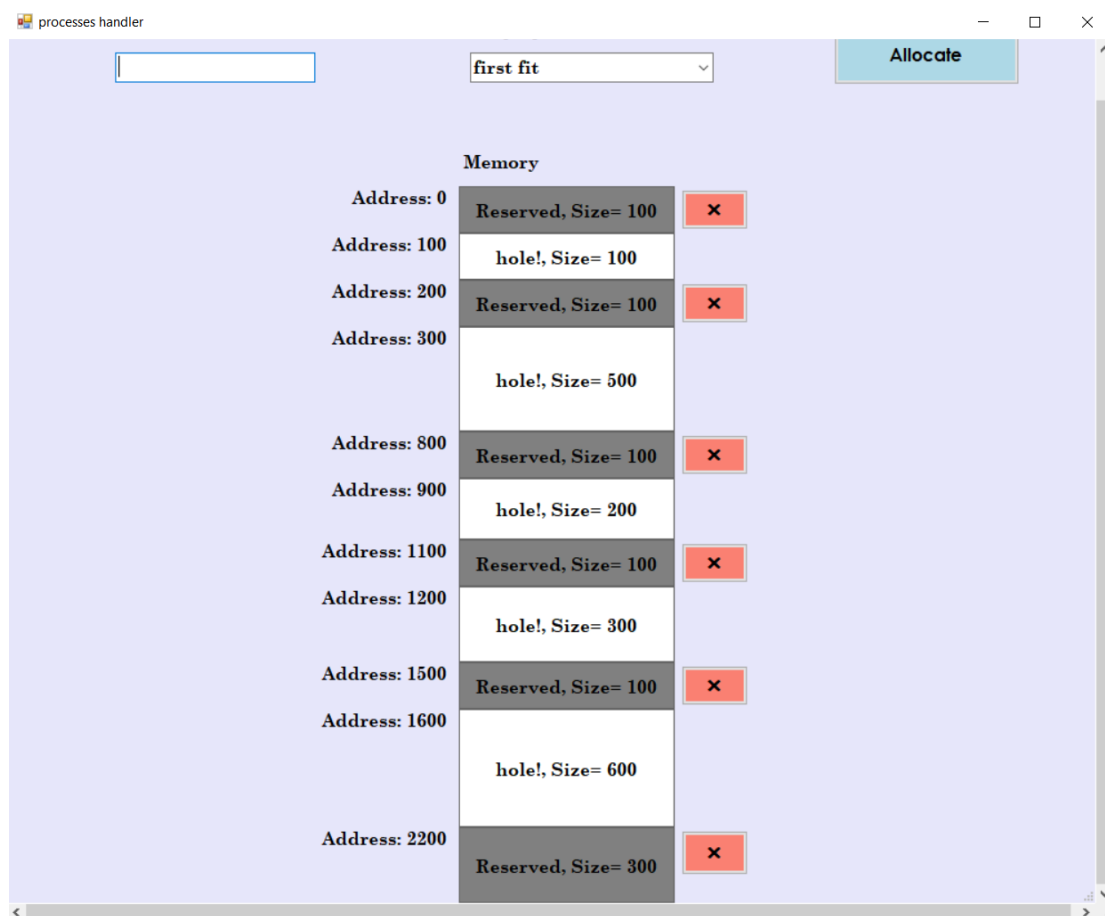
overlapping between holes is not allowed

OK

Fill processes

3. After clicking on "Fill processes" button another form will appear has the picture of memory holes on it.

Other locations will be simulated as reserved with the option to deAllocate any of them.



4. Enter positive integer number for the process size.
And choose method or algorithm -"first fit" or "best fit"-
then press "Allocate" button.

If you don't choose the method or typed any other word
it'll be "first fit" by default.

To deAllocate any process just click on the button next
to it.

Address: 0	Reserved, Size= 100	x
Address: 100	hole!, Size= 100	
Address: 200	Reserved, Size= 100	x
Address: 300	P1, Size= 212	x1
Address: 512	hole!, Size= 288	
Address: 800	Reserved, Size= 100	x
Address: 900	hole!, Size= 200	
Address: 1100	Reserved, Size= 100	x
Address: 1200	hole!, Size= 300	
Address: 1500	Reserved, Size= 100	x
Address: 1600	hole!, Size= 600	
Address: 2200	Reserved, Size= 300	x

this screen after allocating a process of size 212.

5. If no hole to fit the size of the process but the sum of holes will fit the process. A message will appear allowing you to choose compact or no.

processes handler

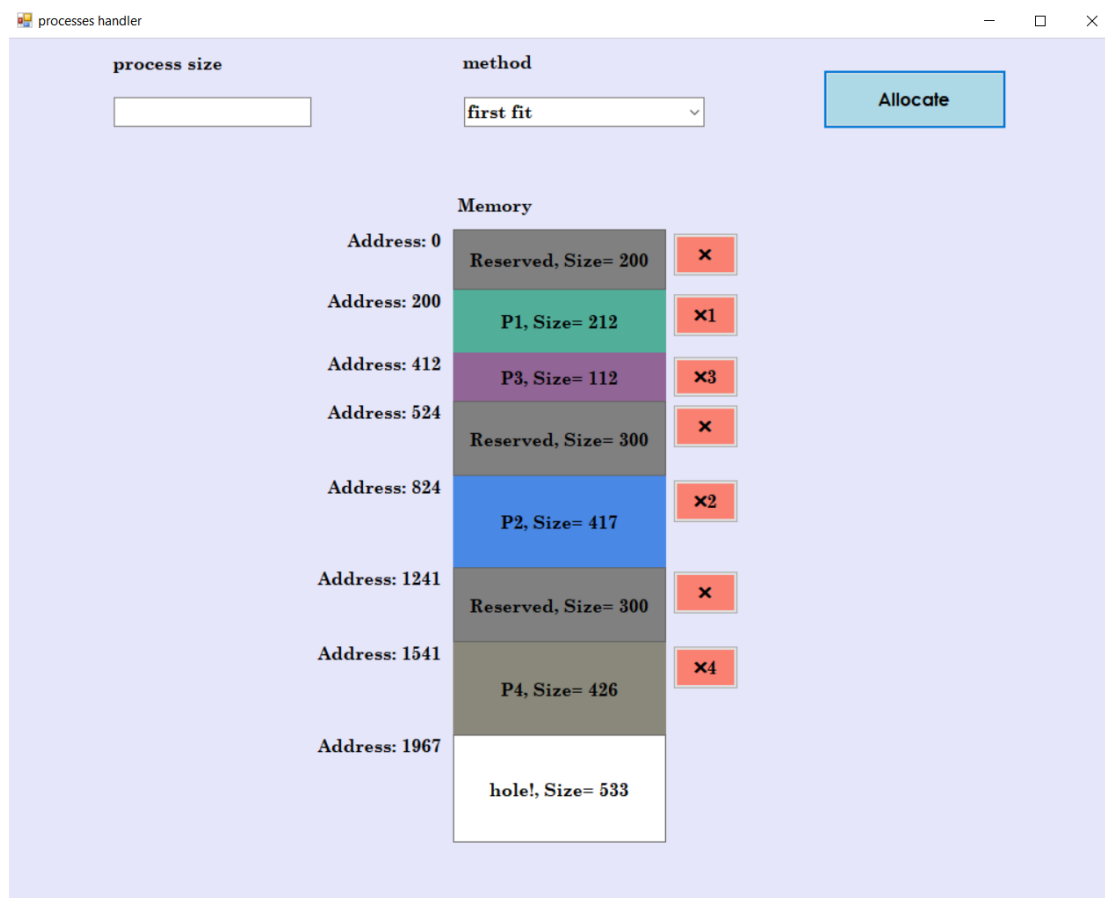
Memory		
Address: 0	Reserved, Size= 100	×
Address: 100	hole!, Size= 100	
Address: 200	Reserved, Size= 100	×
Address: 300	P1, Size= 212	×1
Address: 512	P3, Size= 112	×3
Address: 624	hole!, Size= 176	
Address: 800	Reserved, Size= 100	×
Address: 900	hole!, Size= 200	
Address: 1100	Reserved, Size= 100	×
Address: 1200	hole!, Size= 300	
Address: 1500	Reserved, Size= 100	×
Address: 1600	P2, Size= 417	×2
Address: 2017	hole!, Size= 183	
Address: 2200	Reserved, Size= 300	×

No enough space

? using compact can allocate P4, Do you want to apply compact?

If you clicked "yes" compaction would be applied to merge all holes at the end of memory and the process will be allocated.

Note: merge between reserved sections if nothing between them is allowed as we don't have information about them.



If you clicked "No" or the sum of holes is less than size of process. The process would be added to a waiting queue waiting deAllocation of the other processes.

