



Ain Shams University

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Memory Allocation

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Program interface

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside the window, the word "Memory" is displayed in red text at the top left. Below it is a large, empty rectangular box. To the right of this box, the text "Memory Size :" is followed by an empty text input field. Below the "Memory Size" field, the word "Holes" is displayed. Under "Holes", there are two labels: "Base :" and "Limit :", each followed by an empty text input field. Below these fields are two buttons: "Add Holes" and "Finish". Below the "Holes" section, the word "Processes" is displayed. Under "Processes", there are two labels: "Name :" and "Size :", each followed by an empty text input field. Below these fields is a dropdown menu showing "First Fit" and an "Add" button. At the bottom of the window, there are three buttons: "Reset", "compact", and "Delete".

Memoryallocation

Memory

Memory Size :

Holes

Base :

Limit :

Add Holes Finish

Processes

Name :

Size :

First Fit ▼ Add

Reset compact Delete

First Choose Memory Size

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. The window is divided into two main sections. The left section, labeled "Memory" in red, contains a large empty rectangular area. The right section contains several input fields and buttons. At the top of the right section, the text "Memory Size :" is followed by a text input field containing the value "1700". This input field is highlighted with a red rectangular border. Below this, there are two more input fields labeled "Base :" and "Limit :". Under these are two buttons: "Add Holes" and "Finish". Further down, there is a section labeled "Processes" which contains two input fields labeled "Name :" and "Size :". Below these is a dropdown menu currently showing "First Fit" and an "Add" button. At the bottom of the window, there are three buttons: "Reset", "compact", and "Delete".

Memoryallocation

Memory

Memory Size : 1700

Holes

Base :

Limit :

Add Holes Finish

Processes

Name :

Size :

First Fit ▼ Add

Reset compact Delete

Then Add Holes

write Base & Limit Then click Add Holes

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside, the word "Memory" is displayed in red. A large empty rectangular box is on the left. On the right, the "Memory Size" is set to 1700. Below this, the "Holes" section contains two input fields: "Base" with the value 0 and "Limit" with the value 100. These two fields are enclosed in a red rectangular box. Below the "Holes" section, the "Add Holes" button is also enclosed in a red rectangular box. To the right of the "Add Holes" button is a "Finish" button. Below these buttons is the "Processes" section, which includes "Name" and "Size" input fields, a dropdown menu currently showing "First Fit", and an "Add" button. At the bottom of the window are three buttons: "Reset", "compact", and "Delete".

You can Add Holes with Different and separate Bases

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside the window, the word "Memory" is displayed in red on the left. On the right, there is a "Memory Size" field with the value "1700". Below this is a "Holes" section containing a "Base" field with the value "200" (highlighted by a red rectangle) and a "Limit" field with the value "600". There are "Add Holes" and "Finish" buttons below the "Holes" section. Further down is a "Processes" section with "Name" and "Size" input fields, a "First Fit" dropdown menu, and an "Add" button. At the bottom of the window are "Reset", "compact", and "Delete" buttons.

Memoryallocation

Memory

Memory Size : 1700

Holes

Base : 200

Limit : 600

Add Holes Finish

Processes

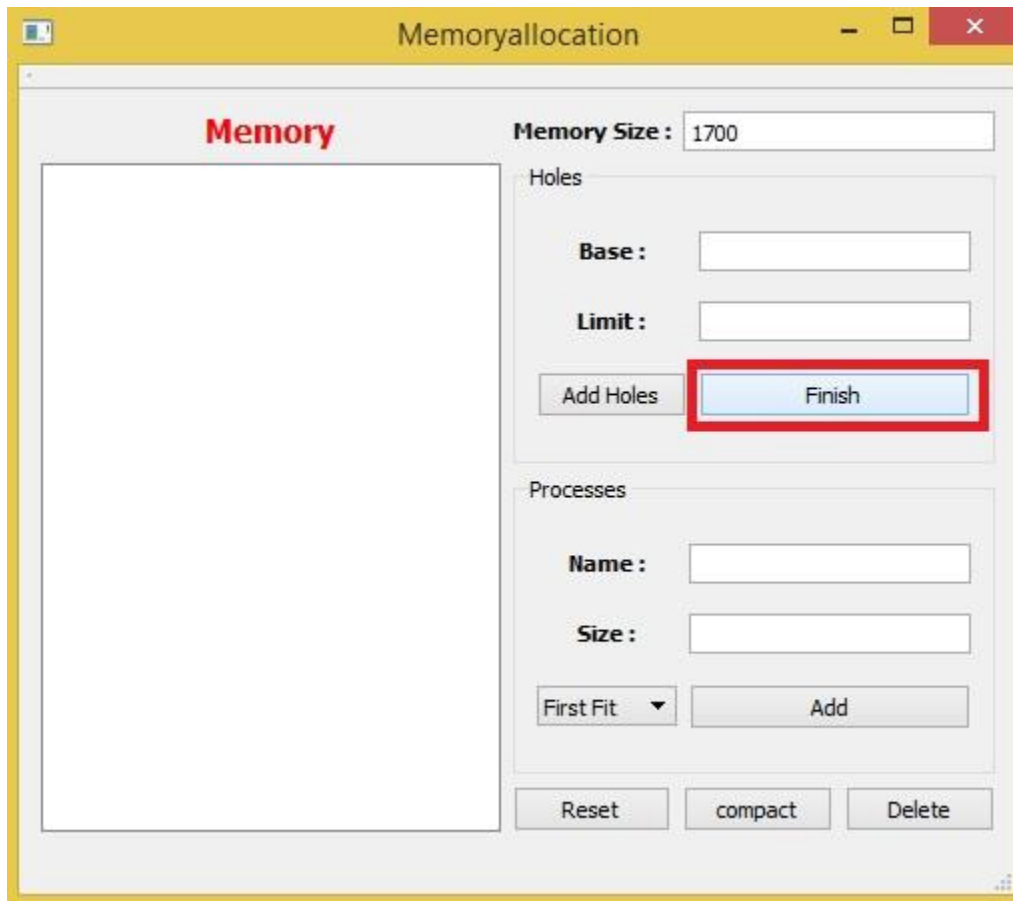
Name :

Size :

First Fit Add

Reset compact Delete

After Adding all Holes Click Finish



The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside the window, the word "Memory" is displayed in red text on the left side. To the right of "Memory" is a "Memory Size" field containing the value "1700". Below this, there is a "Holes" section with two input fields labeled "Base" and "Limit". Below these fields are two buttons: "Add Holes" and "Finish". The "Finish" button is highlighted with a red rectangular border. Below the "Holes" section is a "Processes" section with two input fields labeled "Name" and "Size". Below these fields is a dropdown menu currently showing "First Fit" and an "Add" button. At the bottom of the window, there are three buttons: "Reset", "compact", and "Delete".

After Clicking Finish the Memory will be drawn

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside, the "Memory" section is highlighted with a red border. It contains a diagram of memory layout with a green block labeled "#0 100" and a larger block labeled "600". To the right, the "Memory Size" is set to "1700". Below this are sections for "Holes" (with "Base" and "Limit" fields and "Add Holes" and "Finish" buttons) and "Processes" (with "Name" and "Size" fields, a "First Fit" dropdown, and an "Add" button). At the bottom are "Reset", "compact", and "Delete" buttons.

Memoryallocation

Memory

Memory Size : 1700

Holes

Base :

Limit :

Add Holes Finish

Processes

Name :

Size :

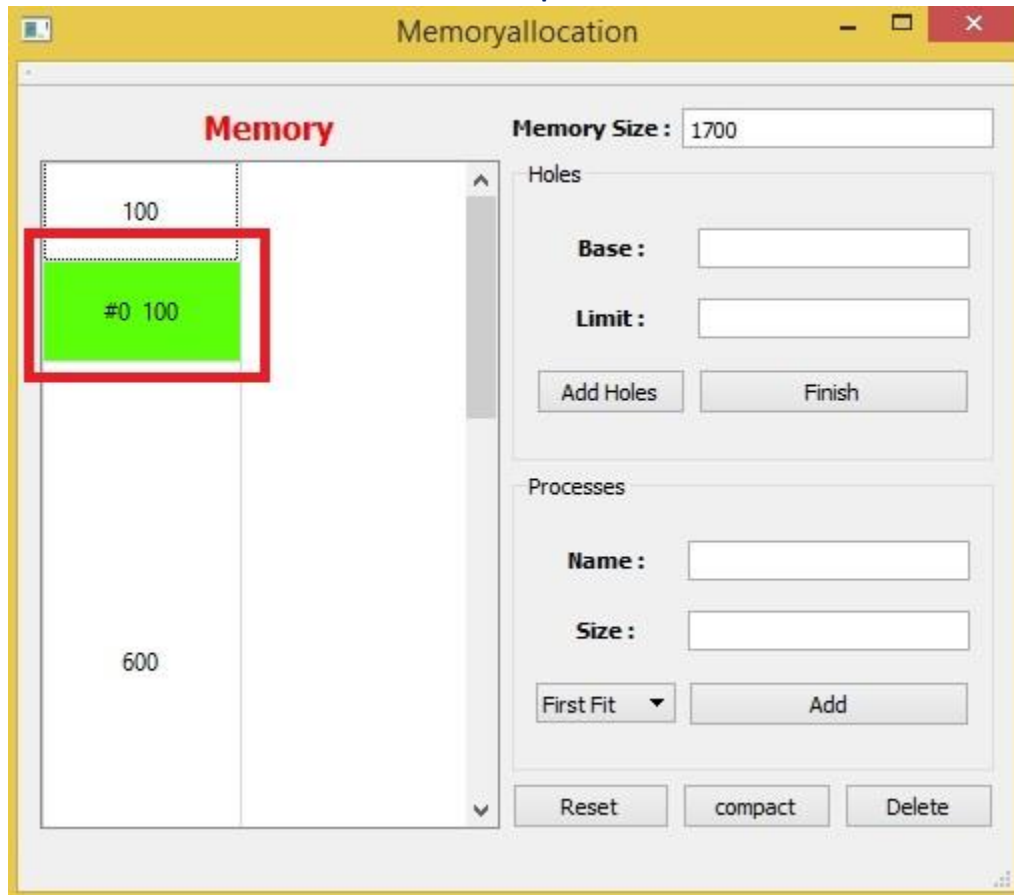
First Fit ▼ Add

Reset compact Delete

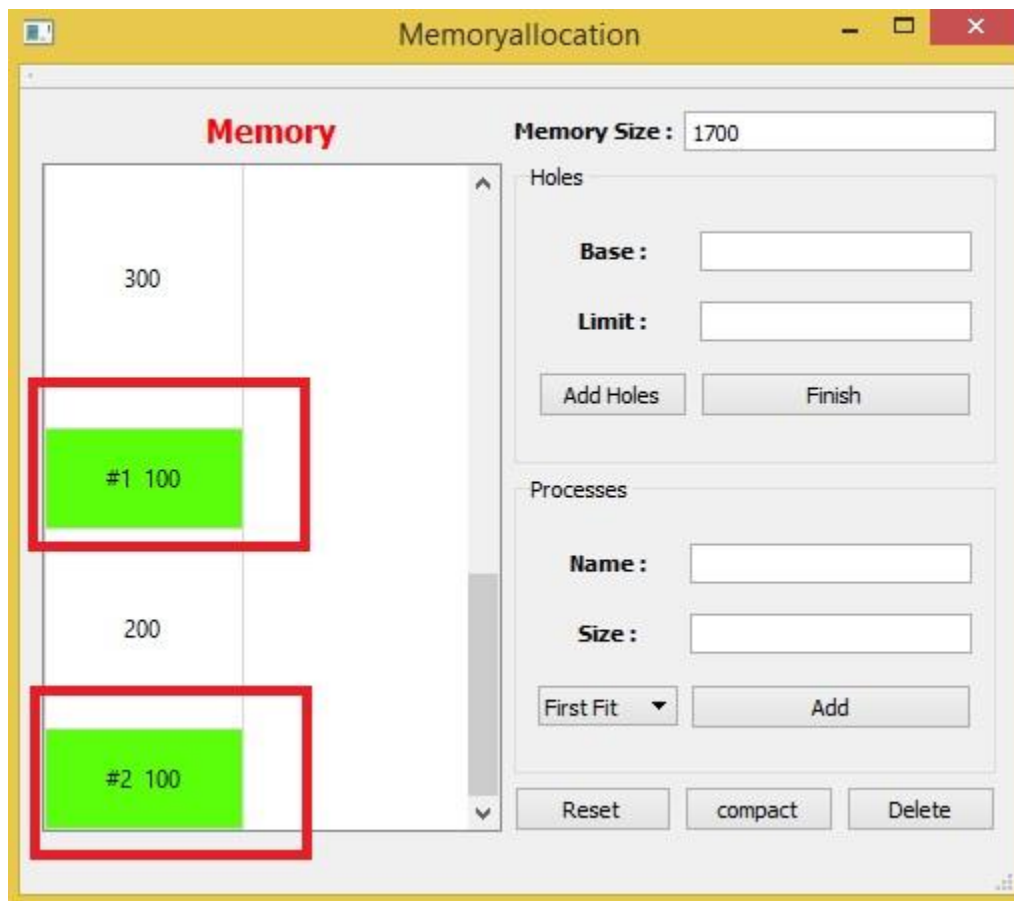
Holes : will take white color and its size will appear

Predefined Processes : Will Appear if there are spaces between Holes And it Will Take name #n

Where n is unique number



Predefined Processes : will Appear in every space without Holes even it in end or start



The image shows a window titled "Memoryallocation" with a yellow title bar. Inside, the word "Memory" is written in red. The window is divided into two main sections. The left section is a memory layout diagram with a vertical axis. It shows two large white rectangular blocks, one labeled "300" and the other "200". Within the "300" block, there is a smaller green rectangle labeled "#1 100". Within the "200" block, there is a smaller green rectangle labeled "#2 100". Both green rectangles are outlined with a red border. The right section contains controls. At the top, "Memory Size : 1700" is displayed next to a text input field. Below this is a "Holes" section with "Base :" and "Limit :" labels, each followed by a text input field. There are "Add Holes" and "Finish" buttons. Below the "Holes" section is a "Processes" section with "Name :" and "Size :" labels, each followed by a text input field. There is a "First Fit" dropdown menu and an "Add" button. At the bottom of the right section are "Reset", "compact", and "Delete" buttons.

Memoryallocation

Memory

Memory Size : 1700

Holes

Base :

Limit :

Add Holes Finish

Processes

Name :

Size :

First Fit ▼ Add

Reset compact Delete

Now Add Processes

Write Name & Size Then choose the Algorithm

First Fit

Best Fit

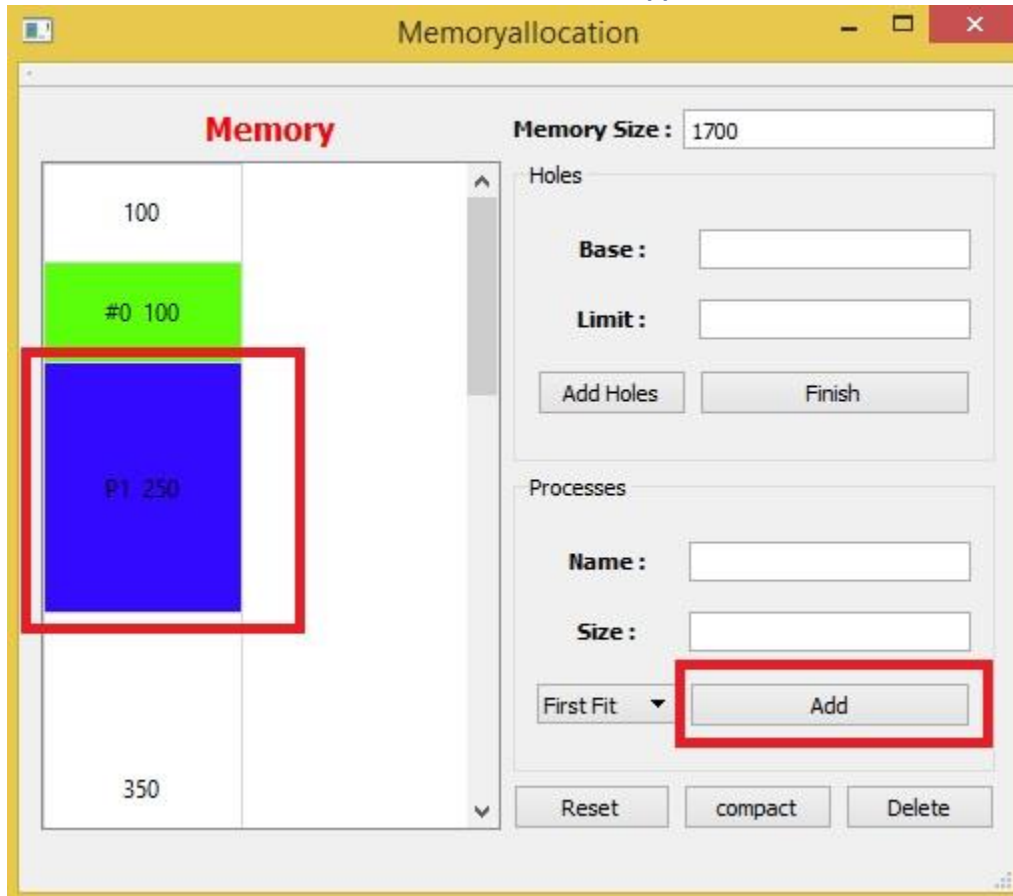
Worst Fit

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside, the "Memory" section on the left displays a vertical bar representing memory layout. The top segment is labeled "100" and the bottom segment is labeled "600". A green box labeled "#0 100" is highlighted in the middle. To the right, the "Memory Size" is set to "1700". Below this, the "Holes" section has input fields for "Base" and "Limit", and buttons for "Add Holes" and "Finish". The "Processes" section on the right has input fields for "Name" (containing "P1") and "Size" (containing "250"). A dropdown menu for the allocation algorithm is open, showing "First Fit" as the selected option, with "Best Fit" and "Worst Fit" also visible. Below the dropdown are buttons for "Add", "compact", and "Delete".

After setting Process Values Click Add

When you click it will be drawn immediately

Process Name & Size Will appear



Best Fit Process

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. The main area is divided into two sections: "Memory" and "Processes".

Memory Section:

- Memory Size: 1700
- Memory layout (vertical stack):
 - Process #0: 100 (green block)
 - Process P1: 250 (blue block)
 - Free space: 350 (white block)

Holes Section:

- Base:
- Limit:
- Buttons: Add Holes, Finish

Processes Section:

- Name: P2
- Size: 150
- Allocation Method: **Best Fit** (selected from a dropdown menu, highlighted with a red box)
- Buttons: Add, compact, Delete

Will Fit in Smallest Hole Can fit it

Memoryallocation

Memory

Memory Size : 1700

Holes

Base :

Limit :

Add Holes Finish

Processes

Name :

Size :

Best Fit ▼ Add

Reset compact Delete

350

P2 150

50

Worst Fit Process

Memoryallocation

Memory

Memory Size : 1700

Holes

Base :

Limit :

Add Holes Finish

Processes

Name : P3

Size : 50

Worst Fit
First Fit
Best Fit
Worst Fit
Reset

Add compact Delete

#0 100

P1 250

350

Will Fit in Largest Hole Can fit it

Memoryallocation

Memory

Memory Size : 1700

Holes

Base :

Limit :

Add Holes Finish

Processes

Name :

Size :

Worst Fit ▼ Add

Reset compact Delete

100

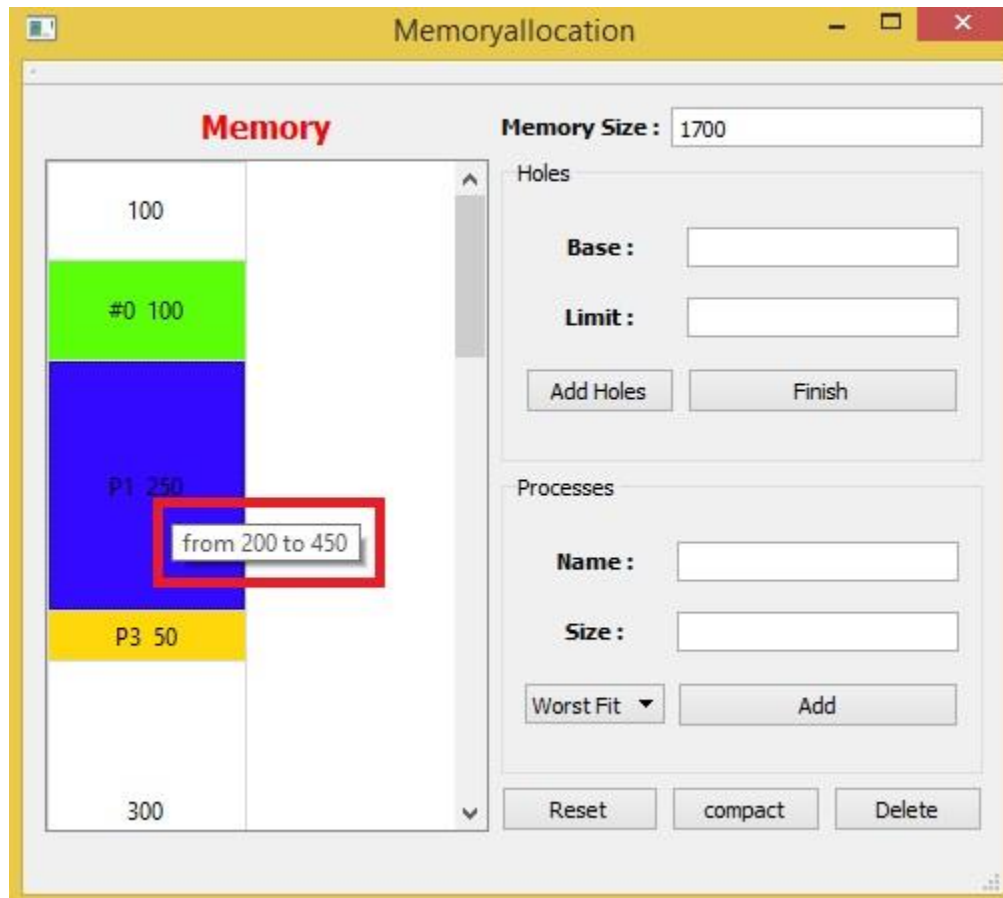
#0 100

P1 250

P3 50

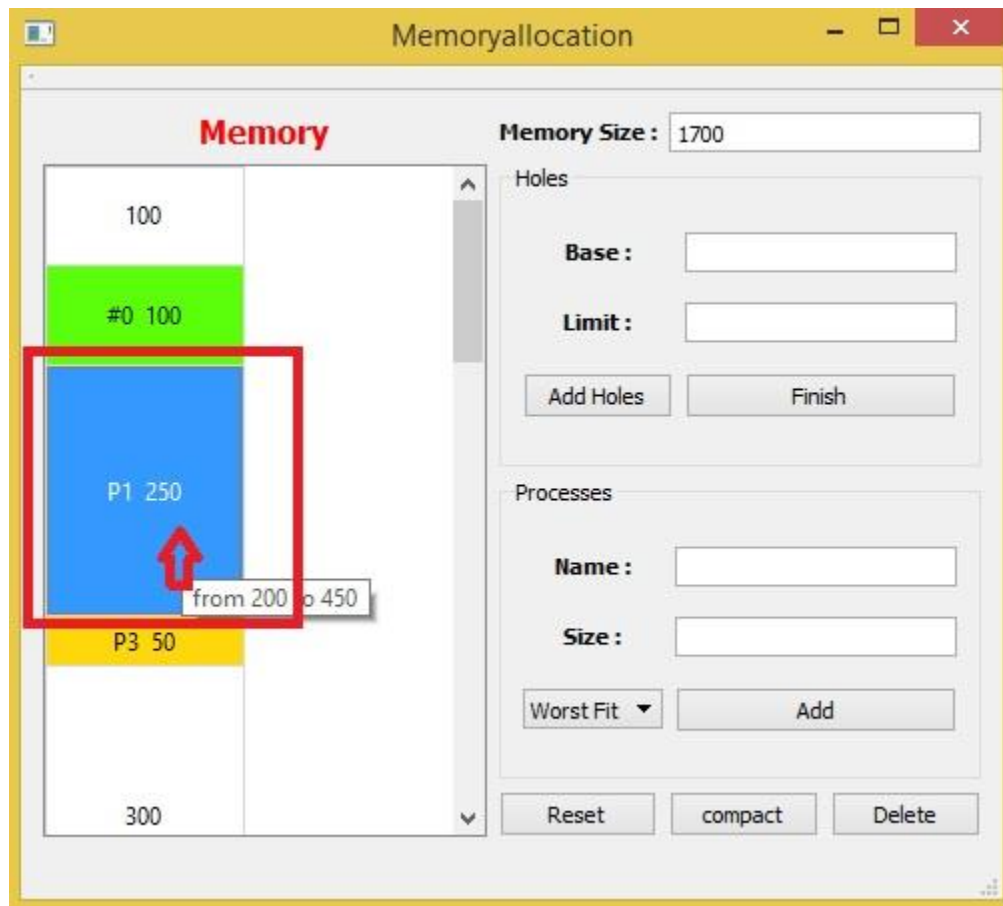
300

Mouse Over Any Process or Hole To see Its Start & End

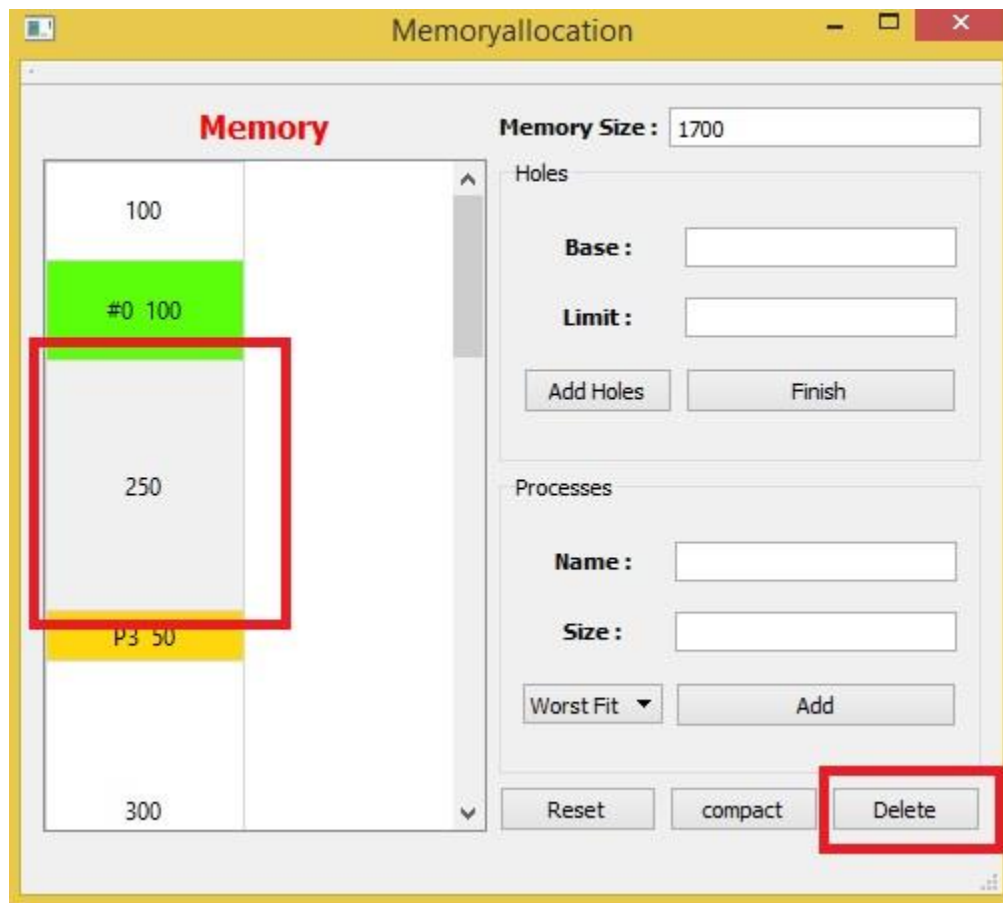


Delete Process

Click on Any Process In Memory Draw Then Click Delete



After Clicking Delete Its Space Will be Free Hole



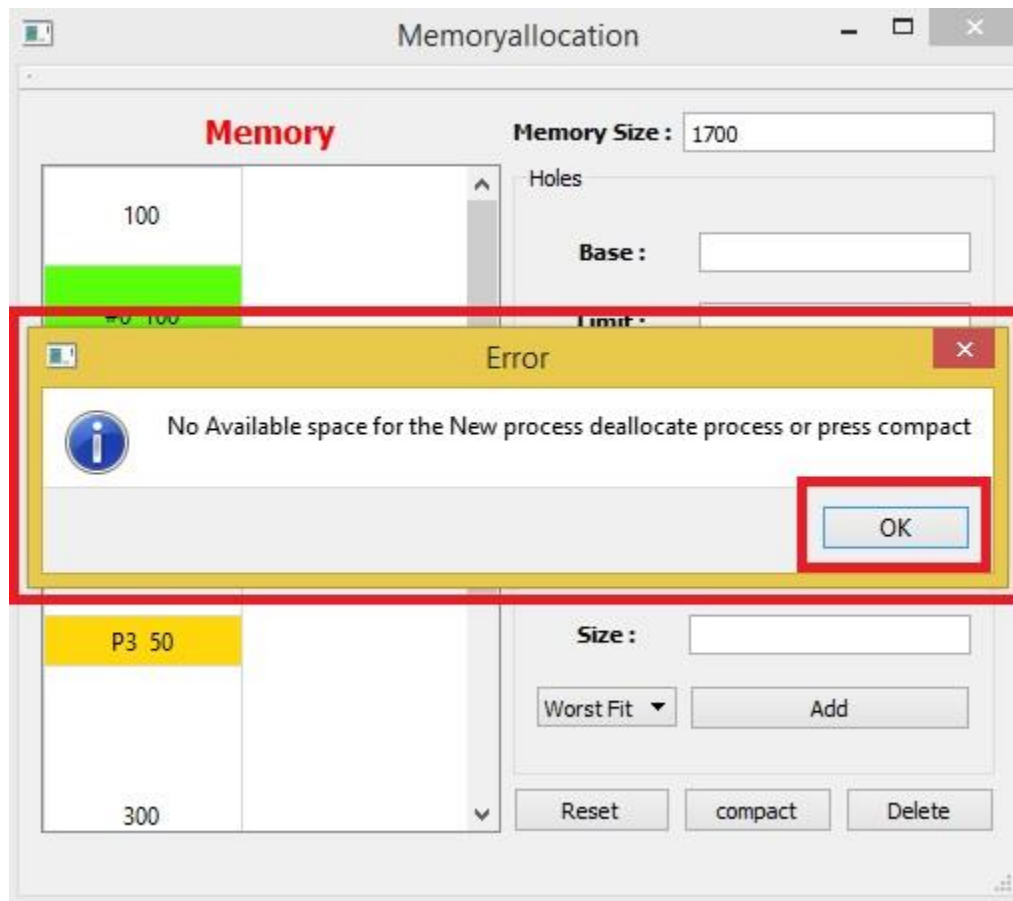
Adding Large Process

If you add New Process with Large Size That will not Fit Any Hole

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside, the "Memory" section displays a vertical stack of memory blocks. The first block is labeled "100" and is highlighted in green with the text "#0 100". The second block is labeled "250". The third block is labeled "P3 50" and is highlighted in yellow. The fourth block is labeled "300". To the right of the memory blocks, the "Memory Size" is set to "1700". Below this, the "Holes" section has fields for "Base" and "Limit", and buttons for "Add Holes" and "Finish". The "Processes" section has a "Name" field with "P4" and a "Size" field with "1000", which is highlighted with a red rectangle. Below the "Size" field is a "First Fit" dropdown menu and an "Add" button. At the bottom of the window are buttons for "Reset", "compact", and "Delete".

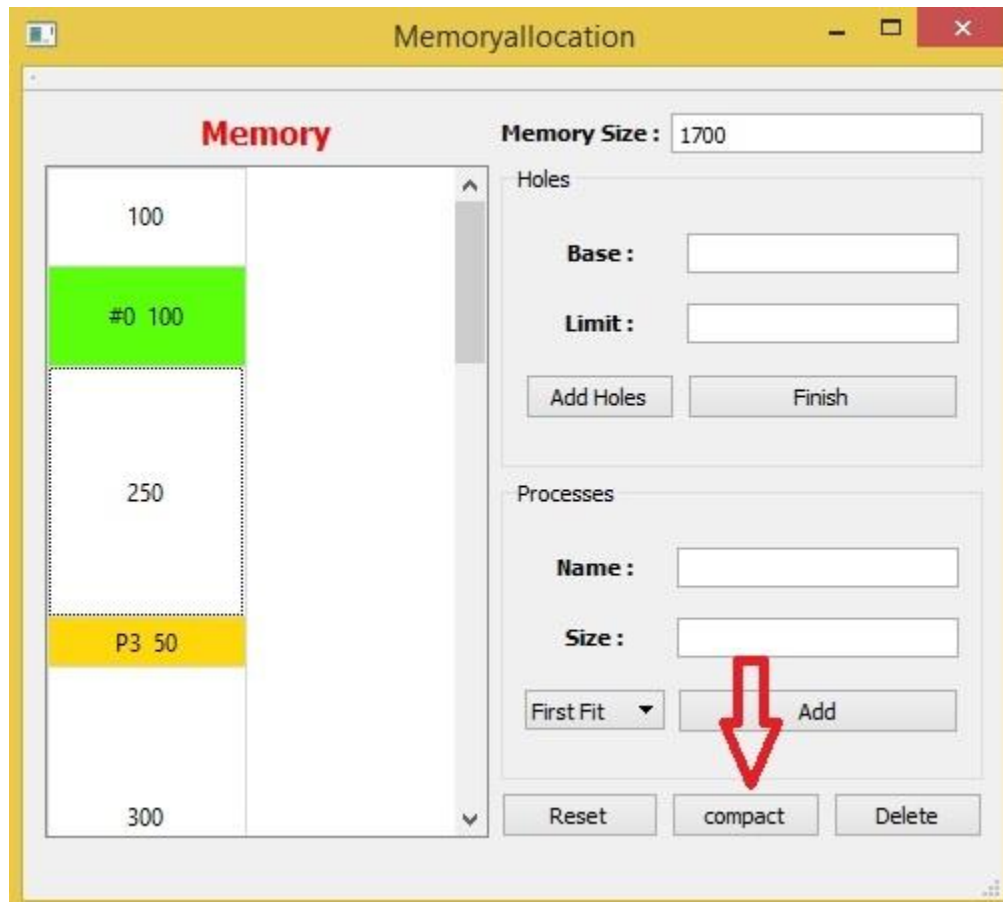
Process	Size
#0	100
P3	50
P4	1000

An Error Message Will Appear Warning You That Process Will not fit
and advice you to deallocate a process or Click Compact



Compact

You can click it any time to compact Memory



After Click All Processes will be compressed
and all holes will be combined together and create a big sized hole Can be fit for big process

The screenshot shows a 'Memoryallocation' window with a yellow title bar. The main area is divided into two sections: 'Memory' and 'Holes'. The 'Memory' section displays a vertical stack of memory blocks: a green block labeled '#0 100', a yellow block labeled 'P3 50', a green block labeled 'P2 150', a green block labeled '#1 100', and a green block labeled '#2 100'. Below these is a large white rectangular area labeled '1200'. The 'Holes' section on the right contains input fields for 'Base :' and 'Limit :', and buttons for 'Add Holes' and 'Finish'. Below this is the 'Processes' section with input fields for 'Name :' and 'Size :', a 'First Fit' dropdown menu, and an 'Add' button. At the bottom of the window are three buttons: 'Reset', 'compact' (highlighted with a red box), and 'Delete'. The 'compact' button is intended to compress all processes and combine all holes into a single large hole.

Reset

Click reset Any time To Reset Program

The screenshot shows a window titled "Memoryallocation" with a yellow title bar. Inside the window, there is a large empty box on the left labeled "Memory" in red. To the right of this box, there are several input fields and buttons. At the top right, there is a "Memory Size :" label followed by an empty text box. Below this, there is a "Holes" section with "Base :" and "Limit :" labels, each followed by an empty text box. Under the "Holes" section are two buttons: "Add Holes" and "Finish". Below the "Holes" section is a "Processes" section with "Name :" and "Size :" labels, each followed by an empty text box. Under the "Processes" section is a dropdown menu showing "First Fit" and an "Add" button. At the bottom of the window, there are three buttons: "Reset", "compact", and "Delete". The "Reset" button is highlighted with a red rectangular box.