

# Memory Management App Documentation

Made by:

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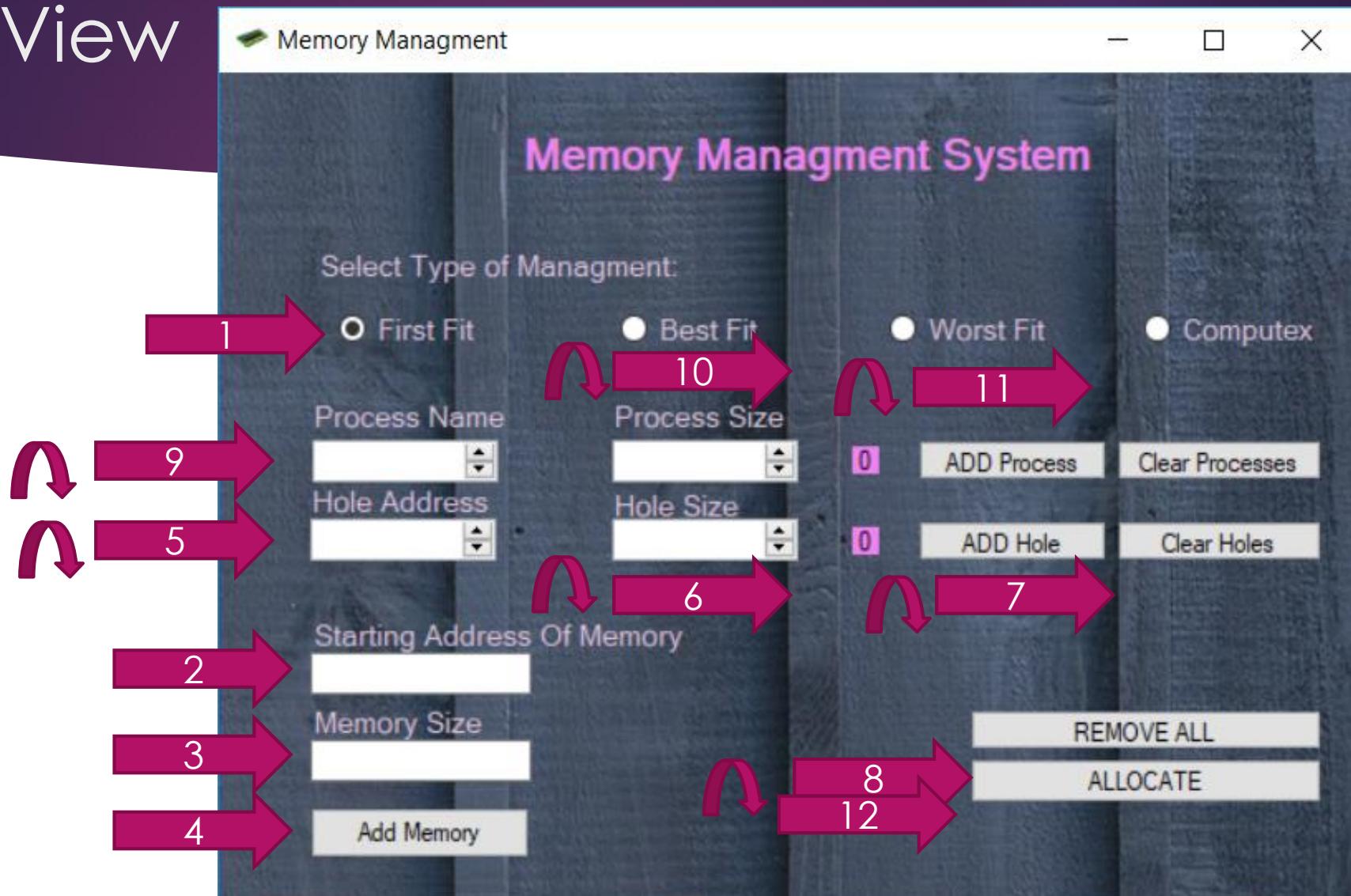
Soha Alaa

Section:

2



# First View

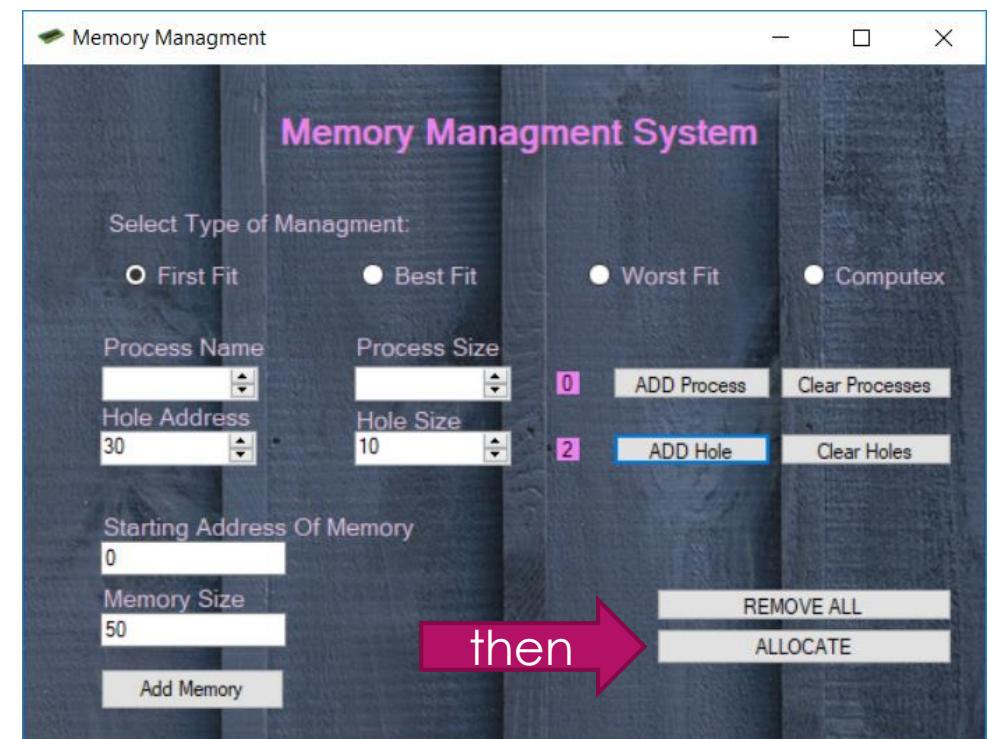
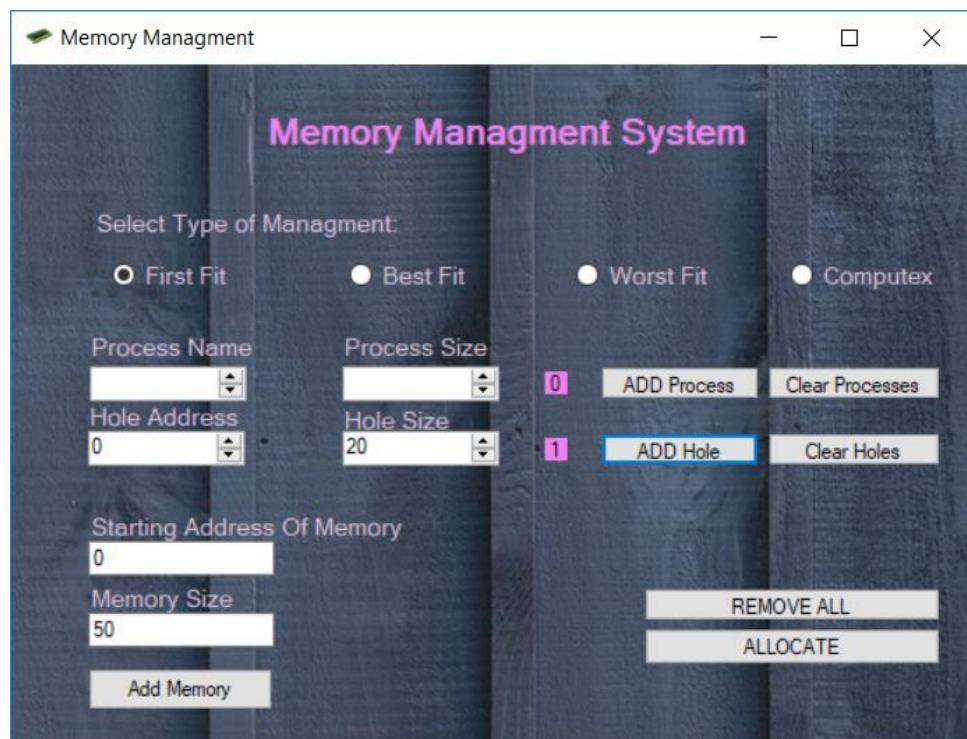


# Second View

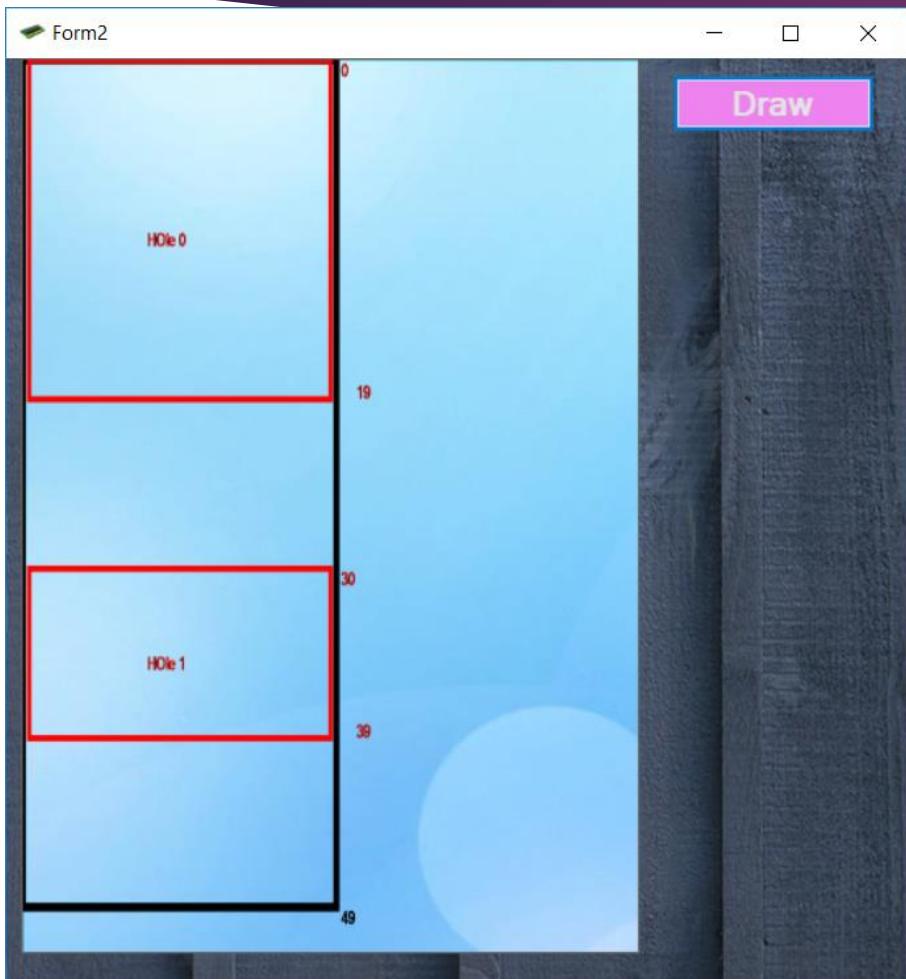


- ▶ Memory -> Black Border
- ▶ Hole -> Red Border
- ▶ Process -> Blue Border

# Example



# Example



Memory Management

### Memory Management System

Select Type of Management:

First Fit     Best Fit     Worst Fit     Computex

Process Name      Process Size

Page1      10

Hole Address      Hole Size

30      10

Starting Address Of Memory

0

Memory Size

50

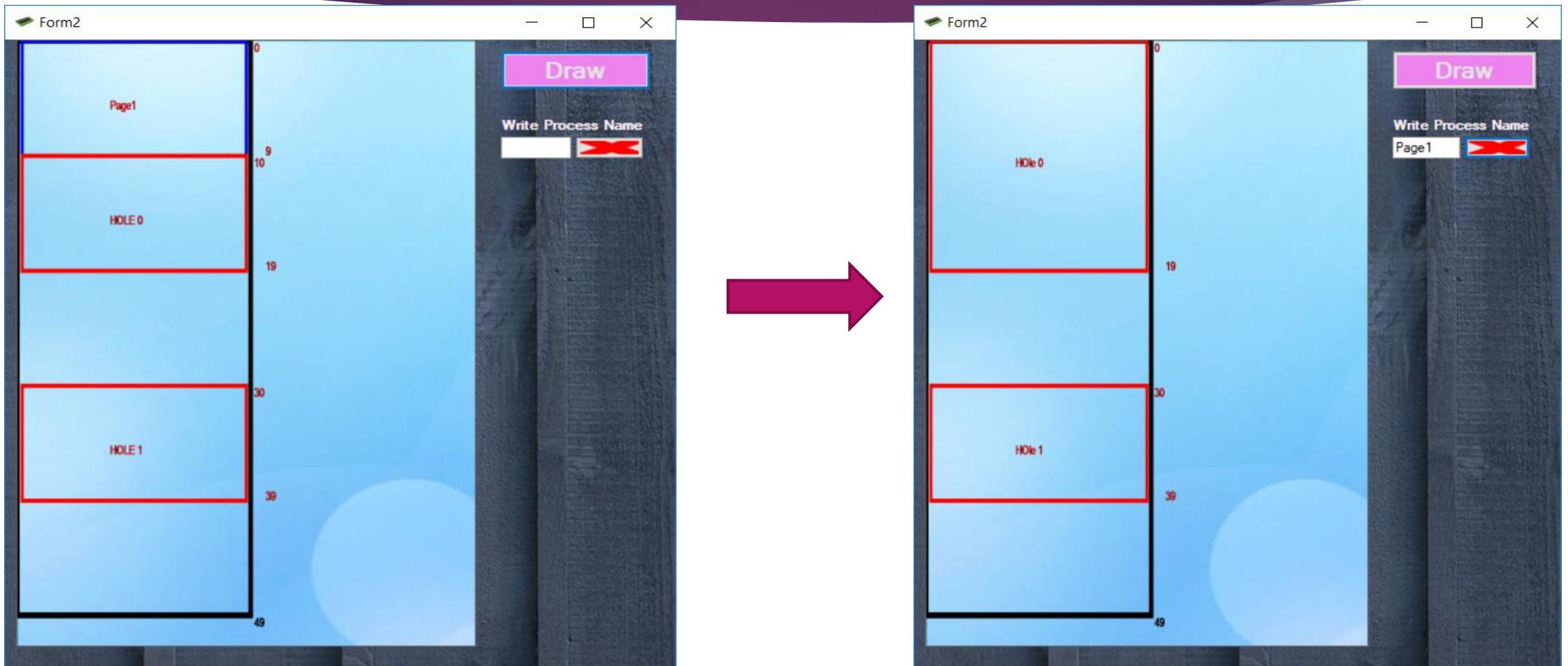
Add Memory

REMOVE ALL

then

ALLOCATE

# Example



# Advantages

- ▶ You can change the memory size & starting address any time during the process.
- ▶ You can add a dynamic number of holes and processes.
- ▶ We support 100 of them but you can change it in the code to any number you want.
- ▶ You can press up or down to show all processes or holes you entered.
- ▶ You can add hole by hole and draw the graph and also for the process.
- ▶ You can clear all processes only or holes only.
- ▶ You can remove all data you enter.
- ▶ You have 4 types of allocation.
- ▶ You can remove any process you want by de-allocated if from the graph.

# Memory Start Address Example

Memory Management System

Select Type of Management:

First Fit     Best Fit     Worst Fit     Computex

Process Name: MM    Process Size: 5    Hole Address: 20    Hole Size: 10

ADD Process    Clear Processes

Starting Address Of Memory: 20

Memory Size: 20

REMOVE ALL

ALLOCATE

Add Memory

```
SEA.DrawLine(penMem, 0, 0, 210, 250); // XYWH
GFX.DrawLineString(memoryList, startAddress.ToString(), myFont, BrushColor);
GFX.DrawLineString(memoryList, endAddress.ToString(), myFont, BrushColor);
```

Build

```
started: Project: Memory_Managment, Configuration: Release Any CPU -----
#\\Memory_Managment\\Memory_Managment\\Memory_Managment\\Form2.cs(22,17,22,20): warning CS
Segment -> D:\\Projects\\C#\\Memory_Managment\\Memory_Managment\\Memory_Managment\\bin\\Release
d: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped ======
```

Memory Management

Draw

Write Process Name: [ ] [X]

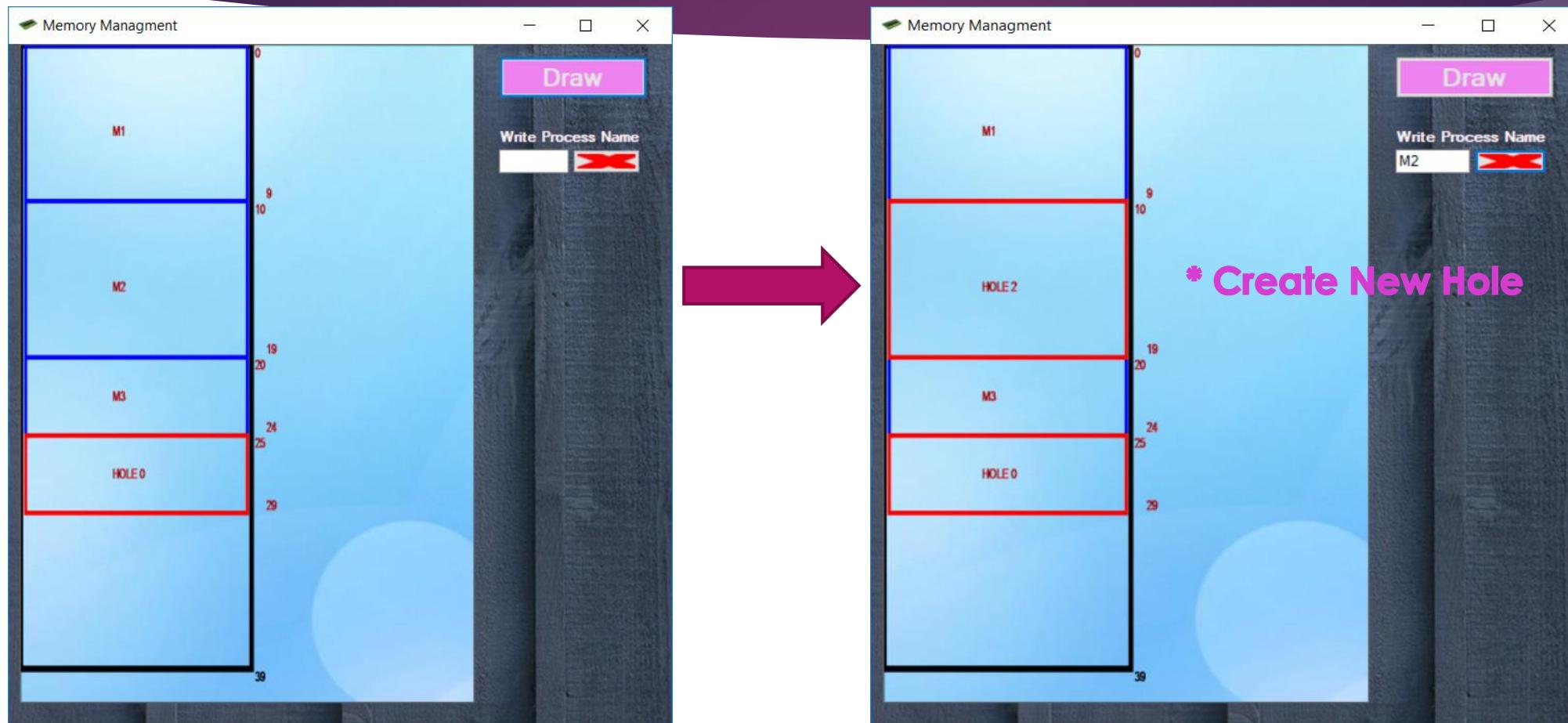
20  
19  
25  
29

MM

HOLE 0

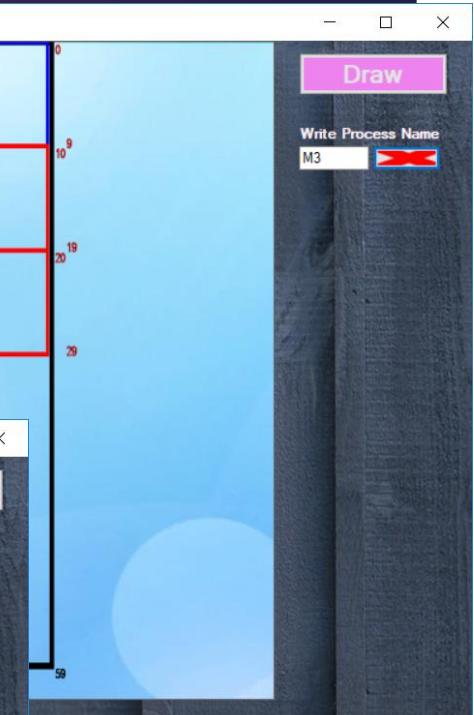
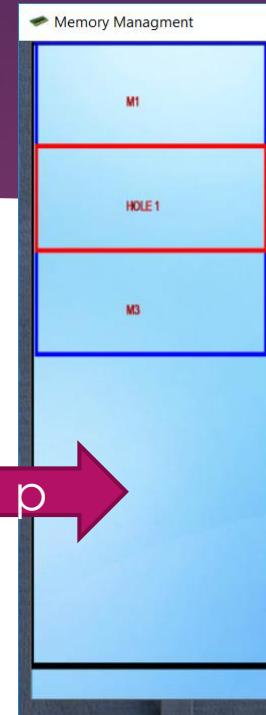
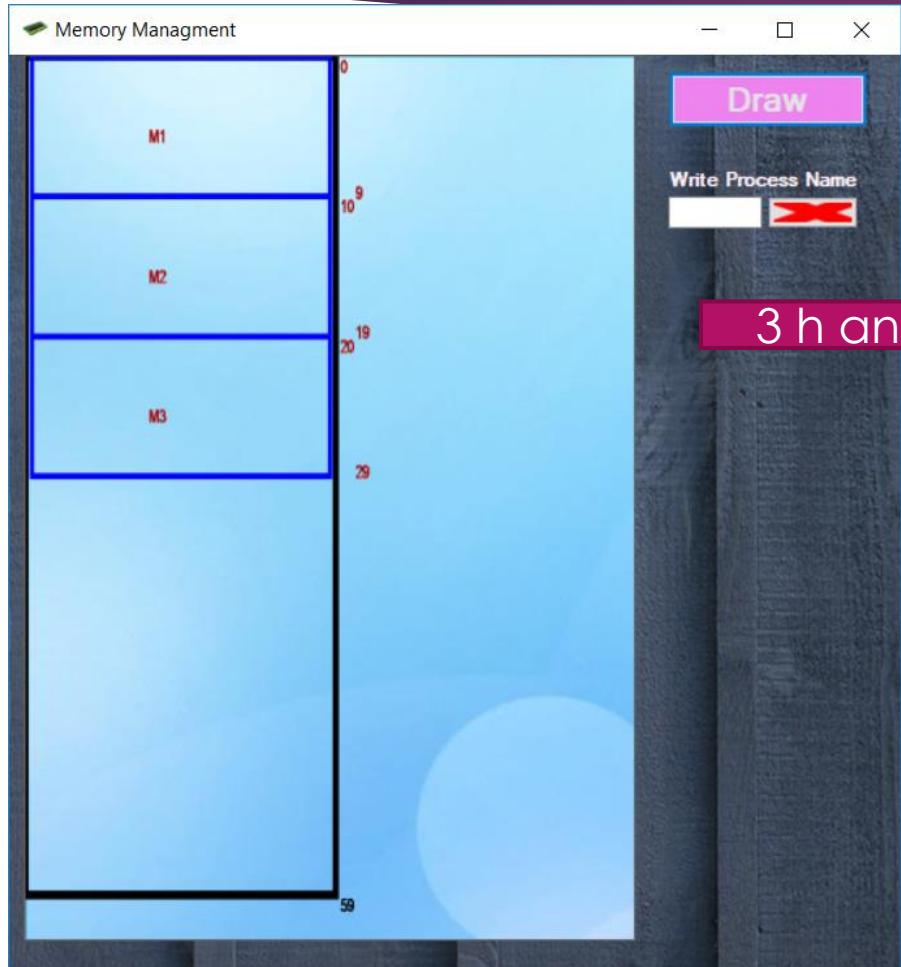
39

# Remove process in the same hole with another processes Example

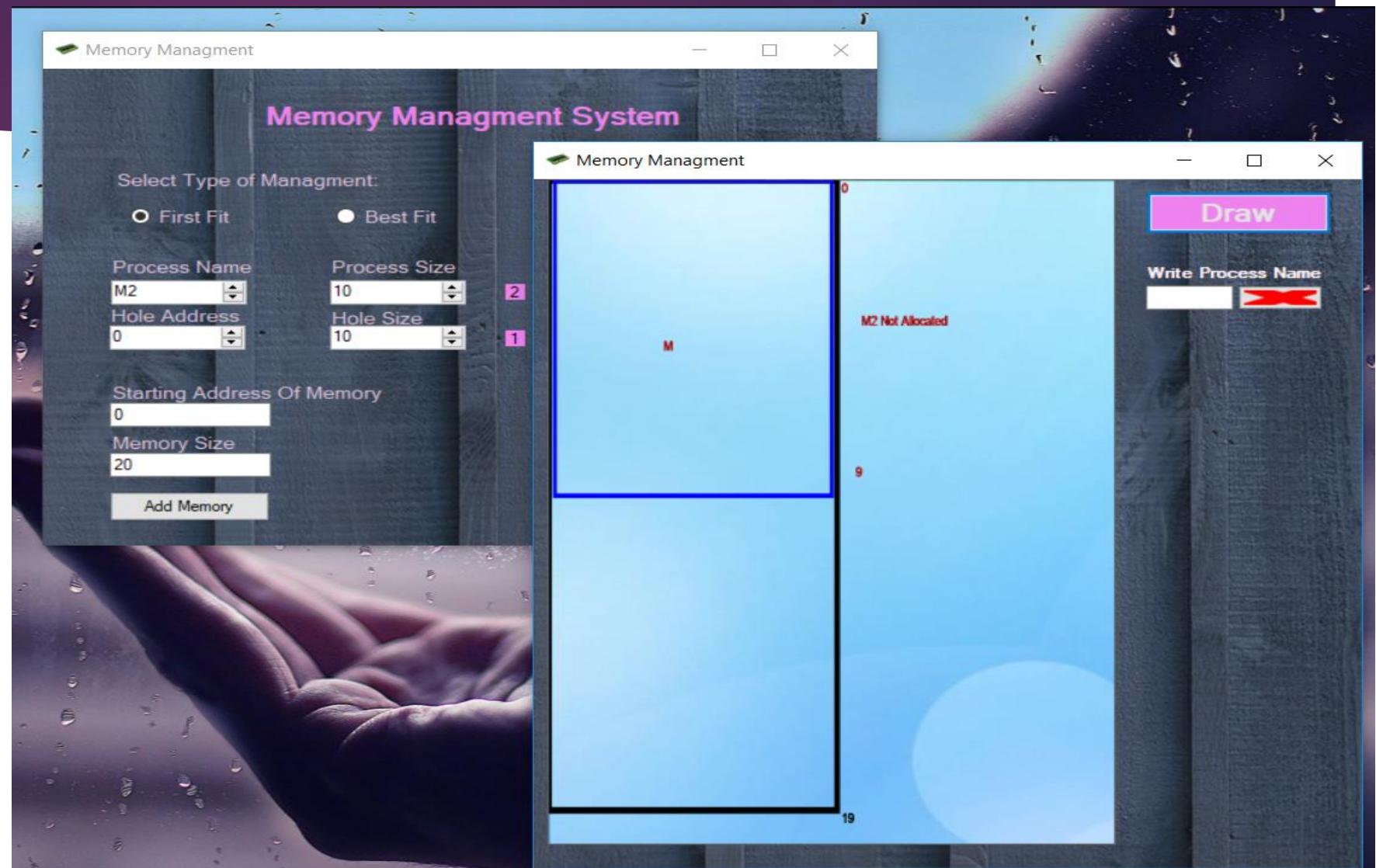


# Remove processes with different holes

## Example



# No holes and user add new process Example



# First Fit Example

► Memory:

-Starting Address: 0

-Size: 60

► Holes:

-hole0: 0 5

-hole1: 10 30

-hole2: 40 5

-hole3: 45 10

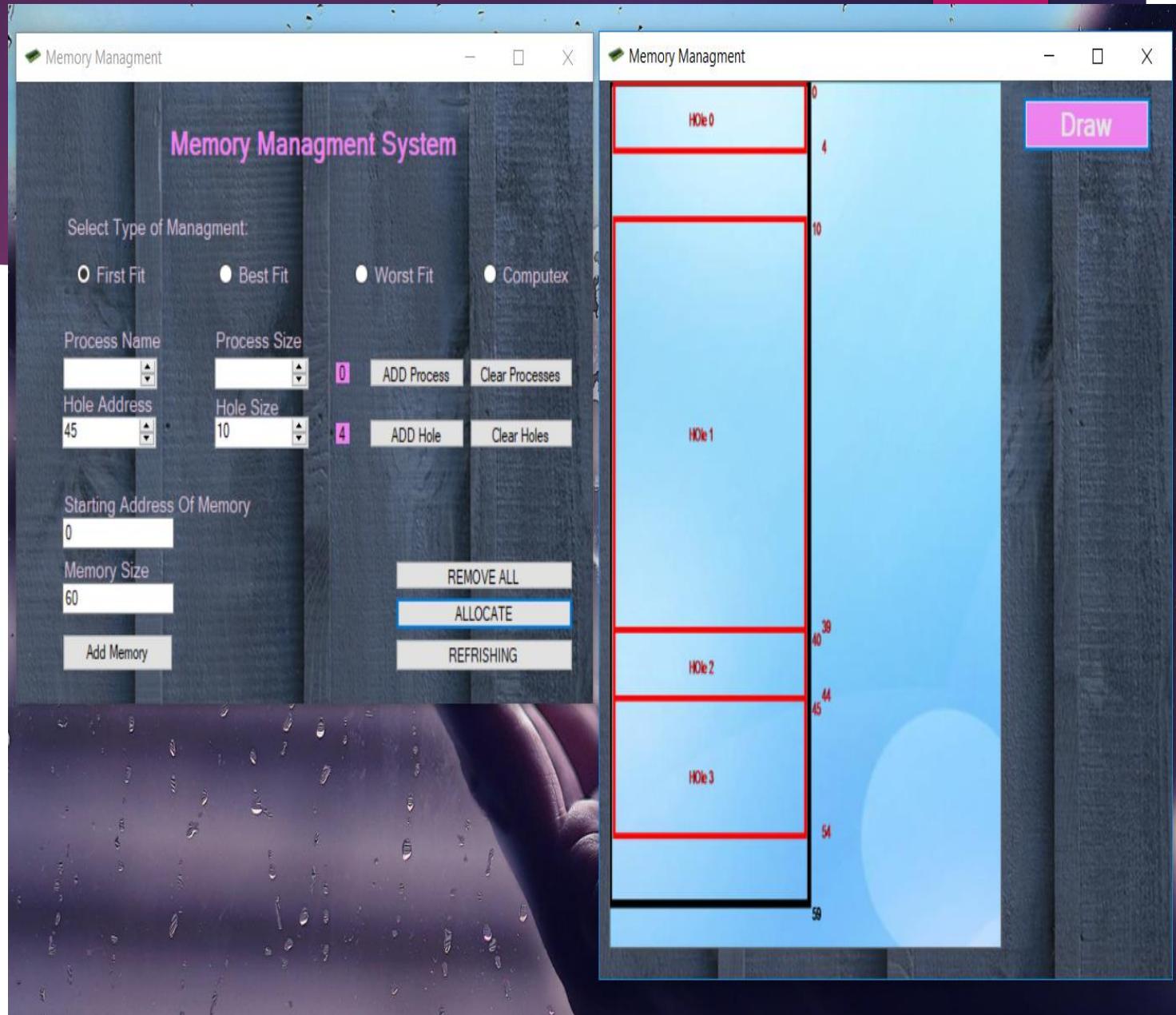
► Processes:

-M1: 5

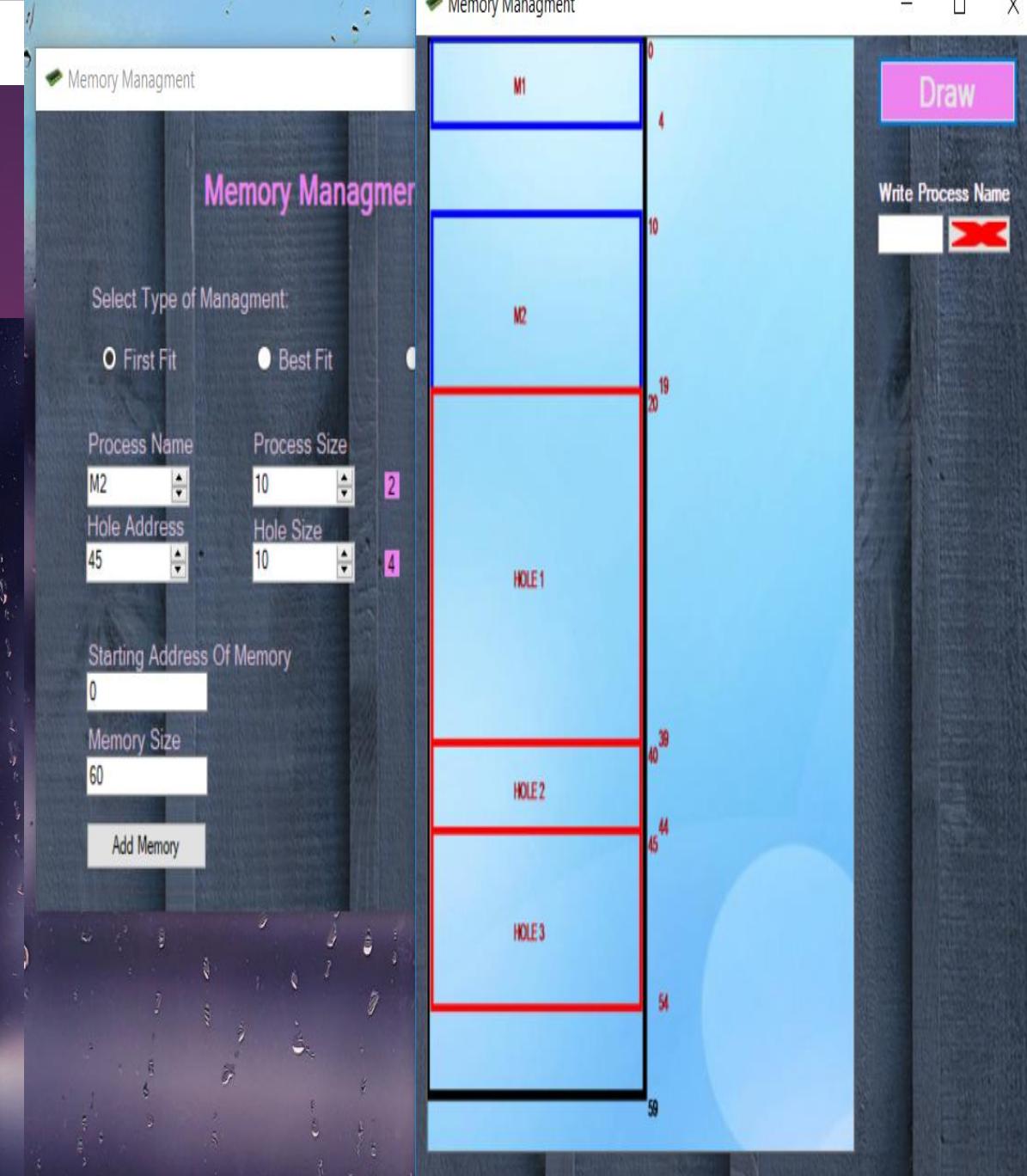
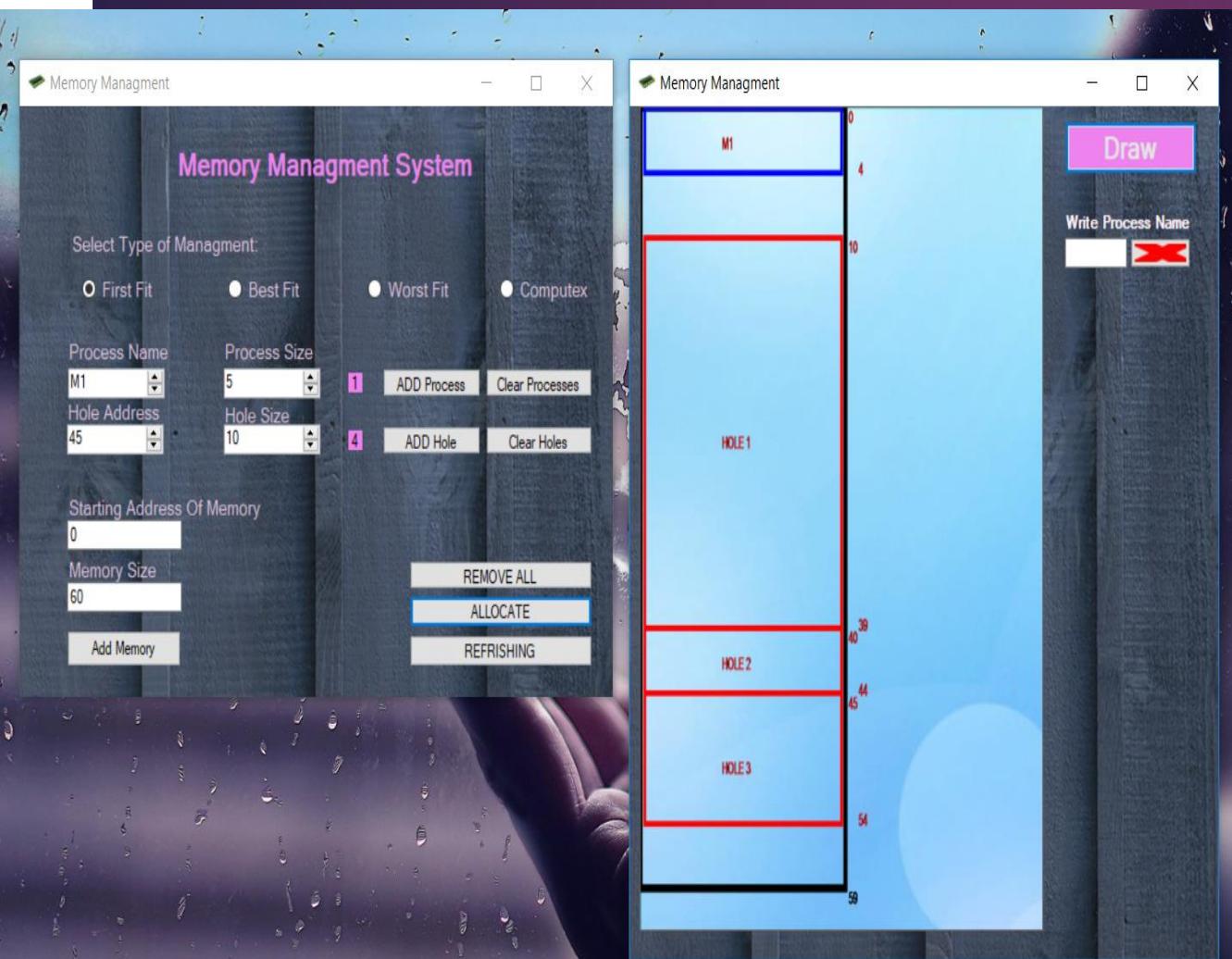
-M2: 10

-M3: 5

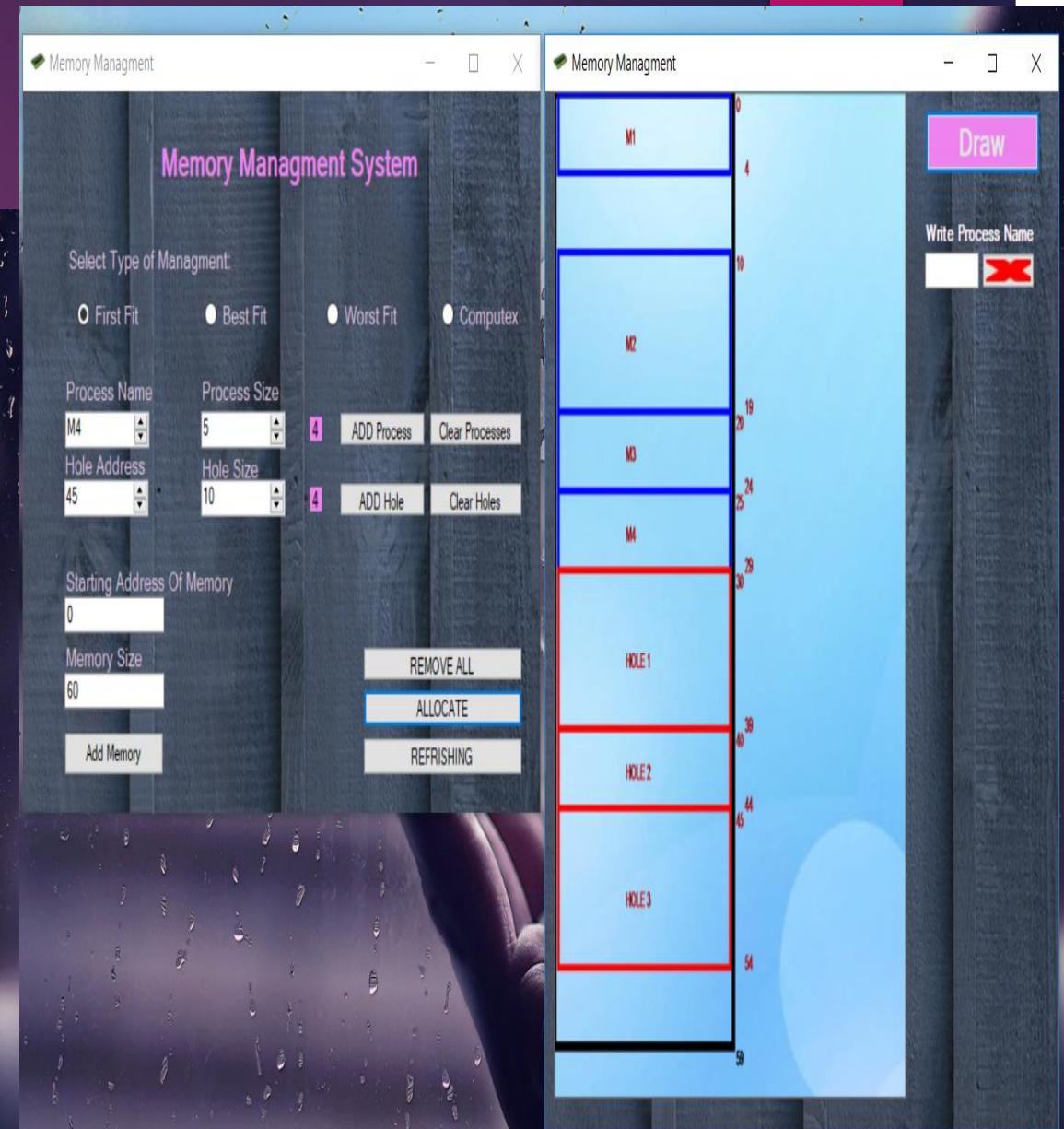
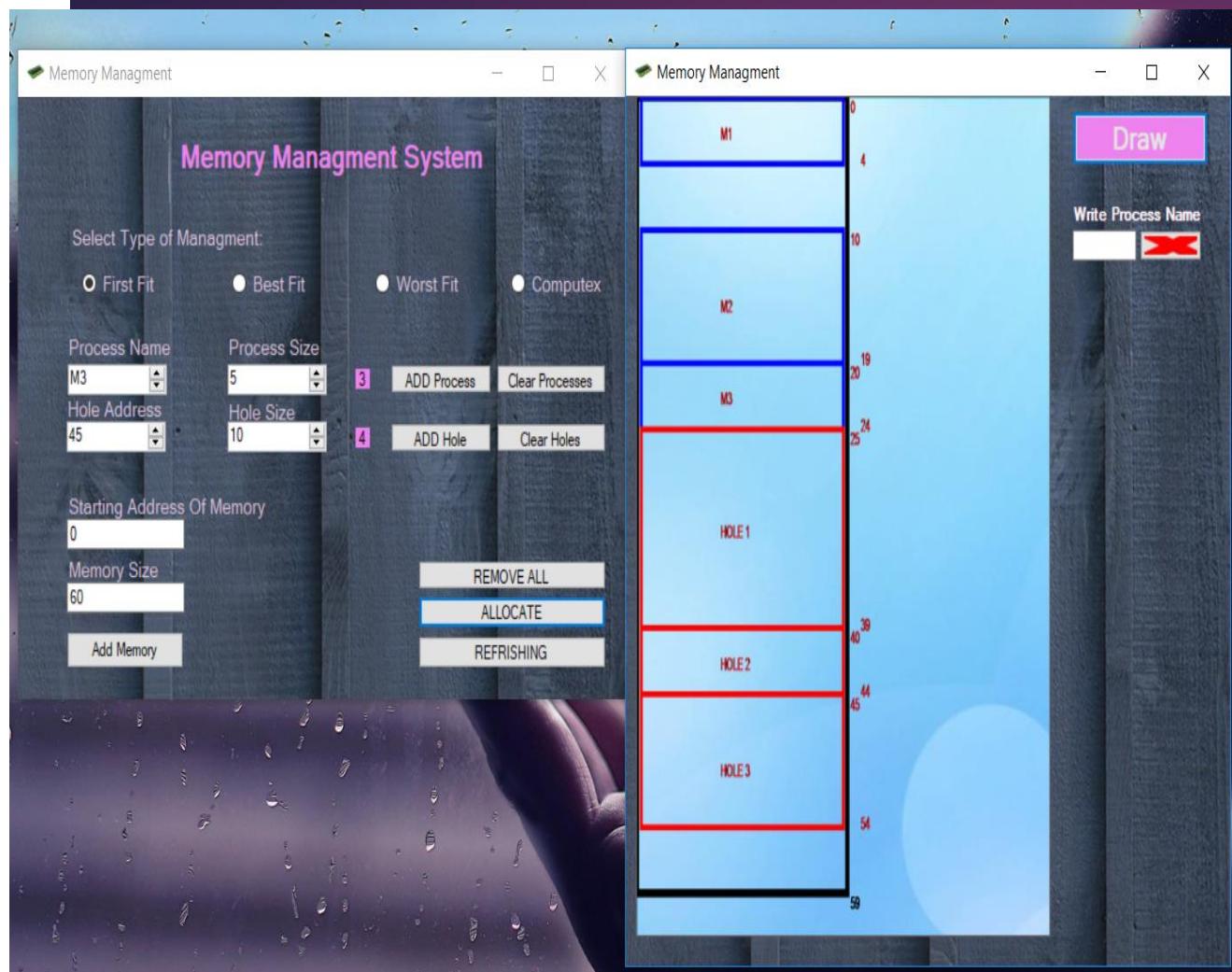
-M4: 5



# First Fit Example



# First Fit Example



# First Fit Example

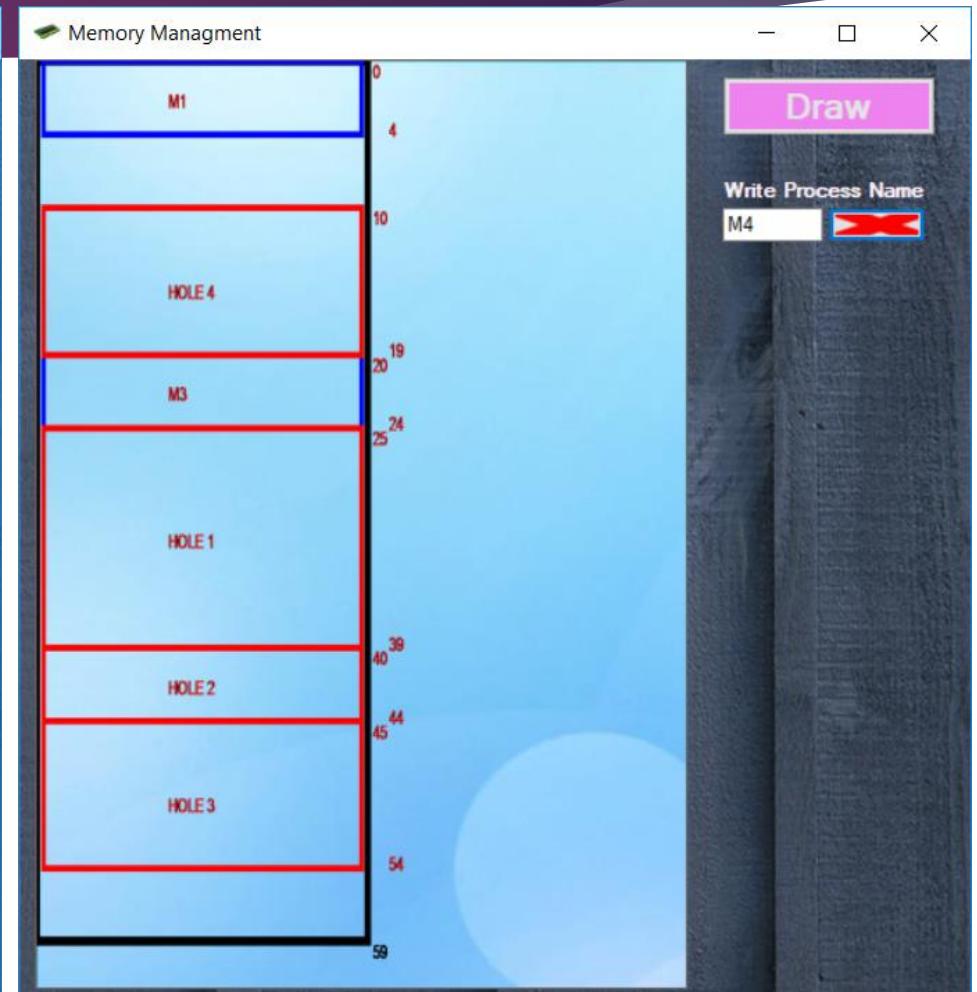
► De-allocation:

M2

M4

M1

M3



# First Fit Example

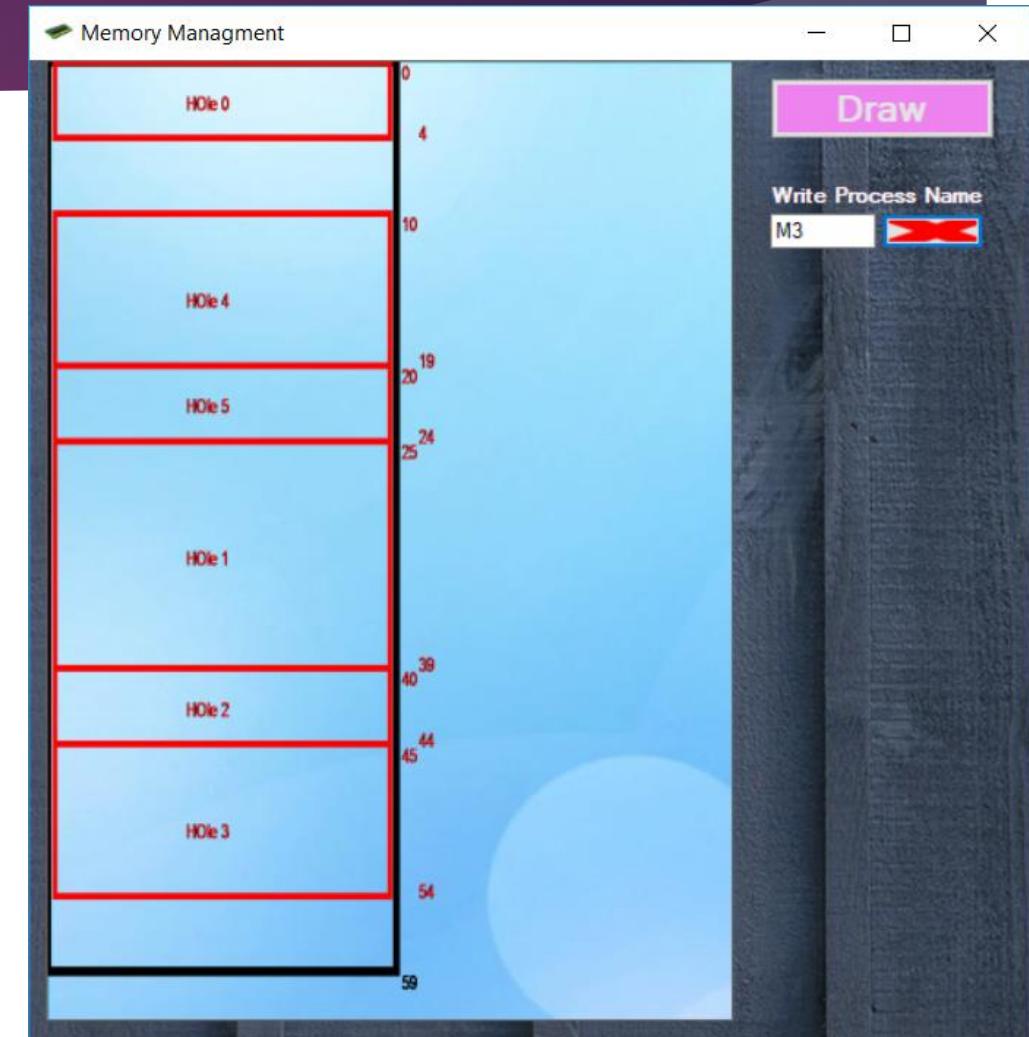
► De-allocation:

M2

M4

M1

M3



# First Fit Example

Memory Management

### Memory Management System

Select Type of Management:

First Fit     Best Fit     Worst Fit     Computex

Process Name	Process Size
M4	5
Hole Address	4
45	10

Hole Size: 4

ADD Process    Clear Processes

Starting Address Of Memory: 0

Memory Size: 60

Add Memory    REMOVE ALL    ALLOCATE    REFRESHING

Before

Memory Management

### Memory Management System

Select Type of Management:

First Fit     Best Fit     Worst Fit     Computex

Process Name	Process Size
45	10

After Refreshing

ADD Process    Clear Processes

ADD Hole    Clear Holes

Starting Address Of Memory: 0

Memory Size: 60

Add Memory    REMOVE ALL    ALLOCATE    REFRESHING

# Best Fit Example

► Memory:

-Starting Address: 0

-Size: 60

► Holes:

-hole0: 0 5

-hole1: 10 30

-hole2: 40 5

-hole3: 45 10

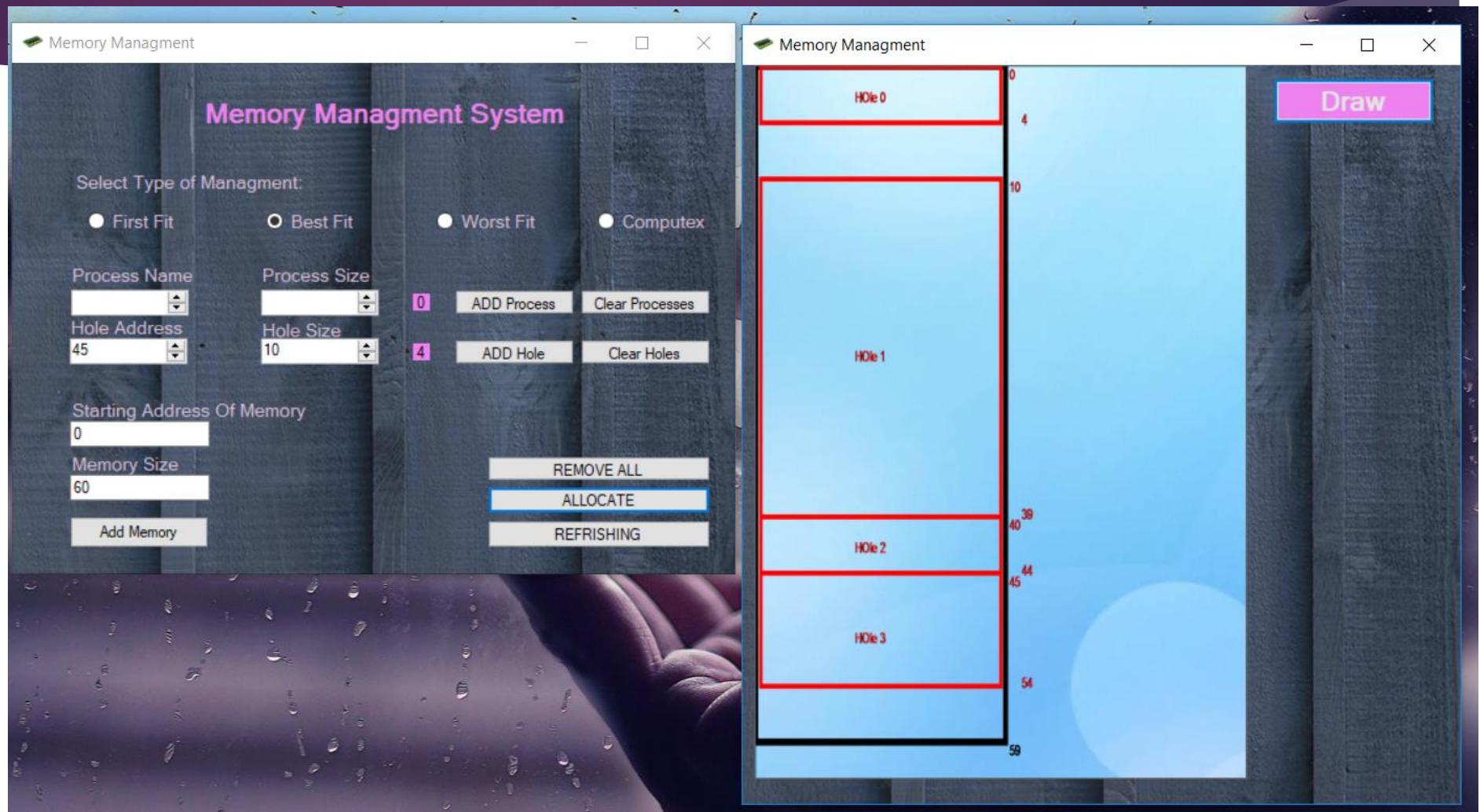
► Processes:

-M1: 5

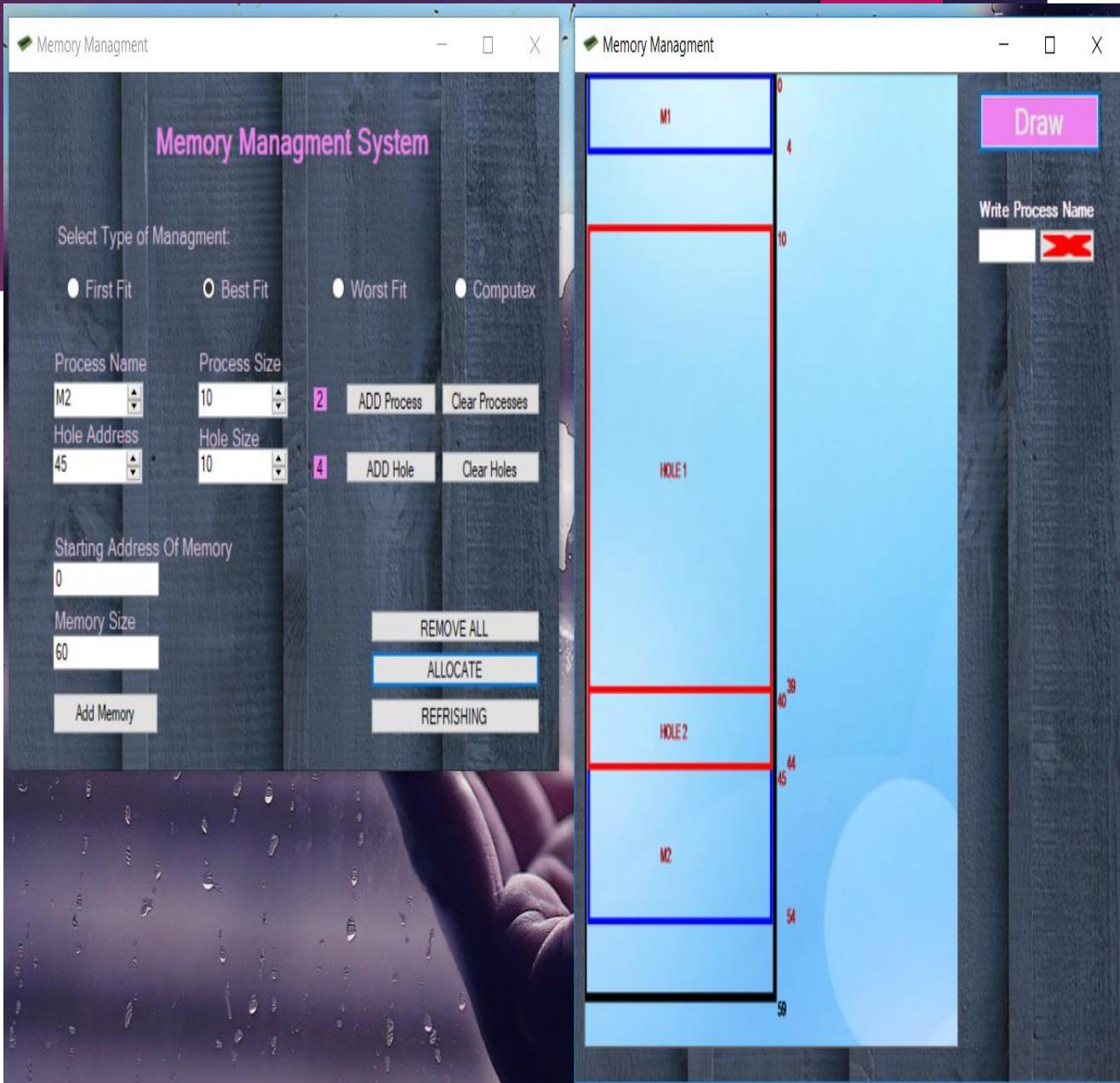
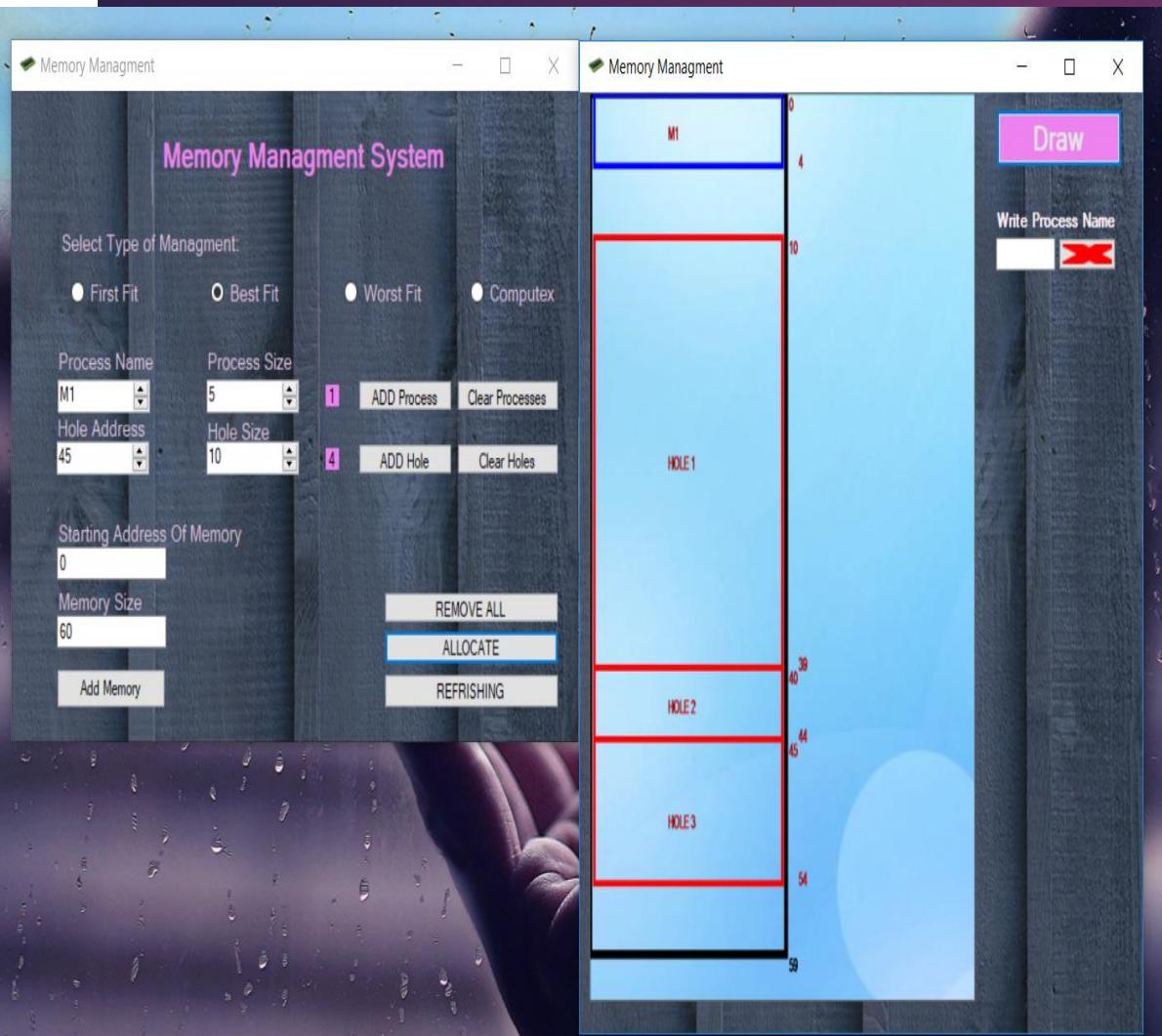
-M2: 10

-M3: 5

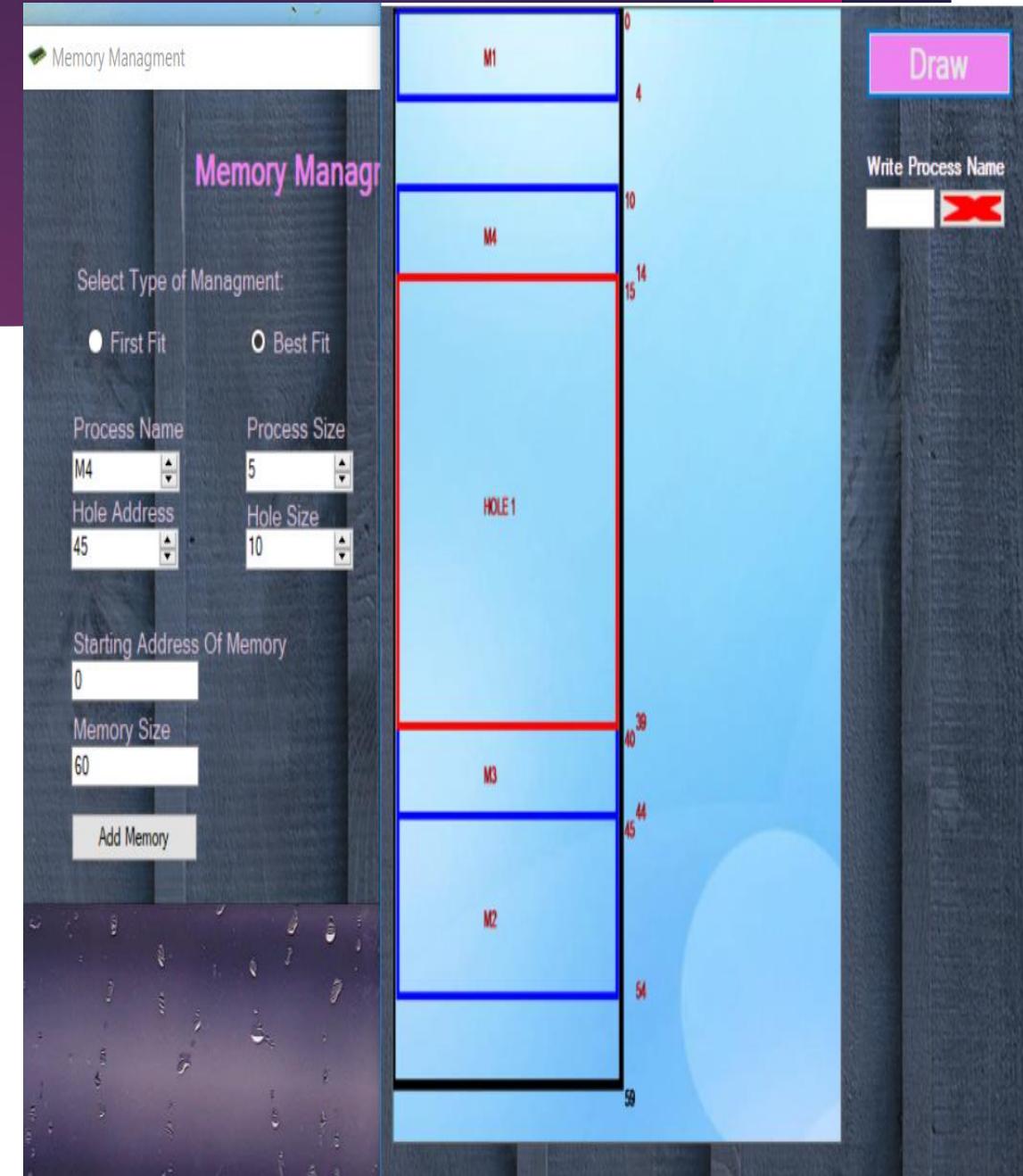
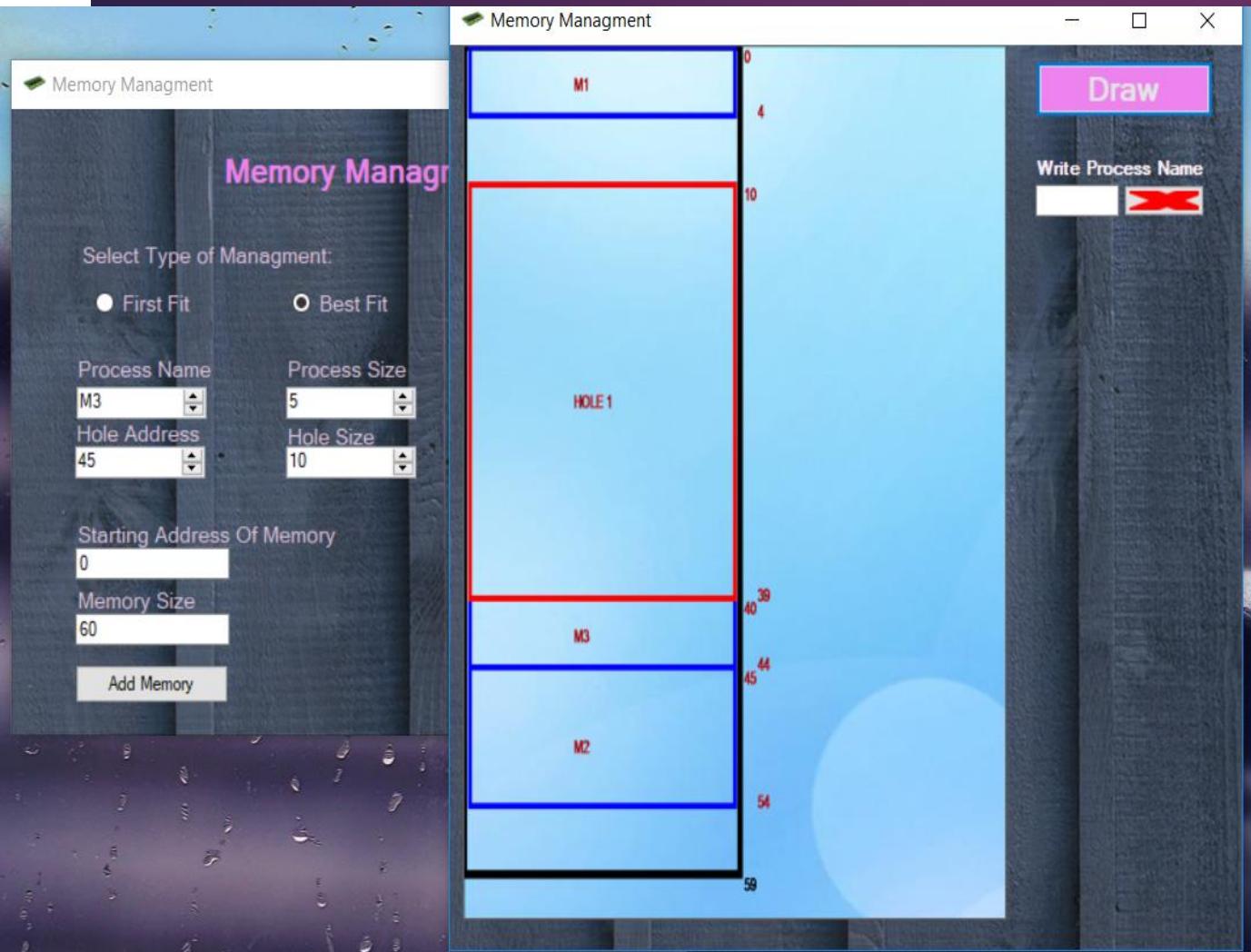
-M4: 5



# Best Fit Example



# Best Fit Example



# Best Fit Example

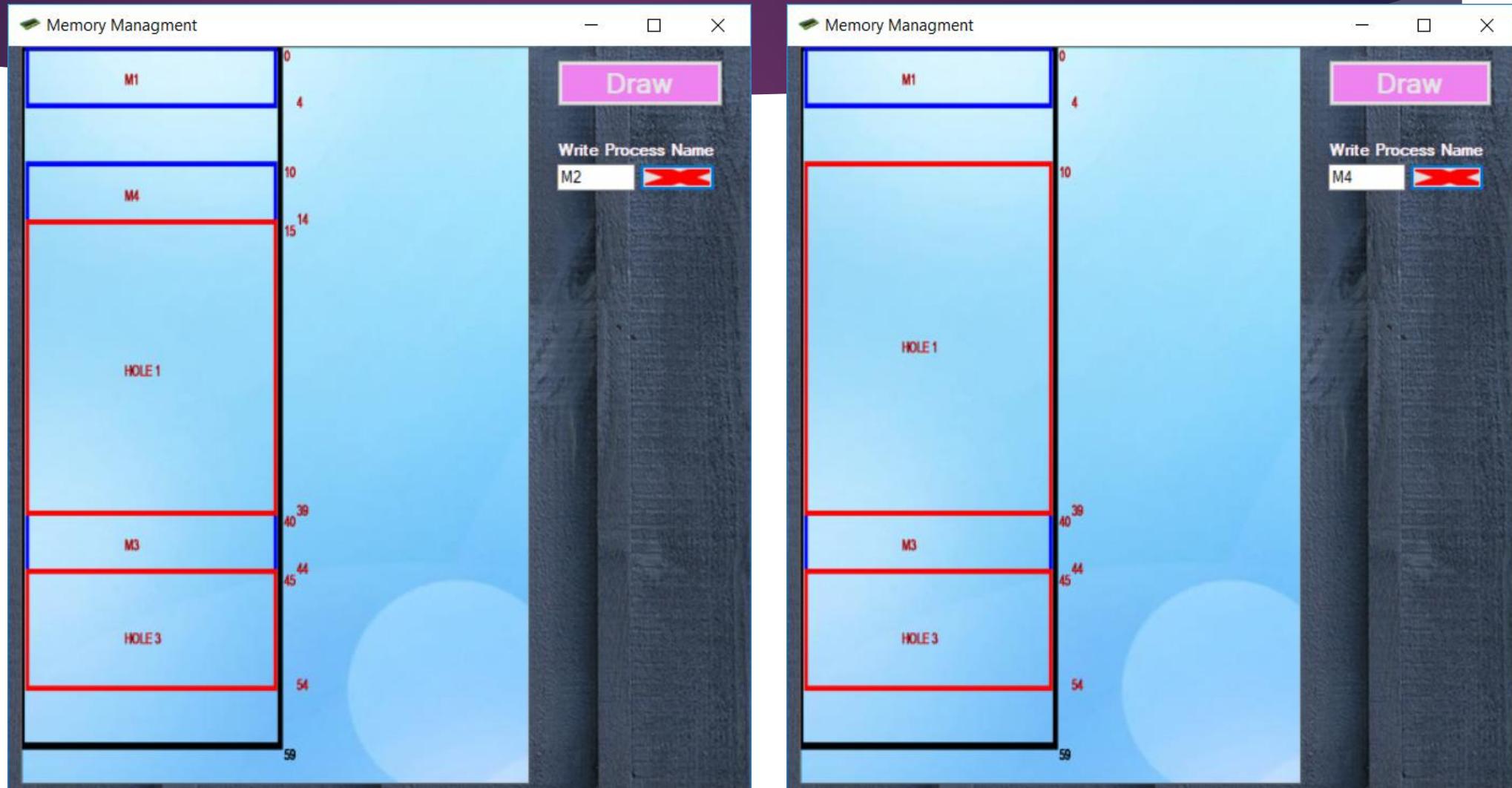
► De-allocation:

M2

M4

M1

M3



# Best Fit Example

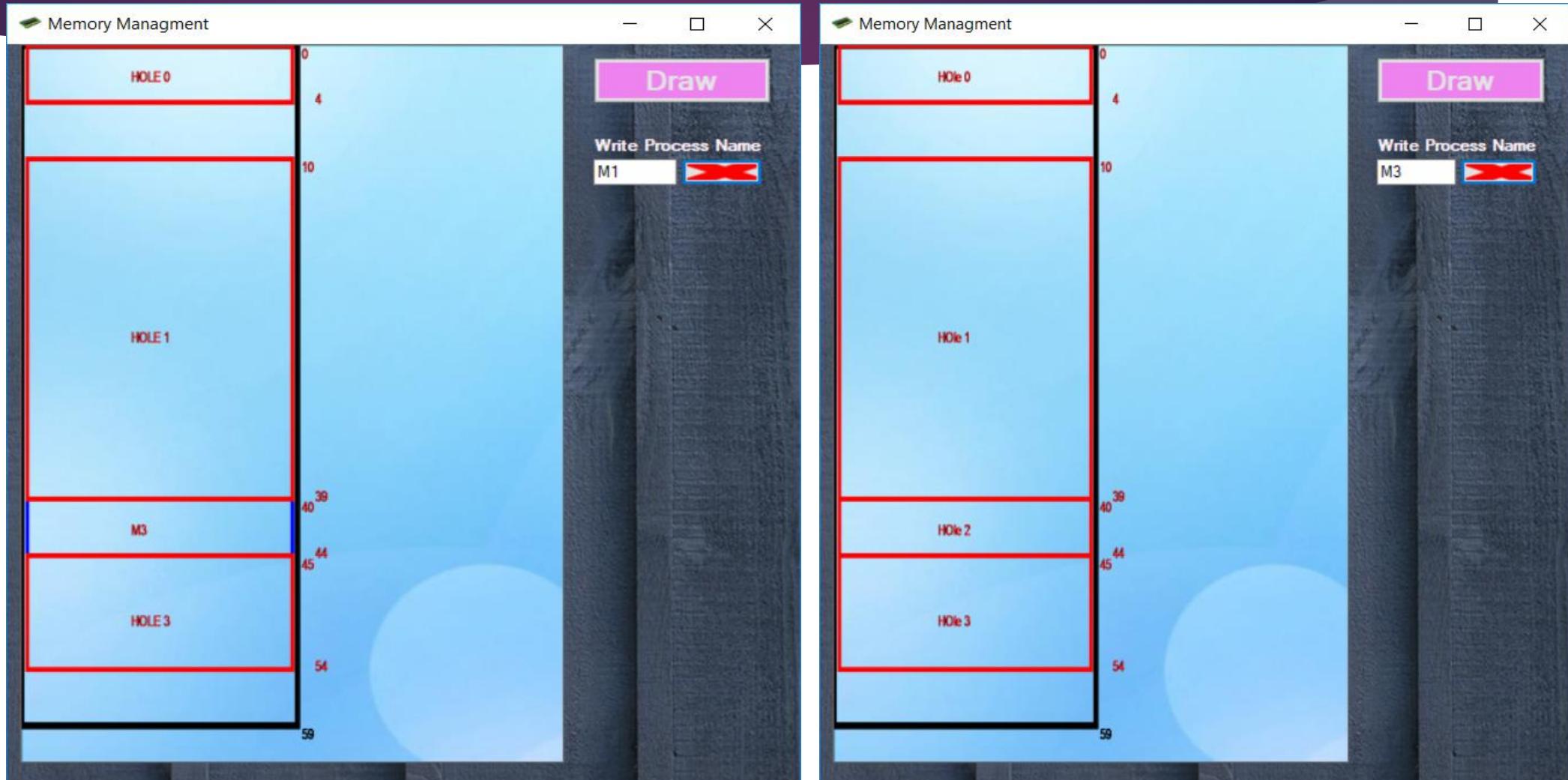
► De-allocation:

M2

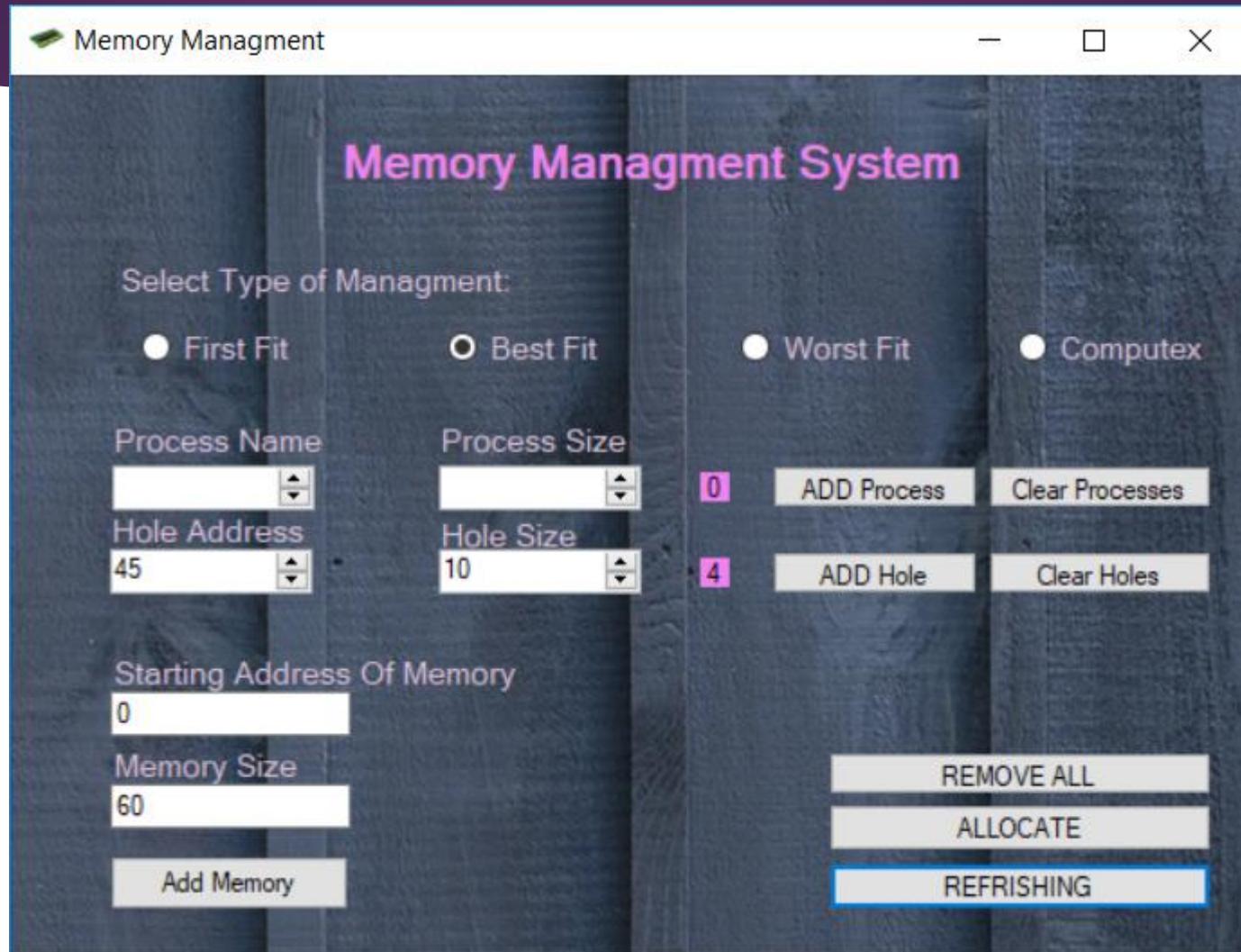
M4

M1

M3



# Best Fit Example



# Worst Fit Example

► Memory:

-Starting Address: 0

-Size: 60

► Holes:

-hole0: 0 5

-hole1: 10 30

-hole2: 40 5

-hole3: 45 10

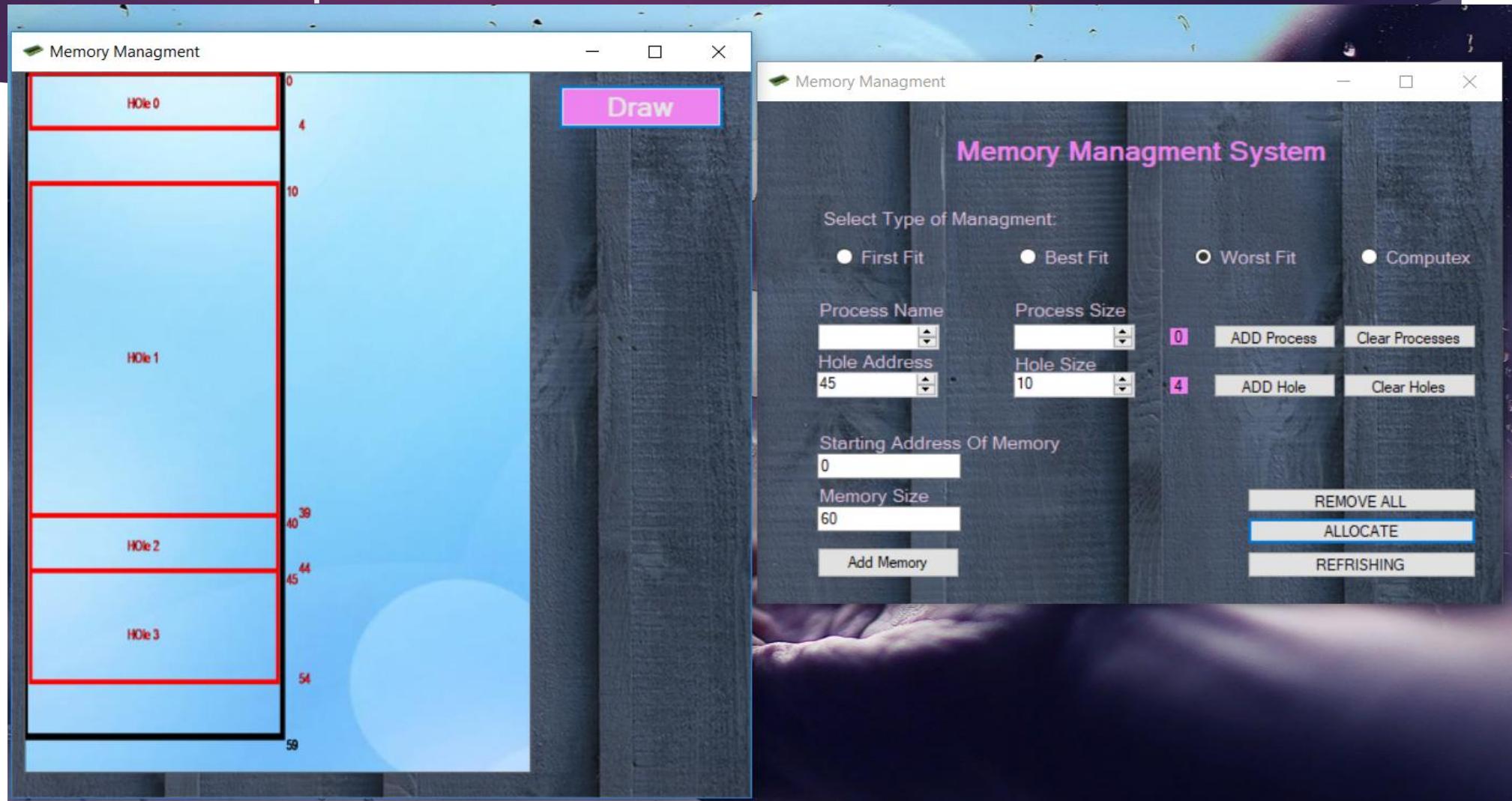
► Processes:

-M1: 5

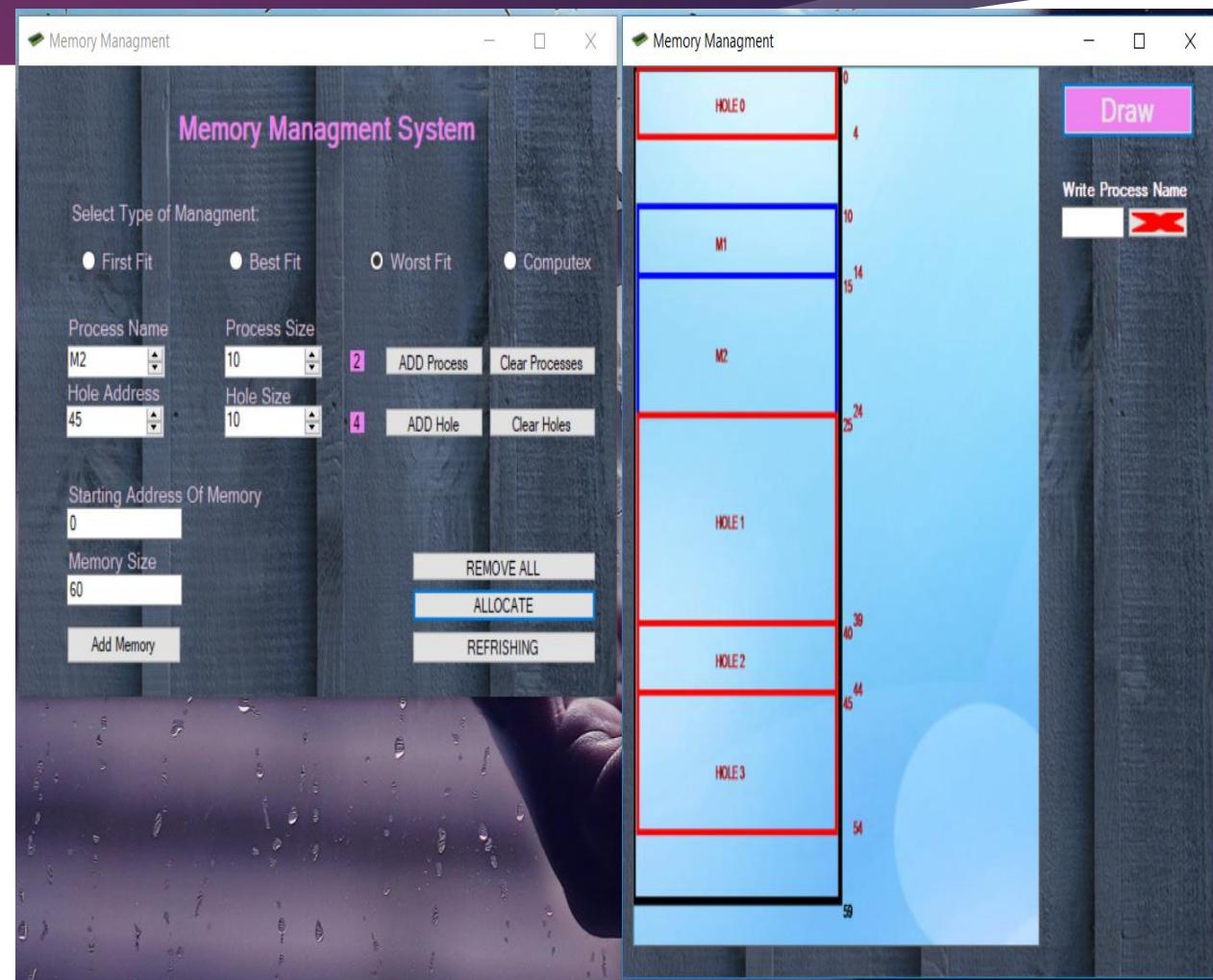
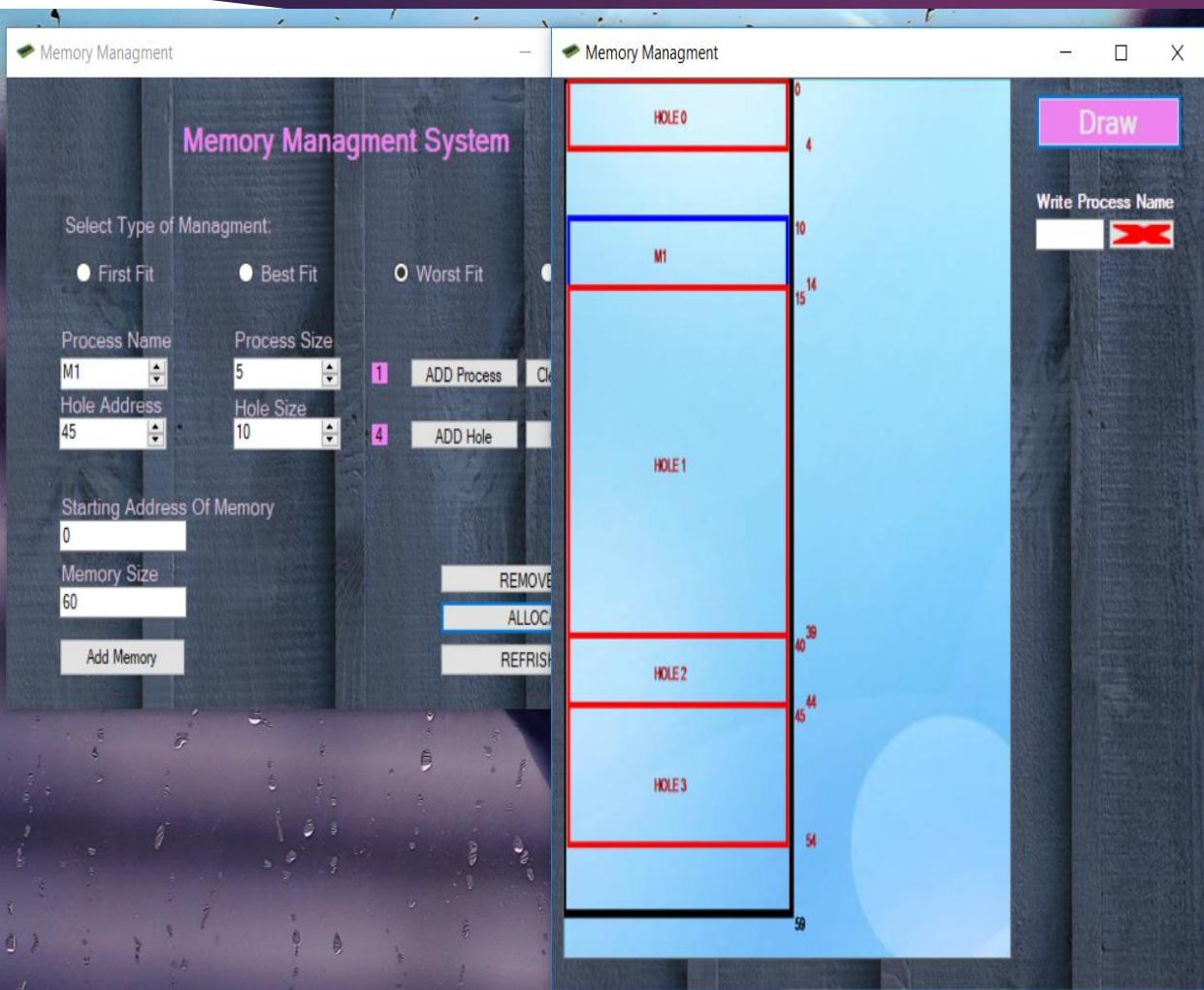
-M2: 10

-M3: 5

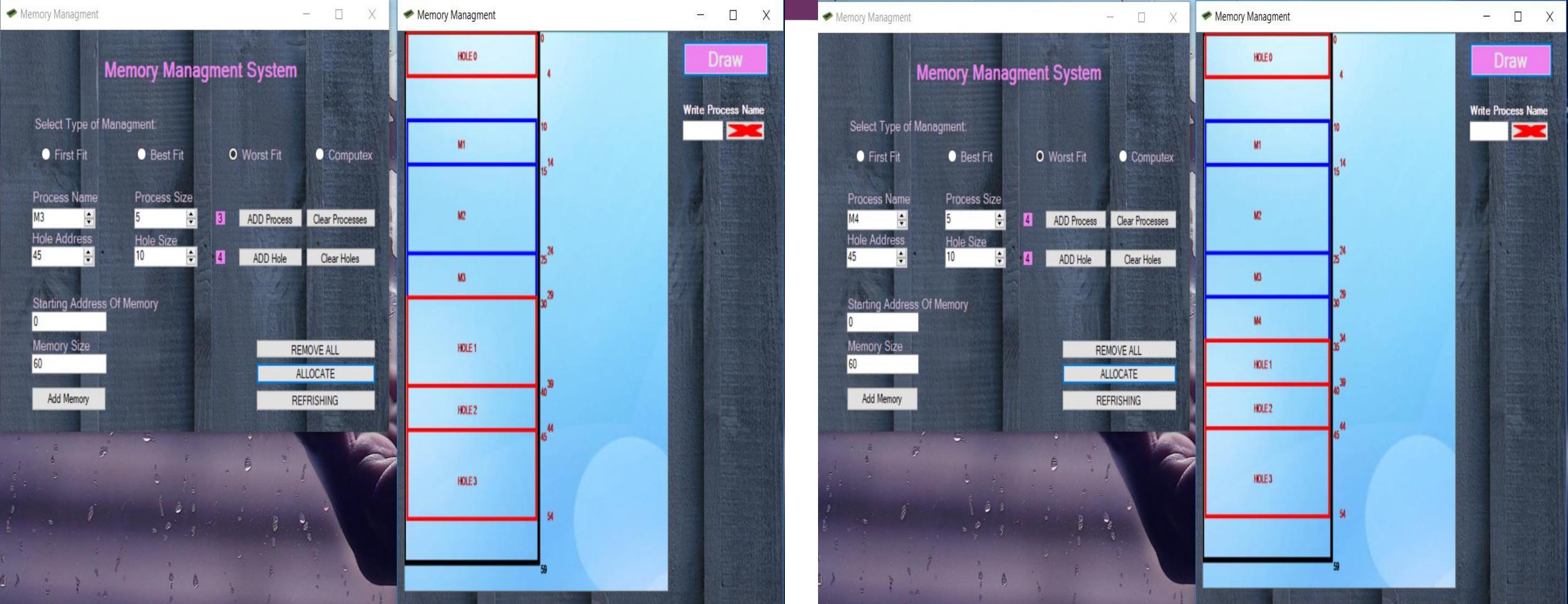
-M4: 5



# Worst Fit Example



# Worst Fit Example



# Worst Fit Example

► De-allocation:

M2

M4

M1

M3



# Worst Fit Example

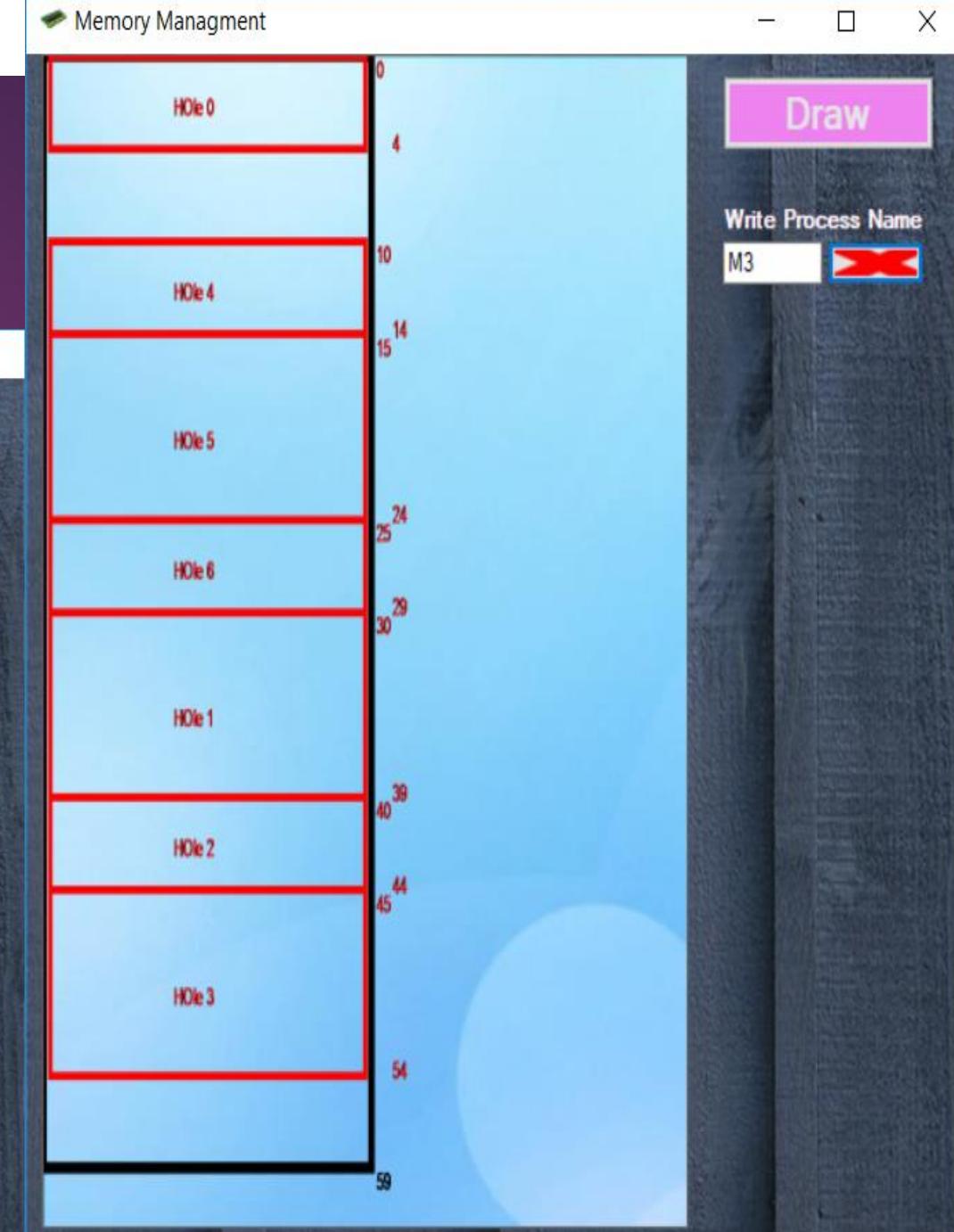
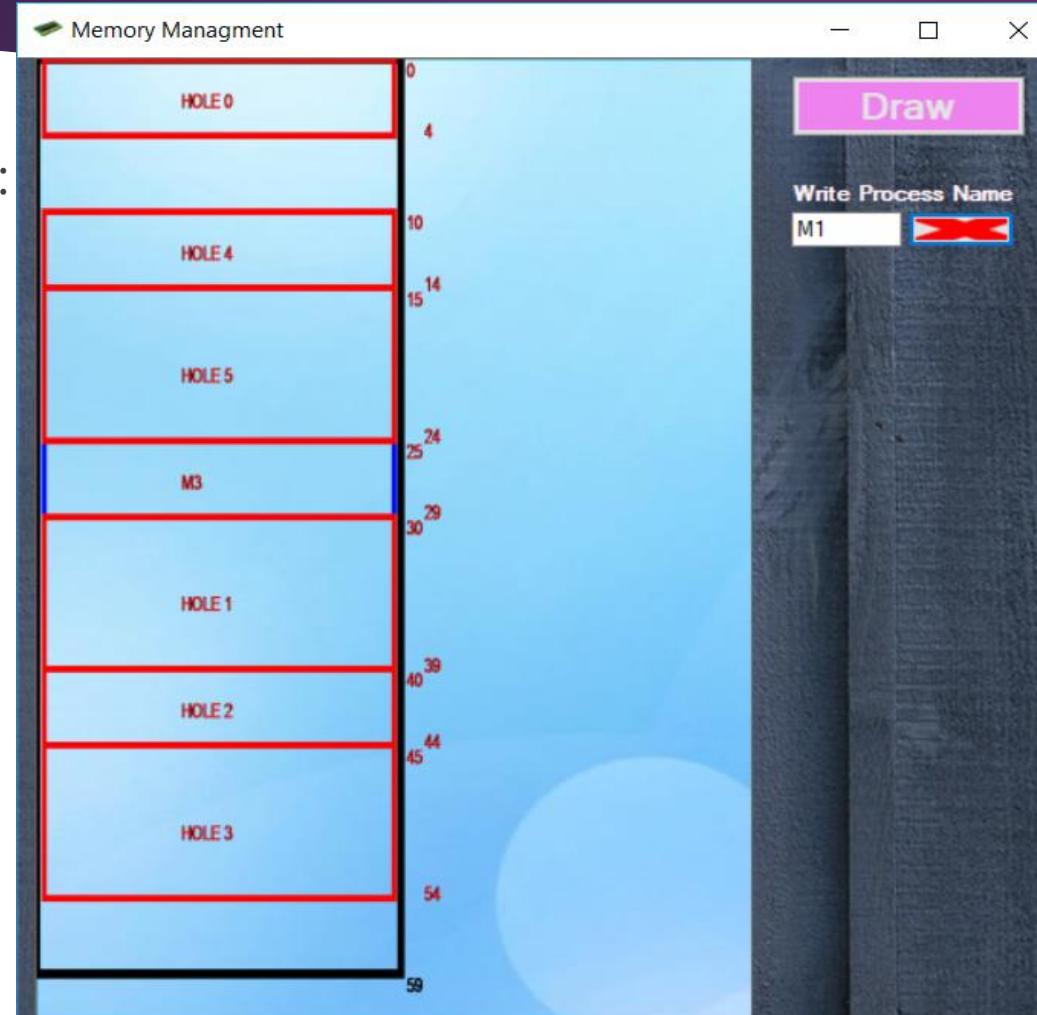
► De-allocation:

M2

M4

M1

M3



# Worst Fit Example

