

Enter total memory size (KB): 1200

Enter number of processes: 10

Enter process details (PID Arrival\_time Size\_in\_KB):

0 0 200

1 2 120

4 6 190

6 1 100

3 2 90

5 8 230

2 10 50

7 1 300

8 2 170

9 8 80

📦 Simulating Dynamic Partitioning with FIFO Replacement and Size-Based Sel

✅ Allocating 0 (200 KB) at address 0

🧠 Memory Layout:

[0 - 199] : 0 (Size: 200)

[200 - 1199] : Free (Size: 1000)

Total: 1200 KB | Used: 200 KB | Free: 1000 KB

✅ Allocating 6 (100 KB) at address 200

🧠 Memory Layout:

[0 - 199] : 0 (Size: 200)

[200 - 299] : 6 (Size: 100)

[300 - 1199] : Free (Size: 900)  
Total: 1200 KB | Used: 300 KB | Free: 900 KB  
✅ Allocating 7 (300 KB) at address 300

💡 Memory Layout:  
[0 - 199] : 0 (Size: 200)  
[200 - 299] : 6 (Size: 100)  
[300 - 599] : 7 (Size: 300)  
[600 - 1199] : Free (Size: 600)  
Total: 1200 KB | Used: 600 KB | Free: 600 KB  
✅ Allocating 1 (120 KB) at address 600

💡 Memory Layout:  
[0 - 199] : 0 (Size: 200)  
[200 - 299] : 6 (Size: 100)  
[300 - 599] : 7 (Size: 300)  
[600 - 719] : 1 (Size: 120)  
[720 - 1199] : Free (Size: 480)  
Total: 1200 KB | Used: 720 KB | Free: 480 KB  
✅ Allocating 3 (90 KB) at address 720

💡 Memory Layout:  
[0 - 199] : 0 (Size: 200)  
[200 - 299] : 6 (Size: 100)  
[300 - 599] : 7 (Size: 300)  
[600 - 719] : 1 (Size: 120)

```
[720 - 809] : 3 (Size: 90)
[810 - 1199] : Free (Size: 390)
Total: 1200 KB | Used: 810 KB | Free: 390 KB
✅ Allocating 8 (170 KB) at address 810
```

🧠 Memory Layout:

```
[0 - 199] : 0 (Size: 200)
[200 - 299] : 6 (Size: 100)
[300 - 599] : 7 (Size: 300)
[600 - 719] : 1 (Size: 120)
[720 - 809] : 3 (Size: 90)
[810 - 979] : 8 (Size: 170)
[980 - 1199] : Free (Size: 220)
Total: 1200 KB | Used: 980 KB | Free: 220 KB
✅ Allocating 4 (190 KB) at address 980
```

🧠 Memory Layout:

```
[0 - 199] : 0 (Size: 200)
[200 - 299] : 6 (Size: 100)
[300 - 599] : 7 (Size: 300)
[600 - 719] : 1 (Size: 120)
[720 - 809] : 3 (Size: 90)
[810 - 979] : 8 (Size: 170)
[980 - 1169] : 4 (Size: 190)
[1170 - 1199] : Free (Size: 30)
Total: 1200 KB | Used: 1170 KB | Free: 30 KB
```

🔄 Replacing process 0 due to lack of memory

🔄 Replacing process 6 due to lack of memory

✅ Allocating 5 (230 KB) at address 0

🧠 Memory Layout:

[0 - 229] : 5 (Size: 230)

[230 - 299] : Free (Size: 70)

[300 - 599] : 7 (Size: 300)

[600 - 719] : 1 (Size: 120)

[720 - 809] : 3 (Size: 90)

[810 - 979] : 8 (Size: 170)

[980 - 1169] : 4 (Size: 190)

[1170 - 1199] : Free (Size: 30)

Total: 1200 KB | Used: 1100 KB | Free: 100 KB

🔄 Replacing process 7 due to lack of memory

✅ Allocating 9 (80 KB) at address 230

🧠 Memory Layout:

[0 - 229] : 5 (Size: 230)

[230 - 309] : 9 (Size: 80)

[310 - 599] : Free (Size: 290)

[600 - 719] : 1 (Size: 120)

[720 - 809] : 3 (Size: 90)

[810 - 979] : 8 (Size: 170)

[980 - 1169] : 4 (Size: 190)

[1170 - 1199] : Free (Size: 30)

Total: 1200 KB | Used: 880 KB | Free: 320 KB

✅ Allocating 2 (50 KB) at address 310

💡 Memory Layout:

[0 - 229] : 5 (Size: 230)

[230 - 309] : 9 (Size: 80)

[310 - 359] : 2 (Size: 50)

[360 - 599] : Free (Size: 240)

[600 - 719] : 1 (Size: 120)

[720 - 809] : 3 (Size: 90)

[810 - 979] : 8 (Size: 170)

[980 - 1169] : 4 (Size: 190)

[1170 - 1199] : Free (Size: 30)

Total: 1200 KB | Used: 930 KB | Free: 270 KB

🎯 Simulation Complete!

=== Code Execution Successful ===