

Event 1 - After p1 Blocked and p4 Running

p1 100K Blocked	p2 250K Ready	p3 70K Ready	p4 210K Running	p5 50K Ready	p6 120K Ready	EMPTY 200K Empty
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p1 tried to access a file currently used by another process and was blocked. According to student ID rule, p4 was selected to run.

Event 2 - p7 (180K) Loaded as Ready

p1 100K Blocked	p2 250K Ready	p3 70K Ready	p4 210K Running	p5 50K Ready	p6 120K Ready	p7 180K Ready	EMPTY 20K Empty
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There was 200K free memory, so a new process p7 (180K) was successfully loaded into memory as Ready.

Event 3 - After Compaction (before loading p8)

p1 100K Blocked	p2 250K Ready	p3 70K Ready	p4 210K Running	p5 50K Ready	p6 120K Ready	p7 180K Ready	EMPTY 20K Empty
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A new process p8 (100K) was scheduled to be loaded, but only 20K free space was available. Compaction was performed to consolidate free memory.

Event 3 - After Loading p8 (100K Ready)

p1 100K Blocked	p2 250K Ready	p3 70K Ready	p4 210K Running	p5 50K Ready	p6 120K Ready	p7 180K Ready	p8 100K Ready
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After compaction, 100K of contiguous memory was created and p8 was successfully loaded into memory.

Event 4A - After Compaction (Still No Space for p9)

p1 100K Blocked	p2 250K Ready	p3 70K Ready	p4 210K Running	p5 50K Ready	p6 120K Ready	p7 180K Ready	p8 100K Ready
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p9 required 150K, but memory was fully used. Compaction was performed again, but still insufficient space was available.

Event 4B - After Suspending p1 (Swap Out)

p2 250K Ready	p3 70K Ready	p4 210K Running	p5 50K Ready	p6 120K Ready	p7 180K Ready	p8 100K Ready	EMPTY 100K Empty
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To make space for p9, the blocked process p1 was suspended and swapped out, freeing 100K of memory.

Event 4C - After Loading p9 (100K Ready)

p2 250K Ready	p3 70K Ready	p4 210K Running	p5 50K Ready	p6 120K Ready	p7 180K Ready	p8 100K Ready	p9 100K Ready
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p9's requirement was reduced to 100K. It was successfully loaded into the available space after the swap-out of p1.

Event 5 - p3 Blocked (Network Failure), p6 Running

p2 250K Ready	p3 70K Blocked	p4 210K Ready	p5 50K Ready	p6 120K Running	p7 180K Ready	p8 100K Ready	p9 100K Ready
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While running, p3 experienced a network timeout and moved to the Blocked state. p6 was selected from the Ready queue to run.

Event 6A - After Compaction for p10 (50K)

p2 250K Ready	p3 70K Blocked	p4 210K Ready	p5 50K Ready	p6 120K Running	p7 180K Ready	p8 100K Ready	p9 100K Ready	EMPTY 50K Empty
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p10 (50K) was scheduled to enter memory but no space was available.
Compaction was performed, making 50K space available.

Event 6B - After Loading p10 (50K Ready)

p2 250K Ready	p3 70K Blocked	p4 210K Ready	p5 50K Ready	p6 120K Running	p7 180K Ready	p8 100K Ready	p9 100K Ready	p10 50K Ready
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After compaction, p10 was successfully loaded into memory.

Event 7 - p8 Terminated (Frees 100K)

p2 250K Ready	p3 70K Blocked	p4 210K Ready	p5 50K Ready	p6 120K Running	p7 180K Ready	p9 100K Ready	p10 50K Ready	EMPTY 100K Empty
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p8 completed its execution and was terminated, freeing 100K in memory.