

Simulation of Memory Management using the Best-Fit algorithm

Beginning of the run

List of available blocks

Start Address = 3145728 Size = 1048576
Start Address = 4194304 Size = 2097152
Start Address = 6291456 Size = 2097152
Start Address = 8388608 Size = 4194304
Start Address = 12582912 Size = 4194304
Total size of the list = 13631488

List of blocks in use

(none)

Total size of the list = 0

Transaction: request to load process 1001, block ID MAIN using 840000 bytes

Found a block of size 1048576

Success in allocating a block

List of available blocks

Start Address = 3985728 Size = 208576
Start Address = 4194304 Size = 2097152
Start Address = 6291456 Size = 2097152
Start Address = 8388608 Size = 4194304
Start Address = 12582912 Size = 4194304
Total size of the list = 12791488

List of blocks in use

Start Address = 3145728 Size = 840000 Process ID = 1001 Block ID = MAIN

Total size of the list = 840000

Transaction: request to terminate process 1001

Merging two blocks at 3145728 and 3985728

Merging two blocks at 3145728 and 4194304

Success in terminating a process

List of available blocks

Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 2097152
Start Address = 8388608 Size = 4194304
Start Address = 12582912 Size = 4194304
Total size of the list = 13631488

List of blocks in use

(none)

Total size of the list = 0

Transaction: request to load process 1002, block ID XYZ1 using 1572864 bytes

Found a block of size 2097152

Success in allocating a block

List of available blocks

Start Address = 3145728 Size = 3145728
Start Address = 7864320 Size = 524288
Start Address = 8388608 Size = 4194304
Start Address = 12582912 Size = 4194304

Total size of the list = 12058624

List of blocks in use

Start Address = 6291456 Size = 1572864 Process ID = 1002 Block ID = XYZ1

Total size of the list = 1572864

Transaction: request to allocate 1835008 bytes for process 1002, block ID: BIG1

Found a block of size 3145728

Success in allocating a block

List of available blocks

Start Address = 4980736 Size = 1310720

Start Address = 7864320 Size = 524288

Start Address = 8388608 Size = 4194304

Start Address = 12582912 Size = 4194304

Total size of the list = 10223616

List of blocks in use

Start Address = 3145728 Size = 1835008 Process ID = 1002 Block ID = BIG1

Start Address = 6291456 Size = 1572864 Process ID = 1002 Block ID = XYZ1

Total size of the list = 3407872

Transaction: request to allocate 1835008 bytes for process 1002, block ID: BIG2

Found a block of size 4194304

Success in allocating a block

List of available blocks

Start Address = 4980736 Size = 1310720

Start Address = 7864320 Size = 524288

Start Address = 10223616 Size = 2359296

Start Address = 12582912 Size = 4194304

Total size of the list = 8388608

List of blocks in use

Start Address = 8388608 Size = 1835008 Process ID = 1002 Block ID = BIG2

Start Address = 3145728 Size = 1835008 Process ID = 1002 Block ID = BIG1

Start Address = 6291456 Size = 1572864 Process ID = 1002 Block ID = XYZ1

Total size of the list = 5242880

Transaction: request to terminate process 1002

Merging two blocks at 7864320 and 8388608

Merging two blocks at 3145728 and 4980736

Merging two blocks at 6291456 and 7864320

Success in terminating a process

List of available blocks

Start Address = 3145728 Size = 3145728

Start Address = 6291456 Size = 3932160

Start Address = 10223616 Size = 2359296

Start Address = 12582912 Size = 4194304

Total size of the list = 13631488

List of blocks in use

(none)

Total size of the list = 0

Transaction: request to load process 1003, block ID ABC1 using 680000 bytes

Found a block of size 2359296
Success in allocating a block

List of available blocks

Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 3932160
Start Address = 10903616 Size = 1679296
Start Address = 12582912 Size = 4194304
Total size of the list = 12951488

List of blocks in use

Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 680000

Transaction: request to allocate 786432 bytes for process 1003, block ID: PQ0A
Found a block of size 1679296
Success in allocating a block

List of available blocks

Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 3932160
Start Address = 11690048 Size = 892864
Start Address = 12582912 Size = 4194304
Total size of the list = 12165056

List of blocks in use

Start Address = 10903616 Size = 786432 Process ID = 1003 Block ID = PQ0A
Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 1466432

Transaction: request to allocate 786432 bytes for process 1003, block ID: PQ0B
Found a block of size 892864
Success in allocating a block

List of available blocks

Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 3932160
Start Address = 12476480 Size = 106432
Start Address = 12582912 Size = 4194304
Total size of the list = 11378624

List of blocks in use

Start Address = 11690048 Size = 786432 Process ID = 1003 Block ID = PQ0B
Start Address = 10903616 Size = 786432 Process ID = 1003 Block ID = PQ0A
Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 2252864

Transaction: request to allocate 786432 bytes for process 1003, block ID: PQ0C
Found a block of size 3145728
Success in allocating a block

List of available blocks

Start Address = 3932160 Size = 2359296
Start Address = 6291456 Size = 3932160
Start Address = 12476480 Size = 106432
Start Address = 12582912 Size = 4194304
Total size of the list = 10592192

List of blocks in use

Start Address = 3145728 Size = 786432 Process ID = 1003 Block ID = PQ0C
Start Address = 11690048 Size = 786432 Process ID = 1003 Block ID = PQ0B
Start Address = 10903616 Size = 786432 Process ID = 1003 Block ID = PQ0A
Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 3039296

Transaction: request to allocate 786432 bytes for process 1003, block ID: PQ0D
Found a block of size 2359296
Success in allocating a block

List of available blocks

Start Address = 4718592 Size = 1572864
Start Address = 6291456 Size = 3932160
Start Address = 12476480 Size = 106432
Start Address = 12582912 Size = 4194304
Total size of the list = 9805760

List of blocks in use

Start Address = 3932160 Size = 786432 Process ID = 1003 Block ID = PQ0D
Start Address = 3145728 Size = 786432 Process ID = 1003 Block ID = PQ0C
Start Address = 11690048 Size = 786432 Process ID = 1003 Block ID = PQ0B
Start Address = 10903616 Size = 786432 Process ID = 1003 Block ID = PQ0A
Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 3825728

Transaction: request to deallocate block ID PQ0C for process 1003
Success in deallocating a block

List of available blocks

Start Address = 3145728 Size = 786432
Start Address = 4718592 Size = 1572864
Start Address = 6291456 Size = 3932160
Start Address = 12476480 Size = 106432
Start Address = 12582912 Size = 4194304
Total size of the list = 10592192

List of blocks in use

Start Address = 3932160 Size = 786432 Process ID = 1003 Block ID = PQ0D
Start Address = 11690048 Size = 786432 Process ID = 1003 Block ID = PQ0B
Start Address = 10903616 Size = 786432 Process ID = 1003 Block ID = PQ0A
Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 3039296

Transaction: request to deallocate block ID PQ0B for process 1003
Merging two blocks at 11690048 and 12476480
Success in deallocating a block

List of available blocks

Start Address = 3145728 Size = 786432
Start Address = 4718592 Size = 1572864
Start Address = 6291456 Size = 3932160
Start Address = 11690048 Size = 892864
Start Address = 12582912 Size = 4194304
Total size of the list = 11378624

List of blocks in use

Start Address = 3932160 Size = 786432 Process ID = 1003 Block ID = PQ0D
Start Address = 10903616 Size = 786432 Process ID = 1003 Block ID = PQ0A
Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 2252864

Transaction: request to deallocate block ID ZZZZ for process 1003
Unable to comply as the indicated block cannot be found.

List of available blocks

Start Address = 3145728 Size = 786432
Start Address = 4718592 Size = 1572864
Start Address = 6291456 Size = 3932160
Start Address = 11690048 Size = 892864
Start Address = 12582912 Size = 4194304
Total size of the list = 11378624

List of blocks in use

Start Address = 3932160 Size = 786432 Process ID = 1003 Block ID = PQ0D
Start Address = 10903616 Size = 786432 Process ID = 1003 Block ID = PQ0A
Start Address = 10223616 Size = 680000 Process ID = 1003 Block ID = ABC1
Total size of the list = 2252864

Transaction: request to terminate process 1003

Merging two blocks at 3145728 and 3932160
Merging two blocks at 3145728 and 4718592
Merging two blocks at 10903616 and 11690048
Merging two blocks at 10223616 and 10903616
Success in terminating a process

List of available blocks

Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 3932160
Start Address = 10223616 Size = 2359296
Start Address = 12582912 Size = 4194304
Total size of the list = 13631488

List of blocks in use

(none)
Total size of the list = 0

Transaction: request to load process 1004, block ID UGLY using 5000000 bytes
Unable to comply as no block of adequate size is available

List of available blocks

Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 3932160
Start Address = 10223616 Size = 2359296
Start Address = 12582912 Size = 4194304
Total size of the list = 13631488

List of blocks in use

(none)
Total size of the list = 0

Transaction: request to terminate process 1004
Unable to comply as the indicated process could not be found.

List of available blocks
Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 3932160
Start Address = 10223616 Size = 2359296
Start Address = 12582912 Size = 4194304
Total size of the list = 13631488

List of blocks in use
(none)
Total size of the list = 0

End of the run

List of available blocks
Start Address = 3145728 Size = 3145728
Start Address = 6291456 Size = 3932160
Start Address = 10223616 Size = 2359296
Start Address = 12582912 Size = 4194304
Total size of the list = 13631488

List of blocks in use
(none)
Total size of the list = 0