

Ex. No.: 10a)
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BEST FIT

Aim:

To implement Best Fit memory allocation technique using Python.

Algorithm:

1. Input memory blocks and processes with sizes
2. Initialize all memory blocks as free.
3. Start by picking each process and find the minimum block size that can be assigned to current process
4. If found then assign it to the current process.
5. If not found then leave that process and keep checking the further processes.

Program Code:

```
#include <stdio.h>
int main() {
    int n, m;
    printf("Enter the no of blocks");
    scanf("%d", &n);
    printf("Enter no of processes ");
    scanf("%d", &m);
    int blocks[n];
    int processes[m];
    int allocation[m];
    for(int i=0; i<m; i++) {
        allocation[i] = -1;
    }
    for(int i=0; i<n; i++) {
        {
            scanf("%d", &blocks[i]);
        }
        for(int i=0; i<m; i++) {
            if(allocation[i] == -1) {
                printf("Enter process %d: size: ", i+1);
                scanf("%d", &processes[i]);
                allocation[i] = blocks[i];
            }
        }
    }
}
```

```

int best_index ;
for (int i=0; i<m; i++)
{
    best_index = -1 ;
    for (int j=0; j<n; j++)
    {
        if (blocks[j] >= process[i])
        {
            if (blocks[j] < blocks[best_index])
            {
                best_index = j ;
                allocation[i] = best_index ;
                blocks[best_index] = process[i] ;
            }
        }
    }
}

printf("In Process NO      Process Size      BlockNo ") ;
for (int i=0; i<m; i++)
{
    if (allocation[i] != -1)
    {
        printf("In %d It %d %d /t %d %d",
               i+1, process[i], allocation[i+1]) ;
    }
    else
    {
        printf("In %d It %d %d /t %d %d",
               i+1, process[i]) ;
    }
}

```

60

Not Allocated

Output

Enter no of blocks = 4

Block size :

B₁ - 100

B₂ - 500

B₃ - 150

B₄ - 300

Enter no of processes : 3

Process size

P₁ - 99

P₂ - 211

P₃ - 300

Process NO	Process size	Block NO
P ₁	99	B ₁
P ₂	211	B ₄
P ₃	300	B ₂

Sample Output:

Process No.	Process Size	Block no.
1	212	4
2	417	2
3	112	3
4	426	5

8/E

Result:

~~Hence the best fit memory allocation~~
Hence the best fit memory allocation
technique has been executed successfully.