Ex. No.: 10b)
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FIRST FIT

Aim:
To write a C program for implementation memory allocation methods for fixed partition using first fit.

Algorithm:
1. Define the max as 25.
2: Declare the variable frag[max],b[max],f[max],i,j,nb,nf,temp, highest=0, bf[max],ff[max]. 3: Get the number of blocks,files,size of the blocks using for loop.
4: In for loop check bf[j]!=1, if so temp=b[j]-f[i]
5: Check highest

Program Code:

```
#include <stdio.h>

#define max 25

int main() {
	int frag[max], b[max], f[max], i, j, nb, nf, temp;
	int bf[max], ff[max];

	// Input
	printf("Enter the number of blocks: ");
	scanf("%d", &nb);

	printf("Enter the size of the blocks:\n");
	for (i = 0; i < nb; i++) {
	printf("Block %d: ", i + 1);
	scanf("%d", &b[i]);
	bf[i] = 0; // initially all blocks are unallocated
	}

	printf("\nEnter the number of files: ");
	scanf("%d", &nf);

	printf("Enter the size of the files:\n");
	for (i = 0; i < nf; i++) {
	printf("File %d: ", i + 1);
	scanf("%d", &f[i]);
```

```
        }

        // First Fit Allocation
        for (i = 0; i < nf; i++) {
        for (j = 0; j < nb; j++) {
        if (bf[j] == 0 && b[j] >= f[i]) {
                ff[i] = j;
                frag[i] = b[j] - f[i];
                bf[j] = 1; // mark block as allocated
                break;
        }
        }
        }

        // Output
        printf("\nFile_no\tFile_size\tBlock_no\tBlock_size\tFragment\n");
        for (i = 0; i < nf; i++) {
        printf("%d\t%d\t\t", i + 1, f[i]);
        if (bf[ff[i]] == 1)
        printf("%d\t\t%d\t\t%d\n", ff[i] + 1, b[ff[i]], frag[i]);
        else
        printf("Not Allocated\n");
        }

        return 0;
}
```

OUTPUT:

```
Enter the size of the blocks:
Block 1: 5
Block 2: 8
Block 3: 4
Block 4: 10

Enter the number of files: 3
Enter the size of the files:
File 1: 1
File 2: 4
File 3: 7

File_no File_size       Block_no        Block_size      Fragment
1       1               1               5               4
2       4               2               8               4
3       7               4               10              3
```

RESULT:

Hence, First Fit memory allocation technique using Python has been implemented.