OS LAB MANUAL (CS23431)

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EX.NO:10(B)

FIRST FIT

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

Program:

```
#include <stdio.h> #define
MAX 25
int main() {   int frag[MAX], b[MAX],
f[MAX], i, j, nb, nf;  static int bf[MAX],
ff[MAX];              printf("Enter the
number of blocks: ");  scanf("%d", &nb);
printf("Enter the number of files: ");
scanf("%d", &nf);              for (i = 0; i <
nb; i++) {             printf("Block %d: ", i +
1); scanf("%d", &b[i]);       bf[i] = 0;
   }
   for (i = 0; i < nf; i++)
{ printf("File %d: ", i + 1); scanf("%d",
&f[i]);
   }
   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;
break;
```

```
        }
      }
    }
    printf("\nFile_no\tFile_size\tBlock_no\tBlock_size\tFragment");
    for (i = 0; i < nf; i++)
{       printf("\n%d\t%d\t\t", i + 1, f[i]);       if
(ff[i] != 0 || (ff[i] == 0 && b[0] >= f[i])) {
printf("%d\t\t%d\t\t%d", ff[i] + 1, b[ff[i]],
frag[i]);
      } else {          printf("Not
Allocated\t-\t\t-");
      }
    }
    return 0;
}
```

Input:

```
Enter the number of blocks: 4
Enter the number of files: 4
Block 1: 2
Block 2: 6
Block 3: 4
Block 4: 5
File 1: 9
File 2: 5
File 3: 5
File 4: 4
```

Output

File_no	File_size	Block_no	Block_size	Fragment
1	9	Not Allocated	-	-
2	5	2	6	1
3	5	4	5	0
4	4	3	4	0