

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-");

    }

}

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

