# WEEK 8

**Write a C program to simulate the first fit contiguous memory allocation technique.**

CODE:

```
#include <stdio.h>
#include <conio.h>

#define max 25

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

   printf("\n\tMemory Management Scheme - First Fit");
   printf("\nEnter the number of blocks:");
   scanf("%d", &nb);
   printf("Enter the number of files:");
   scanf("%d", &nf);

   printf("\nEnter the size of the blocks:\n");
   for (i = 1; i <= nb; i++)
   {
      printf("Block %d:", i);
      scanf("%d", &b[i]);
   }

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

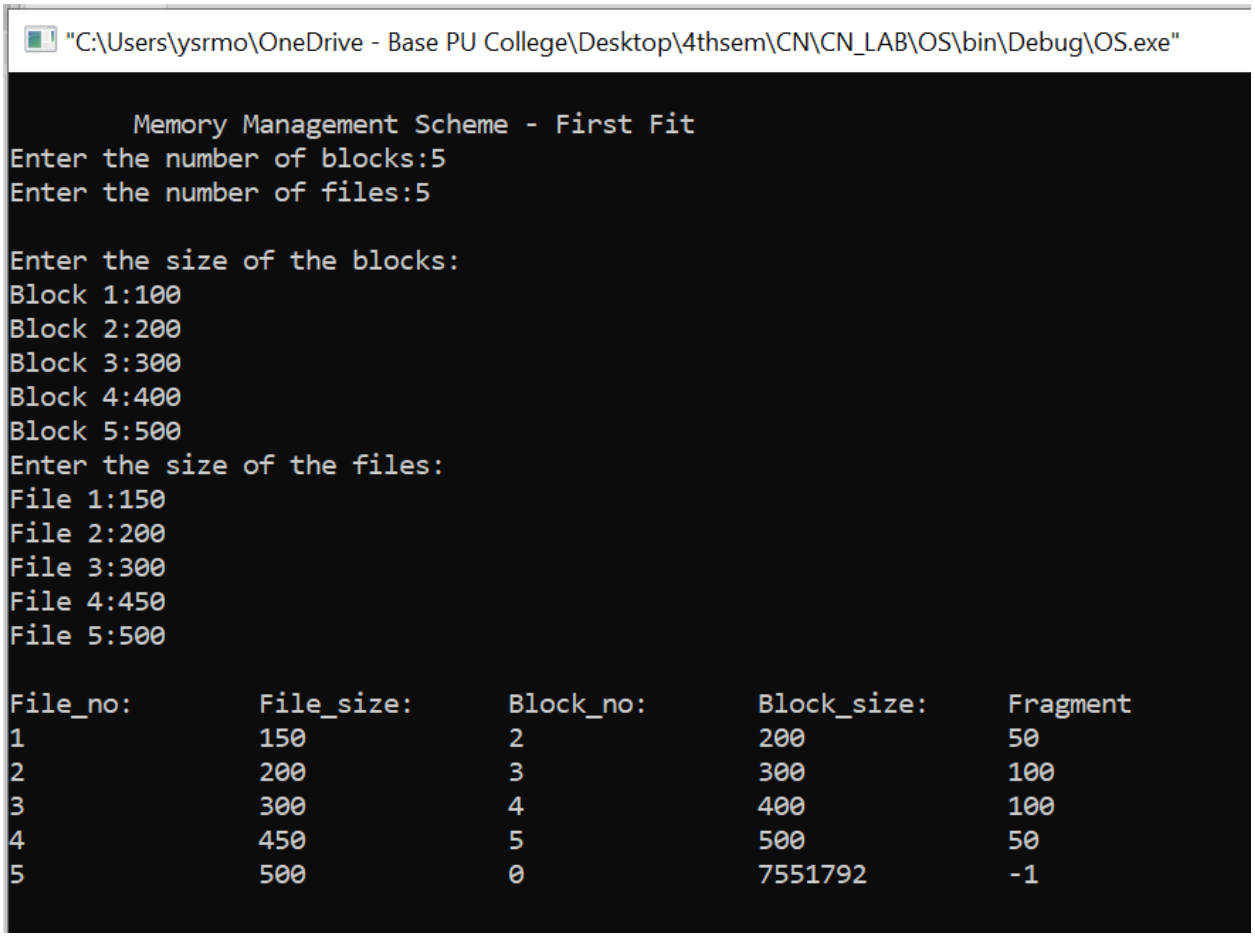
```
    }

    for (i = 1; i <= nf; i++)
    {
        temp = -1; // Reset temp to -1 for each new file
        for (j = 1; j <= nb; j++)
        {
            if (bf[j] != 1)
            {
                if (b[j] >= f[i])
                {
                    ff[i] = j;
                    temp = b[j] - f[i];
                    break;
                }
            }
        }
        frag[i] = temp;
        if (temp != -1)
        {
            bf[ff[i]] = 1;
        }
    }

    printf("\nFile_no:\tFile_size:\tBlock_no:\tBlock_size:\tFragment");
    for (i = 1; i <= nf; i++)
    {
        printf("\n%d\t\t%d\t\t%d\t\t%d\t\t%d", i, f[i], ff[i], b[ff[i]], frag[i]);
    }

    getch();
}
```

OUTPUT:


"C:\Users\ysrmo\OneDrive - Base PU College\Desktop\4thsem\CN\CN_LAB\OS\bin\Debug\OS.exe"
Memory Management Scheme - First Fit
Enter the number of blocks:5
Enter the number of files:5
Enter the size of the blocks:
Block 1:100
Block 2:200
Block 3:300
Block 4:400
Block 5:500
Enter the size of the files:
File 1:150
File 2:200
File 3:300
File 4:450
File 5:500
File_no: File_size: Block_no: Block_size: Fragment
1 150 2 200 50
2 200 3 300 100
3 300 4 400 100
4 450 5 500 50
5 500 0 7551792 -1