S.No: 7	Exp. Name: ***Write the code to implement the Contiguous allocation technique: - First-Fit***	Date:

Aim:

Write a C program to implement the Contiguous allocation technique: - First-Fit

Source Code:

contiguousAllocationTechnique.c

```
#include<stdio.h>
#include<conio.h>
#define max 25
int main()
{
   int frag[max],b[max],f[max],i,j,nb,nf,temp;
   static int bf[max],ff[max];
   printf("Enter the number of blocks: ");
   scanf("%d",&nb);
   printf("Enter the number of files: ");
   scanf("%d",&nf);
   printf("Enter 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++)
   {
      for(j=1;j<=nb;j++)
      {
         if(bf[j]!=1)
         {
            temp=b[j]-f[i];
            if(temp>=0)
            {
               ff[i]=j;
               break;
            }
         }
      }
      frag[i]=temp;
      bf[ff[i]]=1;
   }
   printf("File_no\tFile_size\tBlock_no\tBlock_size\tFragement\n");
   for(i=1;i<=nf;i++)
   printf("%d\t%d\t%d\t%d\t%d\n",i,f[i],ff[i],b[ff[i]],frag[i]);
   return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1

User Output

```
Enter the number of blocks:  3
Enter the number of files:  2
Enter the size of the blocks 5
Block 1:  5
Block 2:  1
Block 3:  4
Enter the size of the files 2
File 1:  2
File 2:  4
File_no File_size       Block_no        Block_size      Fragement
1       2       1       5       3
2       4       3       4       0
```

Test Case - 2

User Output

```
Enter the number of blocks:  4
Enter the number of files:  6
Enter the size of the blocks 2
Block 1:  2
Block 2:  6
Block 3:  1
Block 4:  8
Enter the size of the files 6
File 1:  6
File 2:  8
File 3:  1
File 4:  3
File 5:  5
File 6:  9
File_no File_size       Block_no        Block_size      Fragement
1       6       2       6       0
2       8       4       8       0
3       1       1       2       1
4       3       0       144     -2
5       5       0       144     -4
6       9       0       144     -8
```