Name: Anuj Singh Bhandari Univ rollno: 2023035

Course: BSc.IT Sec: A

Sign: Anuj

Q-1 Worst fit Memory Management Scheme

code

```
clude<stdio.h>
#define max 25
int main ()
{
int frag[max], b[max], f[max], i, j, nb, nf, temp,
high est =0;
 static int bf [max], ff[max];
Printf ("\n\t Memory Management Scheme - Worst fit");
printf ("\n Enter the number of blocks:");
Scanf ("%d", &nb);
Printf (" Enter the number of files:");
 Scanf ("%d", &nf);
 printf ("\n Enter the size of the blocks:-\n");
 for (i=1; i<=nb; i++) {printf("Block %d:",i);
 Scanf ("%d", &b[i]); }
```

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Sign:- Anuj

```
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) //if bf[j] is not allocated
{
temp = b[j]-f[i];
if (temp>=0)
if (highest<temp)
{
ff[i] = j;
highest = temp;
}
}
}
frag[i] = highest;
```

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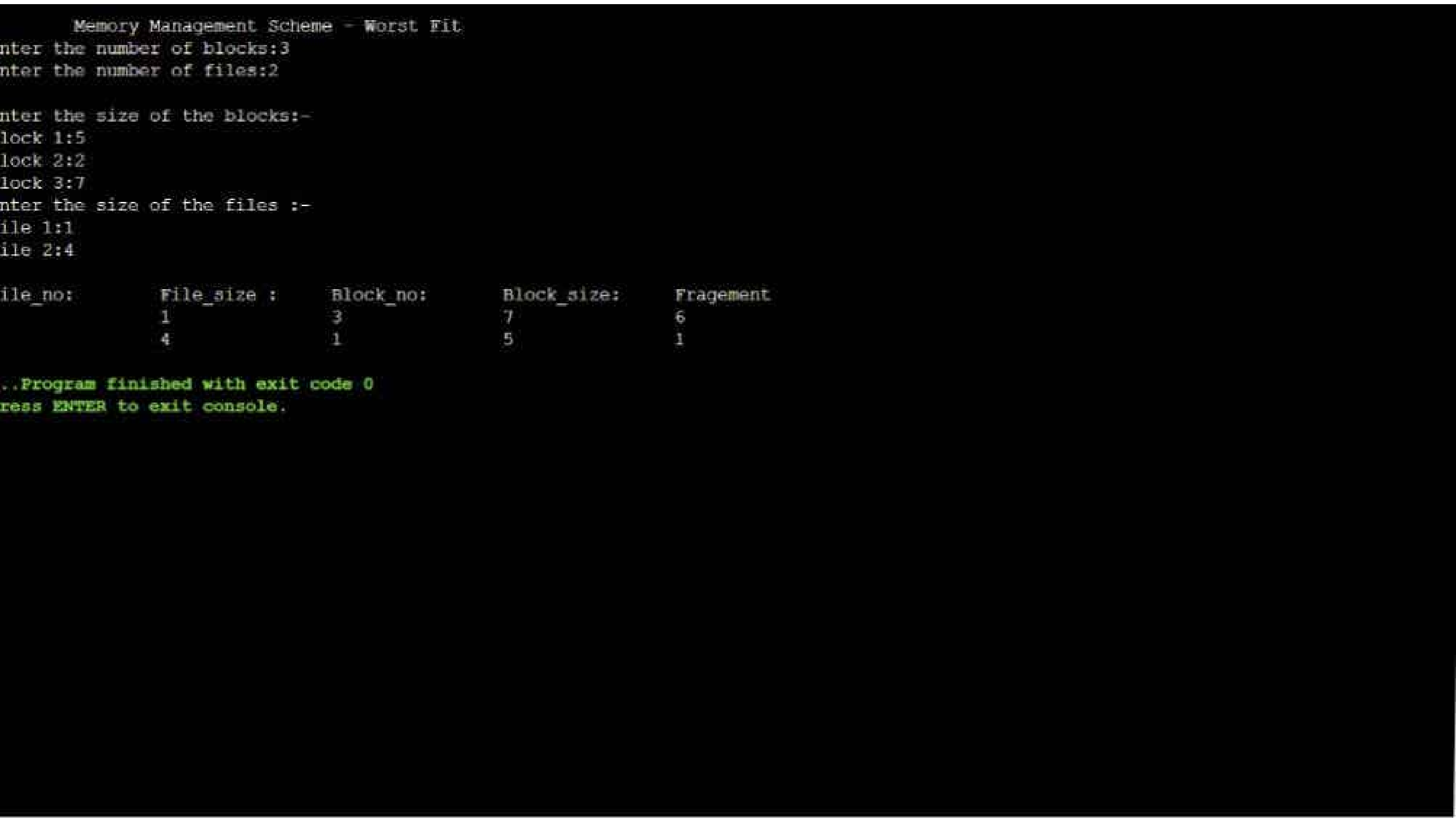
```
bf[ff[i]]=1
highest= 0;
}
printf ("\n file_no:\tfile_size:\tBlock_no:
\tBlock_size:\t fragement");
for (i= 1; i<=nf; i++)
printf ("\n%d\t\t%d\t\t%d\t\t%d\t
\t%d", i, f[i], ff[i], b[ff[i]], frag[i]);
return 0;
}
```



```
       Memory Management Scheme - Worst Fit
nter the number of blocks:3
nter the number of files:2

nter the size of the blocks:-
lock 1:5
lock 2:2
lock 3:7
nter the size of the files :-
ile 1:1
ile 2:4

ile_no:        File_size :     Block_no:       Block_size:     Fragement
               1               3               7               6
               4               1               5               1

..Program finished with exit code 0
ress ENTER to exit console.
```

Name:- Anuj Singh Bhandari   Univ rollno:- 2023035

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Sign:- Anuj.

Q3 →

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
int RQ[100], i, j, n, Total Head Moment=0, intial
, size, move;
printf("Enter the number of Requests\n");
scanf("%d", &n);
printf("Enter the Requests sequence\n");
for (i=0; i<n; i++)
scanf("%d", &RQ[i]);
printf("Enter intial head position\n");
scanf("%d", &intial);
printf("Enter total disk size\n");
scanf("%d", &size);
printf("Enter the head movement direction
for high 1 and for low 0\n");
scanf("%d", &move);
```

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Sign. Anuj -

```
// logic for Scan disk scheduling

/* logic for sort the request array */
for(i=0;i<n;i++)
 {
  for(j=0;j<n-i-1;j++)
  {
   if(RQ[j] > RQ[j+1])
   {
    int temp;
    temp=RQ[j];
    RQ[j]=RQ[j+1];
    RQ[j+1]=temp;
   }
  }
 }

 int index;
for(i=0;i<n;i++)
```

Name:- Anj Singh Bhandari

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Sign:- Anj

```
{
 if (intial <RQ[i])
  {
   index=i;
   break;
  }
 }
 }
 //if moveement is toward high value if (move==1)
{
for (i=index; i<n; i++)
Total Head Moment = Tot
alHeadMoment + abs(RQ[i]-intial);
  intial=RQ[i];
 }
//last movement for max size Total Head Moment
 =Tot
alHeadMoment + abs (size-RQ[i-1]-1);
```

Name: Anuj Singh Chir Bhandari roll no : 2023035

Course:- BSc. IT Sec:- A

Sign:- A

```
intial = size - 1;
for (i = index - 1 ; i > = 0; i -)
{
Total Head Moment = Total Head Moment + abs
                    (RQ [i] - intial );
  intial = RQ [i];
   }
  }
  // if movement is toward low value else
  {
   for (i = index - 1 ; i > = 0; i -)
  {
   Total Head Moment = Total Head Moment +
                       abs (RQ [i] - intial);
     intial = RQ [i];
   }
   // last movement for min size
   Total Head ~~Movement~~ Moment = Total Head Moment +
                           abs (RQ [i+1] - 0);
```

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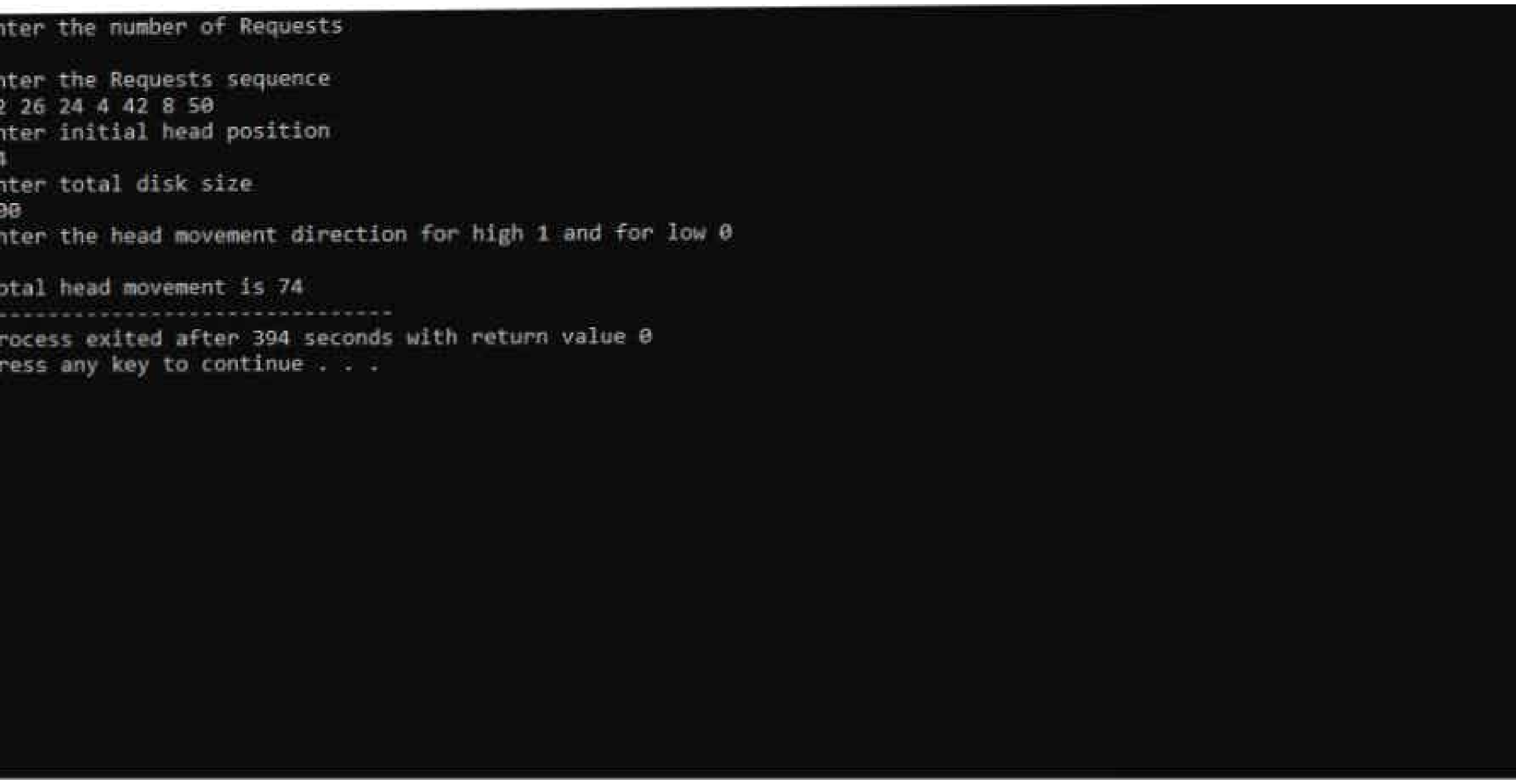
```
for (i= index; i<n; i++)
{
Total Head Moment = Total Head Moment + abs
                        (RQ[i] - initial);
   initial = RQ[i];
  }
 }
Printf ("Total head movement is %d", Total
                  Head Moment);

return 0;

 }
```



```
nter the number of Requests

nter the Requests sequence
2 26 24 4 42 8 50
nter initial head position
4
nter total disk size
00
nter the head movement direction for high 1 and for low 0

otal head movement is 74
--------------------------------
rocess exited after 394 seconds with return value 0
ress any key to continue . . .
```