

Name:- Tejasvi Kukreti

Student Id:- 20052108

Subject Code:- PBI-202

Subject Name:- Operating System Practical Exam

Signature:-

Tejasvi

```
Q1. #include <stdio.h>
```

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

```
#define max 25
```

```
void main ()
```

```
{
```

```
int frag[max], b[max], f[max], i, j, nb, nf, temp;
```

```
static int bf [max], ff [max];
```

```
printf ("\n\tmemory 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]);
```

```
}
```

```
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++)
```

```
{
```

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```
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("In file no: \t file size: \t block no:
```

```
\t block size: \t fragment");
```

```
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();
```

```
}
```

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main.c Language C

```
1 #include<stdio.h>
2 #include<conio.h>
3 #define max 25
4 void main()
5 {
    // ... (code continues) ...
}
```

input

Memory Management Scheme - worst Fit
Enter the number of blocks:3
Enter the number of files:2

Enter the size of the blocks:-
Block 1:5
Block 2:2
Block 3:7
Enter the size of the files :-
File 1:1
File 2:4

File_no: File_size : Block_no: Block_size: Fragement
1 1 1 5 4
2 4 3 7 3

...Program finished with exit code 0
Press ENTER to exit console.

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```
Q2
#include <stdio.h>
int absolute value (int);
void main()
{
    int queue[25], n, head position, i, j, k, seek = 0, max range,
    difference, temp, queue 1[20], queue 2[20], temp 1 = 0, temp 2 = 0;
    float average seek time;
    printf("Enter the maximum range of Disk:");
    scanf("%d", &max range);
    printf("Enter the number of queue requests:");
    scanf("%d", &n);
    printf("Enter the initial head position:");
    scanf("%d", &head position);
    printf("Enter the disk positions to be read (queue:");
    for (i = 1; i <= n; i++)
    {
        scanf("%d", &temp);
        if (temp > head position)
        {
            queue 1[temp 1] = temp;
            temp 1++;
        }
        else
        {
            queue 2[temp 2] = temp;
            temp 2++;
        }
    }
}
```


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```
for (i=0; i<temp1-1; i++)
{
    for (j=i+1; j<temp1; j++)
    {
        if (queue1[i]>queue1[j])
        {
            temp=queue1[i];
            queue1[i]=queue1[j];
            queue1[j]=temp;
        }
    }
}

for (i=0; i<temp2-1; i++)
{
    for (j=i+1; j<temp2; j++)
    {
        if (queue2[i]<queue2[j])
        {
            temp=queue2[i];
            queue2[i]=queue2[j];
            queue2[j]=temp;
        }
    }
}

for (i=1, j=0; j<temp1; i++j++)
{
    queue[i]=Maxrange;
    for (i=temp1+2, j=0, j<temp2; i++j++)
    {
        queue[i]=queue2[j];
    }
    queue[i]=0;
    queue[0]=headposition;
    for (j=0; j<=n; j++)
    {
```

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```
difference = absolute value (queue[i+1] - queue[j]);
```

```
Seek = Seek + difference;
```

```
Print f("Disk head moves from position %d to %d with Seek %d\n",
```

```
queue[j], queue[j+1], difference);
```

```
}
```

```
average Seek time = Seek / (float)n;
```

```
Print f("Total Seek time = %d\n", Seek);
```

```
Print f("Average Seek time = %f\n",
```

```
average Seek Time);
```

```
}
```

```
int absolute value (int x)
```

```
{
```

```
if (x > 0)
```

```
{
```

```
return x;
```

```
}
```

```
else
```

```
{
```

```
return x * -1;
```

```
}
```

```
}
```

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main.c

59 for(i=temp1+2,j=0;j<temp2;i++,j++)
60 {
61 queue[i]=queue2[j];
62 }
63 queue[i]=0;
64 printf("head position: ");

Run Debug Stop Share Save {} Beauty

Input
Enter the maximum range of Disk: 100
Enter the number of queue requests: 7
Enter the initial head position: 24
Enter the disk positions to be read(queue): 12
26
24
4
42
8
50
Disk head moves from position 24 to 26 with Seek 2
Disk head moves from position 26 to 42 with Seek 16
Disk head moves from position 42 to 50 with Seek 8
Disk head moves from position 50 to 100 with Seek 50
Disk head moves from position 100 to 24 with Seek 76
Disk head moves from position 24 to 12 with Seek 12
Disk head moves from position 12 to 8 with Seek 4
Disk head moves from position 8 to 4 with Seek 4
Total Seek Time= 172
Average Seek Time= 24.571428
...Program finished with exit code 0
Press ENTER to exit console.

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