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Univ Roll - 2023/02 SID - 20051114

Subject Name - Os practical Branch - Dehradun

Subject Code - PBI-202 Section - B

Ques 2
Ans

include < stdio.h >

int absoluteValue (int);

Void main()

{ int

queue [25], n, headposition, i, j, k, seek = 0,
maxrange,

difference, temp, queue1 [20], queue2 [20],
temp1 = 0, temp2 = 0;

float averageSeekTime;

printf ("Enter the maximum range of Disk :");

scanf ("%d", &maxrange);

printf ("Enter the number of queue requests :");

scanf ("%d", &n);

printf ("Enter the initial head position :");

scanf ("%d", &headposition);

printf ("Enter the disk position to be read
Queue :");

for (i=1; i<=n; ++)

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```
Scanf("%d", &temp);
if(temp > headposition)
{
    queue1[temp1] = temp;
    temp1++;
}
```

else

```
{ queue2[temp2] = temp;
temp2++;
}
```

```
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=1, j=0; j<temp1; i++, j++)
{
```

```
    queue[i] = queue1[j];
}
```

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queue[i] = maxrange;
for (i=temp1+2, j=0; j<temp2; i++, j++)

{

queue[i] = queue2[j];

}

queue[i] = 0;

queue[0] = head position;

for (j=0; j<=n; j++)

{

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

Seek = Seek + difference;

printf("Disk head moves from position %d
to %d with seek %d \n", queue[j], queue[j],
difference);

{

average seek time = Seek / (float) n;

printf("total seek time = %f \n", Seek);

printf(" 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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```
disk.c : OS2_SCAN_DISK , IF ( $1 ) { OS2_SCAN_DISK }
Enter the number of Requests
7
Enter the Requests sequence
12
26
24
4
42
8
50
Enter initial head position
24
Enter total disk size
100
Total head movement is 170
PS C:\Users\hp\c programming\operating system> █
```