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Paper code - PBI-202

Akash

Ques 2

Ans 2

```
#include <stdio.h>
int absolute value (int);
void main ()
{
    int queue [25], n, head position, i, j, k, seek = 0,
    maxrange,
    difference, temp, queue 1 [20], queue 2 [20], temp 1 = 0,
    temp 2 = 0;
    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", &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++;
        }
    }
}
```



```

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] = queue1[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++)
{
    difference = absolute value (queue [j+1] - queue [j]);
    seek = seek + difference;
}
print ("Total head movement = %d\n", seek);
}

int absolute value (int x)
{
    if (x > 0)
    {
        return x;
    }
    else
    {
        return x * -1;
    }
}
}

```

Akash

```
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

I

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.