Graphic Era Hill University, Dehradun

Campus Dehradun [Answer sheet for online Examination Aug. 2021]

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Subject name OS. End term Practical   Subject code PB1 22

            OS. End term Practical   Section A

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Ans 2

```c
#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], temp;
        =0, temp2=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", &headposition);

    printf("Enter the disk positions to be read
    (queue):");
}
```

```
for(i=1; i<=n; i++)
{
    scanf("%d", &temp);
    if(temp>headposition)
    {
        queue1[temp1] = temp;
        temp1++;
    }
    else
    {
        queue2[temp2] = temp;
    }
}
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(i=1; j; j=0; j<temp1; i++, j++)
    queue[i]=queuel[i];

queue[i]=maxrange;

for(i)=temp1+2; j=0; j<temp2; i++, j++)
    queue[i]=queue2[i];

queue[i]=0;
queue[0]=head position;

for(j=0; j<n; j++)
{
    difference = adsolute value(queue[i]-
                queue[j]);
    seek=seek+difference;
    queue[i]=
        queue[j];
}

printf("Disk head removes from position
       %d to %d with seek %d\n",
       queue[i], queue[j+1], difference);

printf("Total seek Time = %d\n", seek);
```

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

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= 170

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