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2) #include <stdio.h>
int absolute value (int);
Void main()
{
int queue[28], n, head position, i, j, k, seek = 0, max-range, difference, temp, queue1[20], queue2[20], temp1 = 0, temp2 = 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 position to be read (queue): ");
for(i=1; i<=n; i++){{
Scanf("%d", &temp);
if(temp >= head position)
{
queue1[temp1] = temp;
temp1++;
}
else
{
queue2[temp2] = temp;
temp2++;
}
}
for(i=0; i<temp1-1; i++)
{
for(j=i+1; j<temp1; j++){

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```
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;
printf("Disk head moves from position %d to %d with seek %d\n", queue[j], queue[j+1], difference);
}
  average Seek Time = Seek/(float)n;
Printf("Total Seek Time = %d\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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