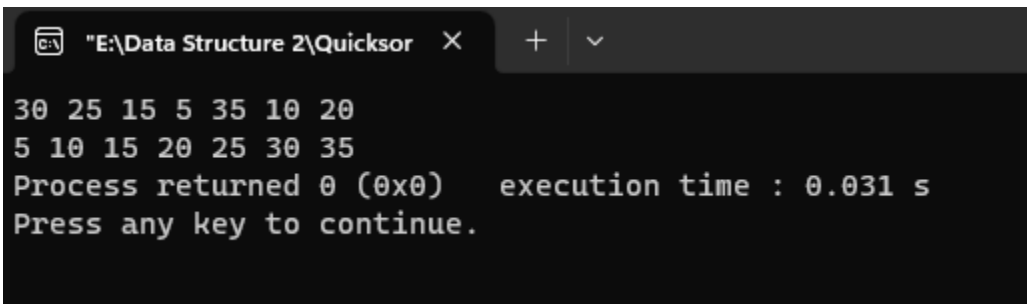
Problem- Quicksort

Input-

```
#include<bits/stdc++.h>
using namespace std;
int arr[]= {30,25,15,5,35,10,20};
int pertition(int low, int high)
{
   int pert=0;
   for(int i=0; i<high; i++)
   {

      if(arr[high]>=arr[i])
      {
         swap(arr[pert],arr[i]);
         pert++;
      }
}
   swap( arr[pert],arr[high]);
   return pert;
}
int quick(int low,int high)
{
   if(high>low)
   {
      int pivot = pertition ( low, high);
      quick(low, pivot-1);
      quick(pivot+1,high);
   }
```

```
}
int main()
{
   int sz = sizeof(arr)/sizeof(0);
   int low=0;
   int high= sz-1;

   for(int i=0; i<sz; i++)
   {

      cout<<arr[i]<<" ";
   }
   cout<<endl;
   quick( low, high);

   for(int i=0; i<sz; i++)
   {

      cout<<arr[i]<<" ";
   }

}
```

Output—

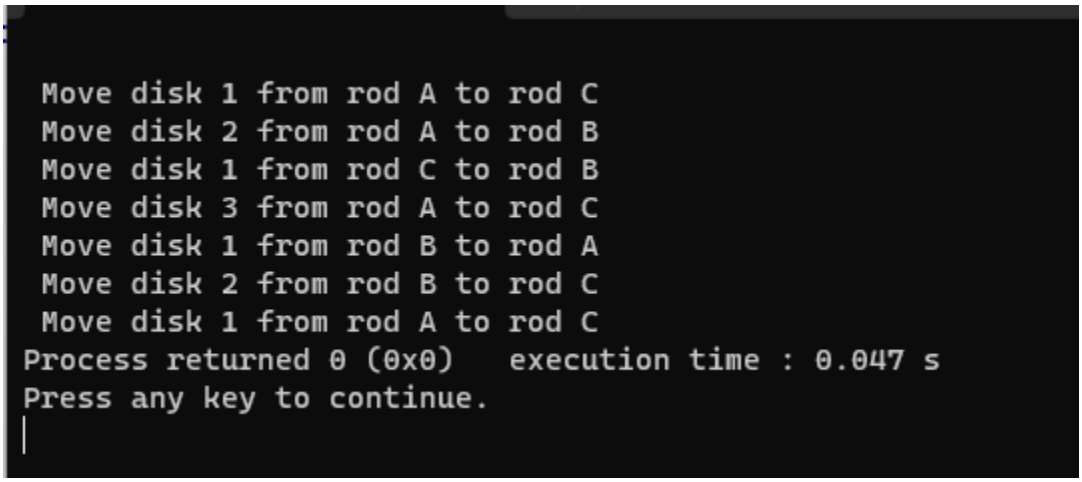


Problem- Tower of Hanoi

Input-

```
#include <stdio.h>
void towerOfHanoi(int n, char from_rod, char to_rod, char aux_rod)
{
	if (n == 1)
	{
		printf("\n Move disk 1 from rod %c to rod %c", from_rod, to_rod);
		return ;
	}
	towerOfHanoi(n-1, from_rod, aux_rod, to_rod);
	printf("\n Move disk %d from rod %c to rod %c", n, from_rod, to_rod);
	towerOfHanoi(n-1, aux_rod, to_rod, from_rod);
}
int main()
{
	int n = 3;
	towerOfHanoi(n, 'A', 'C', 'B');
	return 0;
}
```

Output-


Move disk 1 from rod A to rod C
Move disk 2 from rod A to rod B
Move disk 1 from rod C to rod B
Move disk 3 from rod A to rod C
Move disk 1 from rod B to rod A
Move disk 2 from rod B to rod C
Move disk 1 from rod A to rod C
Process returned 0 (0x0) execution time : 0.047 s
Press any key to continue.