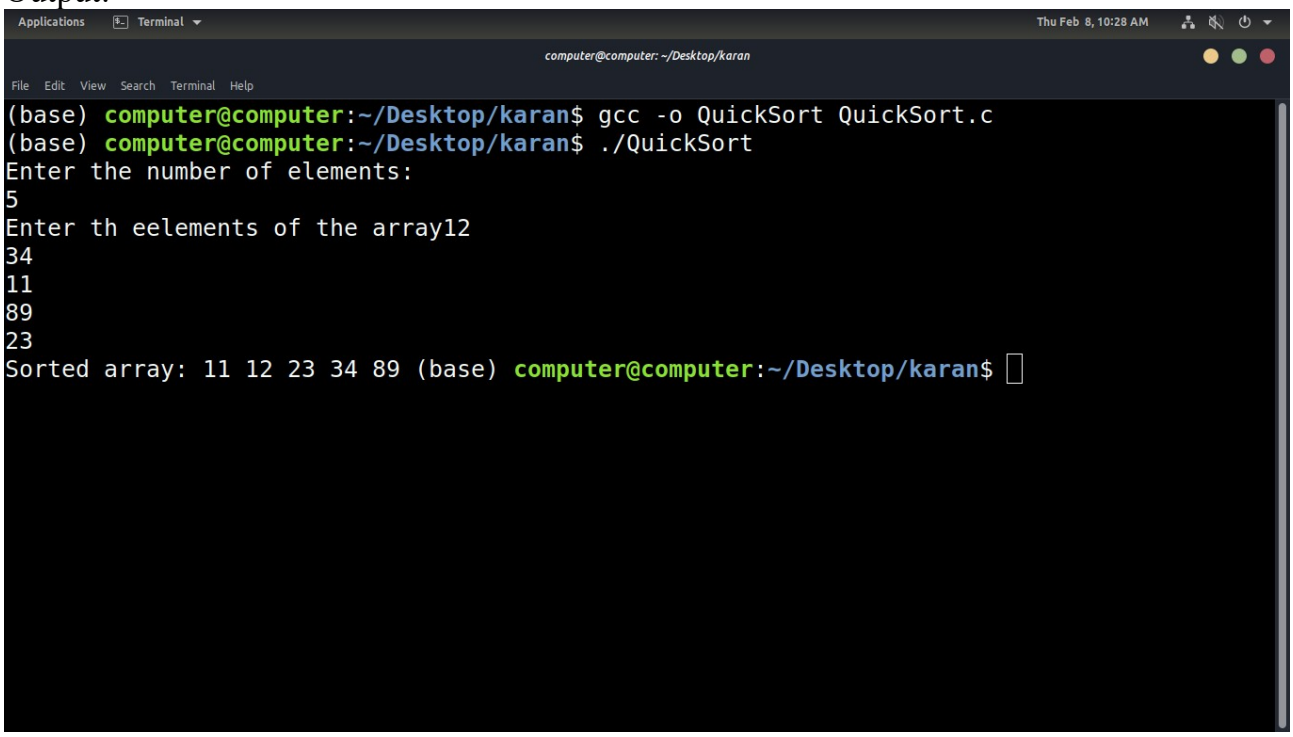
## Experiment 2

```
#include<stdio.h>
int partition(int arr[], int low, int high){
	int pivot = arr[low];
	int k = high;
	for(int i = high; i>low;i--){
		if(arr[i] > pivot){
			int temp = arr[i];
			arr[i] = arr[k];
			arr[k] = temp;
			k--;
		}
	}
	int temp = arr[k];
	arr[k] = arr[low];
	arr[low] = temp;
	return k;
}

void quickSort(int arr[], int low, int high){
	if(low<high){
	int pi = partition(arr, low, high);
	quickSort(arr, low, pi-1);
	quickSort(arr, pi+1, high);
	}
}

int main(){
	int n;
	printf("Enter the number of elements:\n");
	scanf("%d",&n);
	int arr[n];
	printf("Enter th eelements of the array");
	for(int i=0;i<n;i++){
		scanf("%d",&arr[i]);
	}
	quickSort(arr,0,n-1);
	printf("Sorted array: ");
	for(int i=0;i<n;i++){
		printf("%d  ",arr[i]);
	}
}
```

Output:


Applications
Terminal
Thu Feb 8, 10:28 AM
computer@computer: ~/Desktop/karan
File Edit View Search Terminal Help
(base) computer@computer:~/Desktop/karan$ gcc -o QuickSort QuickSort.c
(base) computer@computer:~/Desktop/karan$ ./QuickSort
Enter the number of elements:
5
Enter th eelements of the array12
34
11
89
23
Sorted array: 11 12 23 34 89 (base) computer@computer:~/Desktop/karan$