

## ASCENDING PRIORITY QUEUES

```
#include<stdio.h>

#define s 5

int front=0,rear=-1;

int queue[s];

void insertRear(){
    int value;
    if(rear==s-1){
        printf("Queue overflow\n");
        return;
    }
    int i,j,small;
    printf("Enter the value\n");
    scanf("%d",&value);
    queue[++rear]=value;
    if(rear>=1){
        for(i=1;i<=rear;i++){
            small = queue[i];//10 9 8 7 6 5
            j=i-1;
            while(j>=0&&queue[j]>small){
                queue[j+1]=queue[j];//9 9 8 7 6 5
                j--;
            }
            queue[j+1]=small;//9 10 8 7 6 5
        }
    }
}
```

```

int deleteFront(){
    if(front>rear){
        printf("Queue underflow\n");
        return -1;
    }
    int value=queue[front++];
    if(front>rear){
        front=0;
        rear=-1;
    }

    return value;
}

```

```

void display(){
    int i;
    if(front>rear){
        printf("Queue is empty\n");
        return;
    }
    for(i=front;i<=rear;i++){
        printf("%d ",queue[i]);
    }
    printf("\n");
}

```

```

int main(){
    int ch,chq,value;
    while(1){
        printf("****Ascending Priority Queue****\n1-insert to queue\n2-delete from the front\n3-display all queue\n4-exit\n");

```

```
scanf("%d",&ch);

switch(ch){

    case 1:

        insertRear();

        break;

    case 2:

        value=deleteFront();

        if(value== -1){

            break;

        }else{

            printf("Deleted item:%d\n",value);

        }

        break;

    case 3:

        display();

        break;

    case 4:

        return 0;

}

}

}
```

```
"C:\Users\Veeres h sajjan\Desktop\CODE BLOCK\ccp123\D6\ascendprio\bin\De...
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
1
Enter the value
25
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
1
Enter the value
22
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
1
Enter the value
26
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
1
Enter the value
20
***Ascending Priority Queue***
```

```
"C:\Users\Veeres h sajjan\Desktop\CODE BLOCK\ccp123\D6\ascendprio\bin\De...
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
1
Enter the value
21
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
1
Queue overflow
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
3
20 21 22 25 26
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
2
Deleted item:20
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
```

```
"C:\Users\Veereesh sajjan\Desktop\CODE BLOCK\ccp123\D6\ascendprio\bin\De...
3-display all queue
4-exit
2
Deleted item:21
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
2
Deleted item:22
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
2
Deleted item:25
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
2
Deleted item:26
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
2
Queue underflow
***Ascending Priority Queue***
```

```
"C:\Users\Veereesh sajjan\Desktop\CODE BLOCK\ccp123\D6\ascendprio\bin\De...
2
Queue underflow
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
3
Queue is empty
***Ascending Priority Queue***
1-insert to queue
2-delete from the front
3-display all queue
4-exit
```