#include <stdio.h>

#include <stdlib.h>

#define MAX 5

void insert\_by\_pr(int);

void delete\_by\_pr(int);

void create();

void check(int);

void display();

int pr\_queue[MAX];

int front,rear;

void main()

{

int n, ch;

printf("\n1.Insert an element into queue");

printf("\n2.Delete an element from queue");

printf("\n3.Display queue elements");

printf("\n4.Exit");

create();

while (1)

{

printf("\nEnter your choice:");

scanf("%d", &ch);

switch (ch)

{

case 1:

printf("\nEnter value to be inserted:");

scanf("%d",&n);

insert\_by\_pr(n);

break;

case 2:

printf("\nEnter value to delete:");

scanf("%d",&n);

delete\_by\_pr(n);

break;

case 3:

display();

break;

case 4:

exit(0);

default:

printf("\nInvalid choice");

}

}

}

void create()

{

front = rear = -1;

}

void insert\_by\_pr(int data)

{

if (rear >= MAX - 1)

{

printf("\nQueue overflow no more elements can be inserted");

return;

}

if ((front == -1) && (rear == -1))

{

front++;

rear++;

pr\_queue[rear] = data;

return;

}

else

check(data);

rear++;

}

void check(int data)

{

int i,j;

for (i = 0; i <= rear; i++)

{

if (data >= pr\_queue[i])

{

for (j = rear + 1; j > i; j--)

{

pr\_queue[j] = pr\_queue[j - 1];

}

pr\_queue[i] = data;

return;

}

}

pr\_queue[i] = data;

}

void delete\_by\_pr(int data)

{

int i;

if ((front==-1) && (rear==-1))

{

printf("\nQueue is empty no elements to delete");

return;

}

for (i = 0; i <= rear; i++)

{

if (data == pr\_queue[i])

{

for (; i < rear; i++)

{

pr\_queue[i] = pr\_queue[i + 1];

}

pr\_queue[i] = -99;

rear--;

if (rear == -1)

front = -1;

return;

}

}

printf("\n%d not found in queue to delete", data);

}

void display()

{

if ((front == -1) && (rear == -1))

{

printf("\nQueue is empty");

return;

}

for (; front <= rear; front++)

{

printf(" %d ", pr\_queue[front]);

}

front = 0;

}

