//Linear Queue

//20UET009

#include<stdio.h>

#include<stdlib.h>

int main()

{

struct Queue

{

int front;

int rear;

int element;

int a[20];

}Q;

int i,c;

Q.rear=-1;

Q.front=-1;

while(1)

{

printf("enter choice\tinsertion:1 deletion:2 display:3 exit:4\n");

scanf("%d",&c);

switch(c)

{

case 1:printf("insertion\n");

if(Q.rear!=9)

{

if(Q.rear==-1)

{

Q.rear++;

Q.front++;

}

else

{

Q.rear++;

}

printf("enter element to be insearting\n");

scanf("%d",&Q.element);

Q.a[Q.rear]=Q.element;

}

else

{

printf("Queue is full\n");

}

break;

case 2:printf("deletion\n");

if(Q.front==-1)

{

printf("Queue is empty");

}

else if(Q.rear==Q.front)

{

printf("element deleted is %d\n",Q.a[Q.front]);

Q.front=-1;

Q.rear=-1;

}

else

{

printf("element deleted is %d\n",Q.a[Q.front]);

Q.front++;

}

break;

case 3:printf("display\n");

if(Q.front==-1)

{

printf("Queue is empty\n");

}

else

{

for(i=Q.front;i<=Q.rear;i++)

{

printf("%d\t",Q.a[i]);

}

break;

}

case 4:printf("exit\n");

return 0;

break;

default :

printf("enter the correct choice:");

break ;

}

}

}

