//Queue Implementation In C Using Array !

#include<stdio.h>

#include<stdlib.h> // hearder for for using exit and return function

#define max 5 // symbolic constant

int rear=-1,front=-1; // global variable

int queue[max];

void insert();

int delete();

void display();

main()

{

int w,num;

while(1)

{

printf("\n1. Insert");

printf("\n2. Delete");

printf("\n3. Display");

printf("\n4. EXIT");

printf("\nEnter What you want :");

scanf("%d",&w);

if(w==1)

insert();

else if(w==2)

num=delete();

else if(w==3)

display();

else if(w==4)

exit(1);

else printf("\nInvalid Choice!!");

}

}

void insert()

{

int num;

if(rear==max-1){

printf("\nQueue is Full !\n");

return;

}

printf("\nEnter a number for insert :");

scanf("%d",&num);

if(front==-1)

front=front+1;

rear=rear+1;

queue[rear]=num;

}

int delete()

{

int num;

if(front==-1 || front==rear+1)

{

printf("\nQueue is Empty !\n");

return 0;

}

num=queue[front];

printf("\n%d was deleted !\n",num);

front=front+1;

}

void display()

{

int i;

if(front==-1 || front==rear+1)

{

printf("\nQueue Is Empty ! Nothing To Display !!");

return;

}

printf("\n\n");

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

printf("%d\t",queue[i]);

printf("\n");

}