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Week 3

Write a program to simulate working of linear queue

#include<stdio.h>

#include<conio.h>

#define max 3

int q[max];

int front=-1,rear=-1;

void insert(int);

int del();

void display();

void main()

{

while(1){

int ch,item,x;

char a;

printf("\nQueue Implementation");

printf("\n1.Insert");

printf("\n2.Delete");

printf("\n3.Display");

printf("\n4.Exit");

printf("\nEnter Your Choice: ");

scanf("%d",&ch);

switch(ch)

{

case 1:printf("Enter Element to Insert:\n");

scanf("%d",&item);

insert(item);

if(x==1)

printf("Queue is Full");

break;

case 2:x=del();

printf("The Element Deleted from Queue is %d",x);

if(x==1)

printf("Queue is Empty");

break;

case 3:display();

break;

case 4:exit(0);

break;

default:printf("INVALID Choice\n");

}

}

}

void insert(int x)

{

if(rear==max-1)

printf("Queue is OVERFLOW \n");

else if(rear==-1)

{

front=0;rear=0;

q[rear]=x;

}

else

{

rear++;

q[rear]=x;

}

}

int del()

{

int x;

if(front==-1)

printf("Queue is UNDERFLOW \n");

else if(front==rear)

{

x=q[front];

front=-1;

rear=-1;

return(x);

}

else

{

x=q[front];

front++;

return(x);

}

}

void display()

{

int i;

if(rear==-1)

printf("\n Queue is Empty");

else

{

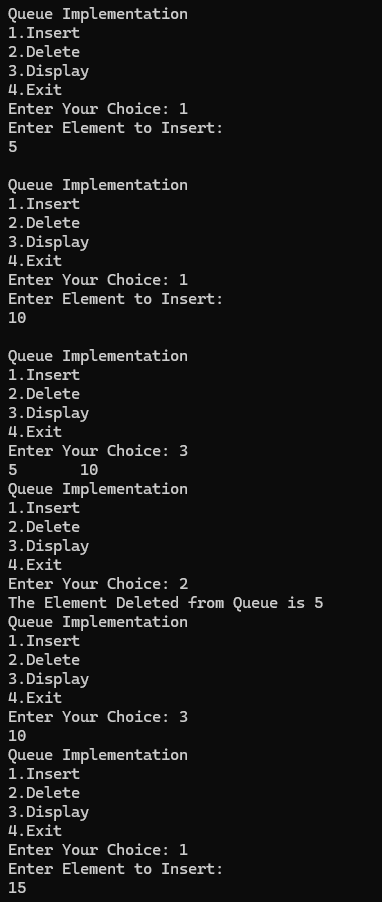
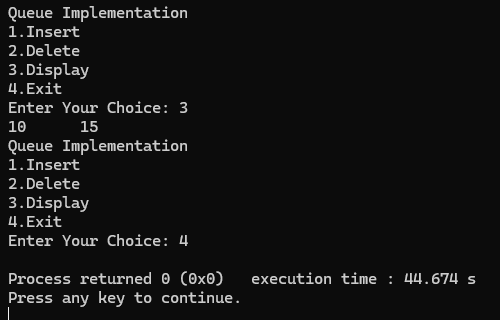
for(i=front;i<=rear;i++)

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

}

}

**Output**

** **