Program

#include<stdio.h>

# define Max 5

static int cqueue[Max];

static int front=-1,rear=-1;

int Insert();

int Delete();

int Display();

int main()

{

int ch;

do

{

printf("\n\*\* MAIN MENU\*\*");

printf("\n 1:INSERT");

printf("\n 2:DELETE");

printf("\n 3:DISPLAY");

printf("\n 4: EXIT");

printf("\n Enter your choice:");

scanf("%d",&ch);

switch(ch)

{

case 1:

Insert();

break;

case 2:

Delete();

break;

case 3:

Display();

break;

}

}while(ch!=4);

return(0);

}

int Insert()

{

int item;

if(front==0 && rear==Max-1)

{

printf("OVERFLOW");

}

else

{

printf("Enter the element to insert:");

scanf("%d",&item);

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

{

rear=0;

front=0;

}

else if(rear==Max-1 && front!=0)

{

rear=0;

}

else

{

rear=rear+1;

}

cqueue[rear]=item;

}

return(0);

}

int Delete()

{

int val;

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

{

printf("UNDERFLOW");

}

else

{

val=cqueue[front];

if(front==rear)

{

front=-1;

rear=-1;

}

else if(front==Max-1)

{

front=0;

}

else

{

front=front+1;

}

printf("Deleted element is %d",val);

}

return(0);

}

int Display()

{

int i;

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

printf("CIRCULAR QUEUE IS EMPTY");

else

{

printf("\*\*CIRCULAR QUEUE\*\*\n");

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

{

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

}

}

return(0);

}

Output

