**Program**

#include<stdio.h>

#define max 5

int cq[max],rear=-1,front=-1;

void enque(int n)

{

if(front==(rear+1)%max)

printf("Circular Queue is Full !....");

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

{

front=0;

rear=0;

cq[rear]=n;

}

else

{

rear=(rear+1)%max;

cq[rear]=n;

}

}

void deque()

{

if(front==-1)

printf("\nCircular Queue is Empty !....");

else

{

printf("\nThe deleted Element is %d ",cq[front]); if(front==rear)

{

front=-1;

rear=-1;

}

else

front=(front+1)%max;

}

}

void display()

{

int f;

if(front==-1)

printf("\nCircular Queue is Empty !....");

else

{

printf("\nQueue contents : ");

if(front<=rear)

{

f=front;

while(f<=rear)

{

printf("%3d",cq[f]);

f++;

}

}

else if(rear<front)

{

f=front;

while(f<max)

{

printf("%3d",cq[f]);

f++;

}

f=0;

while(f<=rear)

{

printf("%3d",cq[f]);

f++;

}

}

}

}

void main()

{

int ch,n;

while(1)

{

printf("\n1.Insertion\n2.Deletion\n3.Display\n4.Exit\nEnter your  choice\n");

scanf("%d",&ch);

switch(ch)

{

case 1: if(front==(rear+1)%max)

printf("Circular Queue is Full !....");

else

{

printf("\nEnter the number to be inserted :

");

scanf("%d",&n);

enque(n);

}

break;

case 2: deque();

break;

case 3: display();

break;

case 4:exit(0);

break;

}

}

}