

Circular queue

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#include <stdio.h>
#include<stdlib.h>
#define size 3
int queue[size];
int front=-1;
int rear=-1;
void insert(){
    int val;
    if(front ==0 && rear==size-1 || front == rear+1){
        printf("circular queue is full");
    }
    else {
        printf("enter a value");
        scanf("%d",&val);
        if(front== -1 && rear== -1){
            front=rear=0;
        }
        else{
            rear = (rear+1)%size;
        }
    }
    queue[rear]=val;
}

void delete(){
    int val;
    if(front== -1 && rear== -1){
        printf("circular queue is empty");
    }
    val = queue[front];
    if(front==rear){
        front = rear = -1;
    }
    else{
        front = (front+1)%size;
    }
}

void display(){
    int i;
```

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if(front== -1 && rear== -1){
    printf("\ncircular Queue is empty");
}
if(rear>front){
    for(i=front;i<=rear;i++){
        printf("%d\t",queue[i]);
    }
}
else{
    for(i=0;i<=rear;i++){
        printf("%d\t",queue[i]);
    }
    for(i=front;i<=size-1;i++){
        printf("%d\t",queue[i]);
    }

}

}

}
int main()
{
    int choice;

    while(1){
        printf("\nEnter choice\n1.Insert\n2.Delete\n3.Display\n4.Exit");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:insert();
            break;
            case 2:delete();
            break;
            case 3:display();
            break;
            case 4:exit(0);
            default :printf("Invalid chocie");

        }

    }
}

```

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    return 0;  
}
```