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[■] EXP2DSA.C 1-[↑↓]

```
#include<stdio.h>
int Q[100],FRONT=-1,REAR=-1,i,n,x,choice;
void insert();
void delete();
void display();

void main()
{
    printf("\t WELCOME to implementation of QUEUE using array!\n");
    printf("Enter the size of Queue(Maximum size=100):");
    scanf("%d",&n);
    do
    {
        printf("Queue operation available: \n");
        printf("\t1.Insert \t2.Delete \t3.Display \t4.Exit \n");
        printf("Enter your choice:");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:
                insert();
```

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[■] EXP2DSA.C 1-[↑↓]

```
{
case 1:
    insert();
    break;
case 2:
    delete();
    break;
case 3:
    display();
    break;
case 4:
    printf("Exit: Program Finished !! ");
    break;
default:
    printf("Please enter a valid choice 1,2,3,4\n");
    break;
}
}while (choice !=4);
}
```

//Function to INSERT element

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EXP2DSA.C

1-[+]

//Function to INSERT element

void insert()

{

if (REAR>=n-1)

{

printf("Queue Overflow !\n");

}

else

{

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

scanf("%d",&x);

REAR++;

Q[REAR]= x;

if (FRONT == -1)

{

FRONT=0;

}

}

}

//Function to DELETE element

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//Function to DELETE element

void delete()

{

if (FRONT== -1)

{

printf("Queue Underflow! \n");

}

else

{

printf("The deleted element is: %d \n",Q[FRONT]);

if(FRONT == REAR)

{

FRONT = REAR = -1;

}

else

FRONT++;

}

}

//Function to DISPLAY Queue

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[■] EXP2DSA.C 1-[↕]

```
    }  
}  
  
//Function to DISPLAY Queue  
void display()  
{  
    if(REAR < 0)  
    {  
        printf("Queue is empty! \n");  
    }  
    else  
    {  
        printf("The elements in the Queue are: \n");  
        for(i= FRONT; i<n; i++)  
        {  
            printf("%d ",Q[i]);  
        }  
        printf("\n");  
    }  
}
```

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C:\TURBOC3\BIN>TC

WELCOME to implementation of QUEUE using array!!

Enter the size of Queue(Maximum size=100):3

Queue operation available:

1.Insert            2.Delete            3.Display            4.Exit

Enter your choice:1

Enter the element to insert: 2

Queue operation available:

1.Insert            2.Delete            3.Display            4.Exit

Enter your choice:1

Enter the element to insert: 1

Queue operation available:

1.Insert            2.Delete            3.Display            4.Exit

Enter your choice:1

Enter the element to insert: 3

Queue operation available:

1.Insert            2.Delete            3.Display            4.Exit

Enter your choice:2

The deleted element is: 2

Queue operation available:

1.Insert            2.Delete            3.Display            4.Exit

Enter your choice:

```
Enter your choice:1
Enter the element to insert: 3
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:2
The deleted element is: 2
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:2
The deleted element is: 1
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:2
The deleted element is: 3
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:2
Queue Underflow!
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:3
Queue is empty!
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:_
```

```
Enter the size of Queue(Maximum size=100):1
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:1
Enter the element to insert: 1
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:2
The deleted element is: 1
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:3
Queue is empty!
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:1
Enter the element to insert: 1
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:3
The elements in the Queue are:
1
Queue operation available:
    1.Insert      2.Delete      3.Display      4.Exit
Enter your choice:
```