**Aim:**

To write a menu driven program to insert , display & Delete elements in a Array Queue.

**Source Code:**

#include<iostream.h>

#include<stdlib.h>

#include<process.h>

int Remove(int []);

int Insert(int [],int);

void Display(int [],int,int);

const int size = 50 ;

int Queue[size],front=-1,rear=-1;

int main()

{

int Item,res;

int ch;

do

{

system("cls");

cout<<" \t\t\t Array Queue Menu\n " ;

cout<<" \t 1. Insert\n ";

cout<<" \t 2. Delete\n ";

cout<<" \t 3. Display\n ";

cout<<" \t 4. Exit\n ";

cout<<" Enter your choice (1-4)... ";

cin>>ch;

switch(ch)

{

case 1:

{

cout<<" \n Enter ITEM for insertion :";

cin>>Item;

res=Insert(Queue,Item);

if(res==-1)

{

cout<<" OVERFLOW!! Aborting \n ";

exit(1);

}

cout<<"\n Now the Queue (Front....to....Rear) is : \n ";

Display(Queue,front,rear);

break;

}

case 2:

{

cout<<"\nNow deletion of elements begins...\n ";

char ch2='y';

while(ch2=='y'||ch2=='Y')

{

cout<<" The Queue is ( Front...to...Rear ) is : \n";

Display(Queue,front,rear);

res=Remove(Queue);

if(res==-1)

{

cout<<" UNDERFLOW!!! Abortingll \n ";

exit(1);

}

else

{

cout<<" \nElement deleted is : "<<res<<endl;

cout<<" Now the Queue ( Front...to...Rear ) is : \n";

Display(Queue,front,rear);

}

cout<<" Want to delete more elements? (y/n)... ";

cin>>ch2;

}

break;

}

case 3:

{

cout<<" Now the Queue ( Front...to...Rear ) is : \n";

Display(Queue,front,rear);

system("pause");

break;

}

case 4:

{

break;

}

default :

cout<<" Valid choices are 1...4 only\n ";

system("pause");

break ;

}

}while(ch!= 4);

return 0 ;

}

int Insert(int Queue[ ], int ele)

{

if(rear==size-1)

return -1;

else if(rear==-1)

{

front=rear=0;

Queue[rear]=ele;

}

else

{

rear++ ;

Queue[rear]=ele;

}

return 0;

}

int Remove(int Queue[])

{

int ret;

if(front==-1)

return -1;

else

{

ret=Queue[front];

if(front == rear)

front=rear=-1;

else front++;

}

return ret;

}

void Display(int Queue[ ], int front, int rear)

{

if(front==-1)

return;

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

cout<<Queue[i]<<"<- \t";

cout<<Queue[rear]<<endl;

}

**Output :**

 