

## Assignment- E11

**Name of Student :- Mayur Dattatray Karpe**

**Div :- A**

**Roll No :- 43**

**Problem Statement :-** Queues are frequently used in computer programming, and a typical example is the creation of a job queue by an operating system. If the operating system does not use priorities, then the jobs are processed in the order they enter the system. Write C++ program for simulating job queue. Write functions to add job and delete job from queue.

**Program :-**

```
#include<iostream>
using namespace std;

struct node
{
    int data;
    node *next,*front =NULL,*rear=NULL;
    void addq(int);
    void delq();
    void display();
};

void node :: addq(int x)
{
    node *ptr;
    ptr=new node;
    ptr->data = x;
    ptr->next = NULL;
    if(rear==NULL)
    {
        rear=ptr;
        front=ptr;
    }
    else
    {
        rear->next=ptr;
        rear=ptr;
    }
}
```

```

void node :: display()
{
    node *ptr;
    if(front==rear)
    {
        cout<<"\nqueue is empty";
    }
    ptr=front;

    while(ptr!=NULL)
    {
        cout<<ptr->data;
        ptr=ptr->next;
    }
    cout<<endl;
}

```

```

void node:: delq()
{
    node *ptr;
    if(front==rear)
    {
        cout<<"\nqueue is empty";
    }
    else
    {
        front=front->next;
    }
}

```

```

int main()
{
    node a;
    int x;
    for(int i=0;i<5;i++)
    {
        cout<<"enter element : ";
        cin>>x;
        a.addq(x);
    }
    cout<<"\nElements in queue are : ";
    a.display();
    for(int i=0;i<2;i++)

```

```

{
    a.delq();
}
cout<<"\nElements remain after deletion are : ";
a.display();
}

```

### Output :-

```

DSLpract10a.cpp - vs code cpp - Visual Studio Code
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Windows PowerShell
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PS C:\Users\Shree\Documents\vs code cpp> cd "c:\Users\Shree\Documents\vs code cpp\" ; if ($?) { g++ DSLpract10a.cpp -o DSLpract10a } ; if ($?) { .\DSLpract10a }
enter element : 10
enter element : 20
enter element : 30
enter element : 40
enter element : 50

Elements in queue are : 1020304050

Elements remain after deletion are : 304050
PS C:\Users\Shree\Documents\vs code cpp>

```