**Assignment Number: 7**

**Subject: Data Structure and Algorithm**

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**Division: B**

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**Title/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.

**CODE**

#include<iostream>

#include<stdlib.h>

using namespace std;

class queue

{

private:

int q[20],i,y;

int rear,front;

public:

queue()

{

rear=-1;

front=-1;

}

void Insert(int n)

{

if(rear<n)

{

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

{

front=rear=0;

}

cout<<"Enter The Job Id"<<endl;

cin>>y;

q[rear++]=y;

cout<<"Job Id inserted "<<y<<endl;

}

if(rear>=n)

{

cout<<"queue overflow"<<endl;

}

}

void Delete()

{

if (front==rear)

{

cout<<"Job Id is empty"<<endl;

return;

}

else

{

cout<<"Job "<<q[front++]<<" id deleted."<<endl;

}

}

void Display()

{

if (front==rear)

{

cout<<"Job Id is empty"<<endl;

}

else

{

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

{

cout<<"The Job id Are :"<<endl;

cout<<q[i] <<" "<<endl;

}

}

}

};

int main()

{

int ch,n;

queue qu;

cout<<"how many elemnts in queue/"<<endl;

cin>>n;

cout<<" Please Select One Of The Following Options !"<<endl;

do

{

cout<<" 1.Insert\n 2.Delete\n 3.Display\n 4.Exit"<<endl;

cin>>ch;

switch(ch)

{

case 1:

qu.Insert(n);

break;

case 2: qu.Delete();

break;

case 3: qu.Display();

break;

case 4: exit(0);

}

cout<<endl;

}while(ch!=0);

return 0;

}

/\*

OUTPUT-:

Please Select One Of The Following Options !

1.Insert

2.Delete

3.Display

4.Exit

1

Enter The Job Id

1

Job Id inserted 1

1.Insert

2.Delete

3.Display

4.Exit

1

Enter The Job Id

2

Job Id inserted 2

1.Insert

2.Delete

3.Display

4.Exit

1

Enter The Job Id

3

Job Id inserted 3

1.Insert

2.Delete

3.Display

4.Exit

2

Job Id Deleted 1

1.Insert

2.Delete

3.Display

4.Exit

2

Job Id Deleted 2

1.Insert

2.Delete

3.Display

4.Exit

2

Job Id Deleted 3

1.Insert

2.Delete

3.Display

4.Exit

2

Job Id is empty

1.Insert

2.Delete

3.Display

4.Exit

1

Enter The Job Id

1

Job Id inserted 1

1.Insert

2.Delete

3.Display

4.Exit

1

Enter The Job Id

2

Job Id inserted 2

1.Insert

2.Delete

3.Display

4.Exit

3

The Job id Are :

1

The Job id Are :

2

1.Insert

2.Delete

3.Display

4.Exit

0

\*/