**ROLL NO:-45**

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**PRACTICAL NO:-**

**PRACTICAL NAME :- IMPLEMENTATION OF QUEUE UISNG LINKED LIST**

#include "iostream.h"

#include "conio.h"

class NODE

{

public:

int data;

NODE \*link;

};

class LIST

{

NODE \*front;

NODE \*rear;

public:

LIST();

void ADD\_REAR(int);

int DEL\_FRONT();

void VIEW();

int IS\_EMPTY();

};

LIST::LIST()

{

front = NULL;

rear = NULL;

}

void LIST::ADD\_REAR(int ele)

{

NODE \*NN;

NN= new NODE();

NN->data = ele;

NN->link = NULL;

if(front == NULL)

front=rear=NN;

else

{

NODE \*ptr;

ptr= rear;

while(ptr->link != NULL)

{

ptr= ptr->link;

}

ptr->link = NN;

}

}

int LIST::DEL\_FRONT()

{

if(front == NULL)

{

cout<<endl<<"List is empty";

return NULL;

}

int ele = front->data;

NODE \* TEMP = front;

front = front->link;

delete TEMP;

return ele;

}

int LIST::IS\_EMPTY()

{

if(front == NULL)

return 1;

else

return 0;

}

void LIST::VIEW()

{

if(front == NULL)

{

cout<<endl<<"List is empty";

return;

}

NODE \*ptr = front;

cout<<endl<<"List elements are : ";

while(ptr != NULL)

{

cout<<ptr-> data<<" ";

ptr=ptr->link;

}

}

void MENU()

{

int ele, opt, pos;

LIST obj;

do

{

cout<<endl<<"1 Add at rear";

cout<<endl<<"2 Delete from Front";

cout<<endl<<"3 View All";

cout<<endl<<"4 Exit Menu";

cout<<endl<<"================\n";

cout<<endl<<"Enter your choice : ";

cin>>opt;

switch(opt)

{

case 1:

cout<<endl<<"Enter element : ";

cin>>ele;

obj.ADD\_REAR(ele);

obj.VIEW();

break;

case 2:

if(!obj.IS\_EMPTY())

{

ele = obj.DEL\_FRONT();

cout<<endl<<"Delted element = "<<ele;

obj.VIEW();

}

break;

case 3:

obj.VIEW();

break;

case 4:

return;

default:

cout<<endl<<"invalid input";

}

}while(1);

}

void main()

{

clrscr();

MENU();

getch();

}