LAB 15 - 3 Nov 2022 - Program of Linked List Implementaion of Linear Queue

// ABHISHEK RAJPUT

// 2100290120007

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#include <iostream>

using namespace std;

void Insert() {

int val;

cout<<"Insert the element in queue : "<<endl;

cin>>val;

if (rear == NULL) {

rear = (struct node \*)malloc(sizeof(struct node));

rear->next = NULL;

rear->data = val;

front = rear;

} else {

temp=(struct node \*)malloc(sizeof(struct node));

rear->next = temp;

temp->data = val;

temp->next = NULL;

rear = temp;

}

}

void Delete() {

temp = front;

if (front == NULL) {

cout<<"Underflow"<<endl;

return;

}

else

if (temp->next != NULL) {

temp = temp->next;

cout<<"Element deleted from queue is : "<<front->data<<endl;

free(front);

front = temp;

} else {

cout<<"Element deleted from queue is : "<<front->data<<endl;

free(front);

front = NULL;

rear = NULL;

}

}

void Display() {

temp = front;

if ((front == NULL) && (rear == NULL)) {

cout<<"Queue is empty"<<endl;

return;

}

cout<<"Queue elements are: ";

while (temp != NULL) {

cout<<temp->data<<" ";

temp = temp->next;

}

cout<<endl;

}

int main() {

int ch;

cout<<"1) Insert element to queue"<<endl;

cout<<"2) Delete element from queue"<<endl;

cout<<"3) Display all the elements of queue"<<endl;

cout<<"4) Exit"<<endl;

do {

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

cin>>ch;

switch (ch) {

case 1: Insert();

break;

case 2: Delete();

break;

case 3: Display();

break;

case 4: cout<<"Exit"<<endl;

break;

default: cout<<"Invalid choice"<<endl;

}

} while(ch!=4);

return 0;

}