1. Design a class node. And then design a class linked list with the help of node class.

* #include <iostream>

#include <stdlib>

class Node

{

public:

Node\* next;

int data;

};

using namespace std;

class LinkedList

{

public:

int length;

Node\* head;

LinkedList();

~LinkedList();

void add(int data);

void print();

};

LinkedList::LinkedList(){

this->length = 0;

this->head = NULL;

}

LinkedList::~LinkedList(){

std::cout << "LIST DELETED";

}

void LinkedList::add(int data){

Node\* node = new Node();

node->data = data;

node->next = this->head;

this->head = node;

this->length++;

}

void LinkedList::print(){

Node\* head = this->head;

int i = 1;

while(head){

std::cout << i << ": " << head->data << std::endl;

head = head->next;

i++;

}

}

int main(int argc, char const \*argv[])

{

LinkedList\* list = new LinkedList();

for (int i = 0; i < 100; ++i)

{

list->add(rand() % 100);

}

list->print();

std::cout << "List Length: " << list->length << std::endl;

delete list;

return 0;

}