Assignment #3

Q#1:

#include<iostream>

#include<string>

using namespace std;

class Node

{

public:

int data;

Node\* next;

Node()

{

this->data = data;

this->next = NULL;

}

};

class Stack

{

Node\* Top;

public:

Stack()

{

Top == NULL;

}

bool isEmpty()

{

return(Top == NULL);

}

bool push(char c)

{

Node\* newnode = new Node;

newnode->data = c;

newnode->next = Top;

Top = newnode;

return Top;

}

char Pop()

{

char v;

if (isEmpty())

{

cout << "Stack is Empty " << endl;

return false;

}

Node\* tempptr = Top;

v = Top->data;

Top = Top->next;

delete tempptr;

return true;

/\* cout << "The Poped Elements are " << Top->data << " " << endl;

Top = Top->next;\*/

}

bool ispalindrome()

{

int length;

int flag = 0;

char st[20];

cout << "Enter the String " << endl;

cin >> st;

length = strlen(st);

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

{

if (st[i]!=st[length-i-1])

{

flag = 1;

break;

}

}

if (flag)

{

cout << st << " String is Not palindrome " << endl;

}

else

{

cout <<st<< " String is palindrome " << endl;

return true;

}

}

void display()

{

Node\* temp = Top;

if (Top==NULL)

{

cout << "Stack is Empty " << endl;

}

else

{

cout << "Stack Elements are " << endl;

while (temp!=NULL)

{

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

temp = temp->next;

}

}

}

};

int main()

{

Stack obj;

obj.push('a');

obj.Pop();

obj.push('b');

obj.Pop();

obj.push('c');

obj.Pop();

obj.push('d');

obj.Pop();

obj.display();

obj.ispalindrome();

system("pause");

}

Output:

