Question2.cpp

```cpp
1   #include <iostream>
2   #include <string>
3
4   using namespace std;
5
6   class stack
7   {
8       char arr[20];
9       int top = -1;
10
11  public:
12      stack()
13      {
14          for (int i = 0; i < 20; i++)
15          {
16              arr[i] = 0;
17          }
18      }
19      bool full()
20      {
21          return top == 19;
22      }
23      bool empty()
24      {
25          return top == -1;
26      }
27
28      void push(char value)
29      {
30          if (!full())
31          {
32              top++;
33              arr[top] = value;
34          }
35          else
36          {
37              cout << "Array is Full.\n";
38              return;
39          }
40      }
41      char pop()
42      {
43          if (!empty())
44          {
45              char temp = arr[top];
46              top--;
47              return temp;
48          }
49          else
50          {
51              cout << "Array is Empty.\n";
52              return -1;
53          }
```

```cpp
54          }
55      void display()
56      {
57          cout << "\n--";
58          for (int i = 0; i <= top; i++)
59          {
60              cout << arr[i];
61          }
62          cout << "--\n";
63      }
64  };
65
66  bool checkp(string s)
67  {
68      stack word;
69      for (int i = 0; i < s.length(); i++)
70      {
71          word.push(s[i]);
72      }
73      string reversed = "";
74      for (int i = 0; i < s.length(); i++)
75      {
76          reversed += word.pop();
77      }
78      return s == reversed;
79  }
80
81  int main()
82  {
83      string str;
84      cout << "Enter String to check for palindrome:\n";
85      getline(cin, str);
86      if (checkp(str))
87      {
88          cout << "String is Palindrome\n";
89      }
90      else
91      {
92          cout << "String is NOT Palindrome\n";
93      }
94  }
```