**Longest Palindrome in a String :-**

Given a string S, find the longest palindromic substring in S.**Substring of string S:** S[ i . . . . j ] where 0 ≤ i ≤ j < len(S)**. Palindrome string:** A string which reads the same backwards. More formally, S is palindrome if reverse(S) = S.**Incase of conflict**, return the substring which occurs first ( with the least starting index ).

**NOTE:** Required Time Complexity **O(n2).**

**Input:**  
The first line of input consists number of the testcases. The following **T** lines consist of a string each.

**Output:**  
In each separate line print the longest palindrome of the string given in the respective test case.

**Constraints:**  
1 ≤ T ≤ 100  
1 ≤ Str Length ≤ 104

**Example:  
Input:**  
1  
aaaabbaa

**Output:**  
aabbaa

**Explanation:  
Testcase 1:** The longest palindrome string present in the given string is "aabbaa".