5. Longest Palindromic Substring

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* Difficulty: **Medium**
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Given a string **s**, find the longest palindromic substring in **s**. You may assume that the maximum length of **s** is 1000.

**Example:**

**Input:** "babad"

**Output:** "bab"

**Note:** "aba" is also a valid answer.

思路：中間抽一個字母，按照奇數搜一遍，偶數也搜一遍。得出這個字母為中間的longest parlidrome substring的起點和長度。

public class Solution {

private int lo, maxLen;

public String longestPalindrome(String s) {

int len = s.length();

if (len < 2)

return s;

for (int i = 0; i < len-1; i++) {

extendPalindrome(s, i, i); //assume odd length, try to extend Palindrome as possible

extendPalindrome(s, i, i+1); //assume even length.

}

return s.substring(lo, lo + maxLen);

}

private void extendPalindrome(String s, int j, int k) {

while (j >= 0 && k < s.length() && s.charAt(j) == s.charAt(k)) {

j--;

k++;

}

if (maxLen < k - j - 1) {

lo = j + 1;

maxLen = k - j - 1;

}

}}