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| --- |
| /\*We have a Letter or a word then we need add some letters to it and need to find out shortest palindrome |
|  | For example we take "S": S will be the shortest palindrome string. |
|  | If we take "xyz": zyxyz will be the shortest palindrome string\*/ |
|  |  |
|  | package shortestpalindromeexample.java; |
|  | import java.util.Scanner; |
|  |  |
|  | public class ShortestPalindromeDemo { |
|  |  |
|  | public static String shortestPalindrome(String str) { |
|  |  |
|  | int x=0; |
|  | int y=str.length()-1; |
|  |  |
|  | while(y>=0){ |
|  | if(str.charAt(x)==str.charAt(y)){ |
|  | x++; |
|  | } |
|  | y--; |
|  | } |
|  |  |
|  | if(x==str.length()) |
|  | return str; |
|  |  |
|  | String suffix = str.substring(x); |
|  | String prefix = new StringBuilder(suffix).reverse().toString(); |
|  | String mid = shortestPalindrome(str.substring(0, x)); |
|  |  |
|  | return prefix+mid+suffix; |
|  | } |
|  |  |
|  | public static void main(String[] args) { |
|  |  |
|  | Scanner in = new Scanner(System.in); |
|  |  |
|  | System.out.println("Enter a String to find out shortest palindrome"); |
|  |  |
|  | String str=in.nextLine(); |
|  |  |
|  | System.out.println("Shortest palindrome of "+str+" is "+shortestPalindrome(str)); |
|  |  |
|  | } |