Setup

Setup a GitHub repository for your code, and send us the URL.
Use GitHub (git) as you would on the job.
While the challenge is rather academic in nature, code it for production.
Add any GitHub actions that you would like to show us.
Please submit your final work within 72 hours of sharing your repository location with us.

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The challenge

In the language of your choice solve the following coding challenges. Complete only as much as you can, and submit your work even if you don’t finish. Remember to use professional code management discipline and aspire for production-ready code. Lastly, we love tests!

Here… we… go!

Fun with Palindromes

palindrome
/ˈpalɪndrəʊm/
noun

1. a word, phrase, or sequence that reads the same backwards as forwards, e.g. *madam* or *nurses run*.

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Level 1

Write a function that takes in a non-empty string and that returns a boolean representing whether the string is a palindrome.

Sample Input

string = "abcdcba"

Sample Output

true // it's written the same forward and backward

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Level 2

Now write a function that, given a string, returns its longest palindromic substring.
You can assume that there will only be one longest palindromic substring.

Sample Input

string = "abaxyzzyxf"

Sample Output

"xyzzyx"

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Level 3

Now write a function that returns the minimum number of cuts needed to perform on the string such that each remaining substring is a palindrome.

Sample Input

string = "noonabbad"

Sample Output

2 // noon | abba | d

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Delivery

Include a guide (in any format/style) for running your code or maybe deploy the code in some way that makes it easy to validate your solutions.
Tests, tests, tests :)
Write a technical brief that explains all the submitted solutions that includes both time and space complexity. Do your best to re-create an “at the whiteboard” experience. Help us understand your thought process.