

Palindrome Partitioning

Question: Given a string *s*, partition *s* such that every substring of the partition is a palindrome. Return all possible palindrome partitioning of *s*.

For example: given *s* = "aab"

Return [["aa","b"], ["a","a","b"]].

Solutions:

```
class Solution:
```

```
    # @param s, a string
```

```
    # @return a boolean
```

```
    def _isPalindrome(self, s):
```

```
        begin, end = 0, len(s)-1
```

```
        while begin < end:
```

```
            if s[begin] != s[end]:
```

```
                return False
```

```
            else:
```

```
                begin += 1
```

```
                end -= 1
```

```
        return True
```

```
    # @param s, a string
```

```
    # @return a list of lists of string
```

```
    def partition(self, s):
```

```
        if len(s) == 0:    return []
```

```
if len(s) == 1: return [[s]]
```

```
result = []
```

```
if self._isPalindrome(s): result.append([s])
```

```
for i in range(1, len(s)):
```

```
    head = s[:i]
```

```
    if not self._isPalindrome(head):
```

```
        continue
```

```
    tailPartition = self.partition(s[i:])
```

```
    result.extend([[head] + item for item in tailPartition])
```

```
return result
```

```
Solution().partition("aab")
```