String Palindrome

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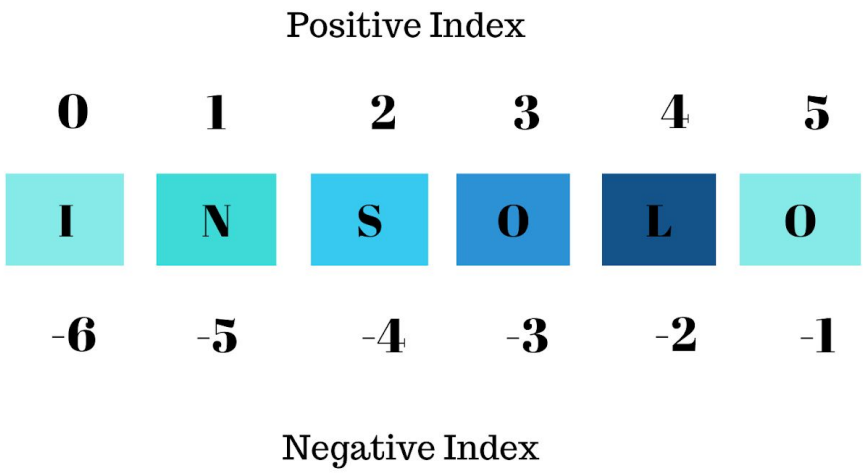

string Indexing

Some Strings Examples (Palindrome)

Text	Reversed Text	Palindrome(True/False)
MADAM	MADAM	True
PYTHON	NOHTYP	False
MAM	MAM	True
HELLO	OLLEH	False

Solution using [::-1]

```
def Palindrome(text):
  flag  = True

  if text != text[::-1]:
    flag = False
  return flag


text = "MADAM"
res = Palindrome(text)
print(res)
```

To achieve the same result You can also use the reversed**()** or **reverse()** method instead of using **text[::-1] .**

Output

```
True
```

Solution 2

Text = “MADAM”
Length(l) = 5

index(i)	i	0	1	2	3	4
Text	t	M	A	D	A	M
Formula	l-(i+1)	5-(0+1)	5-(1+1)	5-(2+1)	5-(3+1)	5-(4+1)
Compare index	c	4	3	2	1	0
Compare now	t[i] == t[c]	True	True	True	True	True

All comparisons are true so input string is palindrome . If any one comparison becomes false that string is not Palindrome.

Using For Loop

```
def Palindrome(text):
  flag  = True
  length = len(text)
  for i,val in enumerate(text):
      if val != text[length-(i+1)]:
            flag = False
            break
  return flag

text = "MADAM"
res = Palindrome(text)
print(res)
```

enumerate() is useful for obtaining an index of given list,string or iterable objects.

Output

```
True
```

Using While Loop

```
def Palindrome(text):
  flag  = True
  length = len(text)
  i = 0
  while i!=length:
    if text[i] != text[length-(i+1)]:
      flag = False
      break
    i+=1
  return flag
text = "MADAM"
res = Palindrome(text)
print(res)
```

Using For Loop

```
def Palindrome(text):
  flag  = False
  length = len(text)

  # Create Reverse String
  rev = ""
  for i in range(length,0,-1):
    rev = rev + text[i-1]

  # Compare Reversed String with Original String
  if text == rev:
    flag = True

  return flag

# Driver Code To Call Palindrome Function
text = "MADAM"
res = Palindrome(text)
print(res)
```

Output

```
True
```

Reverse a String

```
def Reverse(text):
  i = len(text)
  rev = ""
  while i!=0:
     rev+=text[i-1]
     i-=1
  return rev

text = "Python"
res = Reverse(text)
print(res) #nohtyP
```

Number Palindrome

Some Numbers Examples (Palindrome)

Number	Reversed Number	Palindrome(True/False)
515	515	True
2455	5542	False
112211	112211	True
5485	5845	False

Solution

```
def Palindrome(number):
  flag  = False
  n = number
  rev = 0 # Add Final Result

  # Iterate  until n > 0
  while n>0:
    digit = n%10  # Find Out Reminder
    rev = rev * 10 + digit
    n = n//10

  # Compare reversed number and original number
  if number == rev:
    flag = True
  return flag

# Driver Code
number =515
res = Palindrome(number)
print(res)
```

Output

```
True
```

Another Example

```
# Driver code
number =2455
res = Palindrome(number)
print(res)
```

Output

```
False
```

Reverse a Number

```
def Reverse(number):
  n = number
  rev = 0 # Add Final Result

  # Iterate  until n > 0
  while n>0:
    digit = n%10  # Find Out Reminder
    rev = rev * 10 + digit
    n = n//10

  return rev

# Driver Code
number =112255
res = Reverse(number)
print(res)
```

Output

```
552211
```

To everyone who has taken time out of their day to read it.

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