

Recursion (String)

November 23, 2022

1 String Recursion Examples

1.1 1. Replace all the occurrences of a character by another

```
[1]: def replace_all(given_string, char_from, char_to):  
    if len(given_string)==0:  
        return given_string  
    smaller_answer = replace_all(given_string[1:], char_from, char_to)  
    if given_string[0] == char_from:  
        return char_to + smaller_answer  
    return given_string[0] + smaller_answer
```

```
[2]: print(replace_all("this is a sample test case", "e", "x"))
```

this is a samplx txst casx

1.2 2. Remove all the occurrences of a character

```
[3]: def remove_all(given_string, char_from):  
    if len(given_string)==0:  
        return given_string  
    smaller_answer = remove_all(given_string[1:], char_from)  
    if given_string[0] == char_from:  
        return smaller_answer  
    return given_string[0] + smaller_answer
```

```
[4]: print(remove_all("this is a sample test case", "e"))
```

this is a sampl tst cas

1.3 3. Replace all the pi to 3.14

```
[5]: def replace_pi(given_string):  
    if len(given_string)<2:  
        return given_string  
    elif given_string[0]=="p" and given_string[1]=="i":  
        return "3.14"+replace_pi(given_string[2:])  
    return given_string[0]+replace_pi(given_string[1:])
```

```
[6]: print(replace_pi("abcpidefpippi"))
```

abc3.14def3.143.14p3.14

1.4 4. Remove Duplicates

```
[7]: def remove_duplicates(given_string):  
    if len(given_string)==1:  
        return given_string  
    smaller_answer = remove_duplicates(given_string[1:])  
    if given_string[0]==smaller_answer[0]:  
        return smaller_answer  
    return given_string[0] + smaller_answer
```

```
[8]: print(remove_duplicates("xxxyyyzwwzzz"))
```

xyzwz