day 4 today i learn basic of string in python

```
name="nitin"
print(id(name))
print(type(name))
print(len(name))
print(name.upper())
```

```
132856665170672
<class 'str'>
5
NITIN
```

1. String Manipulation: Write a Python program that reverses a given string. Given a string, write a function to count the number of vowels in it. Write a program to check if a string is a palindrome. Implement a function to capitalize the rst letter of each word in a sentence

```
string="komal"
y=string[::-1]
print(y)
if y==string:
  print(string,"is a palindrome number")
else:
  print("its not a palindrome")
print(string.capitalize(),"string in is in first capital letter")
```

```
lamok
its not a palindrome
Komal string in is in first capital letter
```

String Formatting: Create a formatted string using f-strings that includes variables and their values. Write a program to left-align a list of strings with a speci ed width. Given a list of names, format them into a bulleted list using string concatenation or join method

```
name = "Alice"
age = 30
city = "New York"

formatted_string = f"Name: {name}, Age: {age}, City: {city}"
print(formatted_string)
strings ="apple\tbanana\tcherry\t date"
Y=strings.expandtabs(8)
print(Y)
names = ["Alice", "Bob", "Charlie", "Diana"]

bulleted_list = "\n".join(f"* {name}" for name in names)
print(bulleted_list)
```

```
Name: Alice, Age: 30, City: New York
apple   banana  cherry   date
* Alice
* Bob
* Charlie
* Diana
```

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```
s = "   Hello, World!   "
cleaned_string = s.strip()
print("String without leading and trailing whitespaces:", cleaned_string)
```

```
String without leading and trailing whitespaces: Hello, World!
```

```
main_string = "Hello, welcome to the world of Python."
substring = "welcome"
index = main_string.find(substring)
print(f"The first occurrence of '{substring}' is at index {index}")
paragraph = "This is a test. This test is only a test."
word = "test"
words = paragraph.split()
count = words.count(word)
print(f"The word '{word}' occurs {count} times in the paragraph.")
sentence = "This is an example sentence with several words."
words = sentence.split()
last_three_words = ' '.join(words[-3:])
print("Last three words:", last_three_words)
```

```
The first occurrence of 'welcome' is at index 7
The word 'test' occurs 1 times in the paragraph.
Last three words: with several words.
```

```
string1 = "Hello"
string2 = "World"
concatenated_string = string1 + " " + string2
print("Concatenated string:", concatenated_string)

s = "   Hello, World!   "
cleaned_string = s.strip()
print("String without leading and trailing whitespaces:", cleaned_string)
import re

text = "Please contact us at support@example.com or sales@example.co.uk for more information."
email_pattern = r'[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}'
emails = re.findall(email_pattern, text)
print("Extracted emails:", emails)
```

```
Concatenated string: Hello World
String without leading and trailing whitespaces: Hello, World!
Extracted emails: ['support@example.com', 'sales@example.co.uk']
```

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Given a string containing a sentence, use a string method to convert the entire string to uppercase.

```
string="komal"
print(string.upper())
```

```
KOMAL
```

You have a string with extra spaces at the beginning and end. Use a string method to remove these extra spaces

```
string="   komal   "
print("before",string)
s=string.strip()
print(s)
```

```
before    komal
komal
```

You have a string with words separated by commas. Use a string method to split the string into a list of words.

```
string="k,o,m,a,l"
y=string.split()
print(y)
```

```
['k,o,m,a,l']
```

Given a string containing a sentence, replace all occurrences of the word "Java" with "Python".

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```
string = "java is bad language or"
subword = "java"
replace = "python"

# Find the index of the first occurrence of the subword
y = string.find(subword)

# Replace the subword with the new word
if y != -1:
    # Create a new string with the replacement
    string = string[:y] + replace + string[y + len(subword):]

print(string)
```

```
python is bad language or
```

```
 # This is formatted as code
```

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