Python String Methods (1–47) - Deep Explanation

1. capitalize()

Converts the first character to uppercase, rest to lowercase.

2. casefold()

Aggressive lowercasing, used for caseless matching.

3. center(width, char)

Centers the string within given width using optional fill char.

4. count(sub)

Counts occurrences of a substring.

5. encode()

Encodes string into bytes using specified encoding.

6. endswith()

Checks if string ends with a given suffix.

7. expandtabs()

Replaces tabs with spaces.

8. find()

Returns lowest index of substring, or -1 if not found.

9. format()

Formats string with placeholders.

10. format_map()

Formats string using dictionary mapping.

11. index()

Like find(), but raises ValueError if not found.

12. isalnum()

Checks if all characters are alphanumeric.

13. isalpha()

Checks if all characters are alphabets.

14. isascii()

Checks if all characters are ASCII.

15. isdecimal()

Checks if all characters are decimal digits.

16. isdigit()

Checks if all characters are digits.

17. isidentifier()

Checks if string is valid Python identifier.

18. islower()

Checks if all characters are lowercase.

19. isnumeric()

Checks if all characters are numeric.

20. isprintable()

Checks if all characters are printable.

21. isspace()

Checks if string contains only whitespace.

22. istitle()

Checks if string is titlecased.

23. isupper()

Checks if all characters are uppercase.

24. join()

Joins iterable of strings with separator.

25. ljust()

Left aligns string in given width.

26. lower()

Converts all characters to lowercase.

27. lstrip()

Removes leading whitespace.

28. maketrans()

Creates translation mapping for translate().

29. partition()

Splits string into 3 parts at first occurrence of separator.

30. replace()

Replaces substring with another.

31. rfind()

Returns highest index of substring, or -1.

32. rindex()

Like rfind(), but raises ValueError if not found.

33. rjust()

Right aligns string in given width.

34. rpartition()

Splits string into 3 parts at last occurrence of separator.

35. rsplit()

Splits string from the right.

36. rstrip()

Removes trailing whitespace.

37. split()

Splits string into list by separator.

38. splitlines()

Splits string at line breaks.

39. startswith()

Checks if string starts with given prefix.

40. strip()

Removes leading and trailing whitespace.

41. swapcase()

Swaps uppercase to lowercase and vice versa.

42. title()

Converts string into title case.

43. translate()

Applies translation mapping to string.

44. upper()

Converts all characters to uppercase.

45. zfill()

Pads string with zeros on the left.

46. removeprefix()

Removes given prefix if present.

47. removesuffix()

Removes given suffix if present.