

Python List and List Methods - Mentor Style Questions

1. What is a list in Python?
2. How do you create an empty list?
3. How do you initialize a list with elements?
4. How do you access the first element of a list?
5. How do you access the last element of a list?
6. How can you update an element in a list?
7. How do you append an element to a list?
8. What is the difference between `append()` and `extend()`?
9. How do you insert an element at a specific index?
10. How do you remove an element from a list using `remove()`?
11. How do you remove an element from a list using `pop()`?
12. What is the difference between `pop()` and `remove()`?
13. How do you delete an element from a list using `del`?
14. How do you find the length of a list?
15. How do you check if an element exists in a list?
16. How do you loop through a list using a for loop?
17. How do you loop through a list using a while loop?
18. How do you use list comprehension to create a new list?
19. What is the syntax for list comprehension with a condition?
20. How do you reverse a list?
21. How do you sort a list in ascending order?
22. How do you sort a list in descending order?
23. What is the difference between `sort()` and `sorted()`?
24. How do you count occurrences of an element in a list?

25. How do you find the index of an element in a list?
26. What happens if you try to access an index out of range?
27. How can you concatenate two lists?
28. How can you replicate a list?
29. How do you slice a list?
30. How do you copy a list without referencing the original?
31. How do you clear all elements from a list?
32. What are nested lists?
33. How do you access elements in a nested list?
34. How do you flatten a nested list?
35. What is the use of the `list()` constructor?
36. What are the common errors with lists in Python?
37. How do you convert a string to a list of characters?
38. How do you convert a list of strings into a single string?
39. How do you get the minimum and maximum values from a list?
40. How do you use the `enumerate()` function with a list?