

1. What is file handling in Python? Name different file modes.

File handling is used to create, read, write, and modify files. Common file modes are r, w, a, x, r+, w+, and a+.

2. What is the difference between read(), readline(), and readlines()?

read() reads the entire file, readline() reads one line at a time, and readlines() reads all lines into a list.

3. What is exception hierarchy in Python?

Exception hierarchy is the structured classification of exceptions where all exceptions inherit from the base Exception class.

4. Difference between try-except and try-except-finally

try-except handles exceptions, while try-except-finally also executes the finally block whether an exception occurs or not.

5. What is the purpose of the with statement?

The with statement ensures proper resource management by automatically closing files or releasing resources.

6. What are iterators in Python?

Iterators are objects that allow traversal of elements one at a time using `__iter__()` and `__next__()`.

7. What are generators and how are they different from functions?

Generators produce values one at a time using `yield`, whereas functions return a value and terminate execution.

8. What is *args and **kwargs?

`*args` allows passing a variable number of positional arguments, and `**kwargs` allows passing variable keyword arguments.

9. What is type casting? Give examples.

Type casting is converting one data type into another.

Example: `int("10")`, `float(5)`

10. What are built-in functions in Python? Name any five.

Built-in functions are predefined functions in Python. Examples: `print()`, `len()`, `type()`, `range()`, `sum()`.