52.How Many Basic Types Of Functions Are Available In Python?

1. Built-in Functions: These are functions that Python provides out of the box. You can use them directly without needing to define them. Examples include functions like print(), len(), max(), min(), etc. They are like tools already available in your toolbox.
2. User-defined Functions: These are functions that you create yourself using the def keyword followed by a function name and parentheses ( ). Inside the parentheses, you can specify parameters (inputs), and within the function body, you write the code that the function will execute when called.
3. Anonymous Functions (Lambda Functions): These are small, one-line functions defined using the lambda keyword. They are handy for writing quick functions without naming them explicitly. They are often used for short operations where creating a full function definition would be overkill.
4. Higher-order Functions: These are functions that can take other functions as arguments or return them as results. They provide a way to abstract over actions, not just data. Examples include functions like map(), filter(), and sorted().
5. Recursive Functions: These are functions that call themselves either directly or indirectly in order to solve a problem. They are useful for tasks that can be broken down into smaller, similar subproblems. An example is calculating factorials or traversing tree structures.
6. Generator Functions: These are functions that use the yield keyword to produce a series of values one at a time, rather than computing and returning them all at once. They are memory efficient and allow you to iterate over large sequences of data without storing the entire sequence in memory.

53.How can you pick a random item from a list or tuple?

* + In Python, you can pick a random item from a list or tuple using the random module, which provides various functions for generating random numbers and selecting random elements from sequences like lists and tuples.
  + The random.choice() function is particularly useful for picking a random item from a sequence such as a list or tuple.
* Importing the random module: First, you need to import the random module using import random.
* Using random.choice(): This function selects a random item from the sequence (my\_list or my\_tuple in the examples).
* Printing the random item: Finally, the randomly chosen item is stored in random\_item and printed out.