1. What are the key features of Python?

Answer: The key features of Python include its ease of use, readability, and simplicity, as well as its dynamic typing, high-level data structures, and extensive libraries and frameworks.

2. How do you declare a variable in Python?

Answer: In Python, you can declare a variable by simply assigning a value to a name. For example: x = 5

3. What is a list in Python?

Answer: A list in Python is an ordered collection of elements, which can be of any type. Lists are mutable, meaning that you can add, remove, or modify elements within a list.

4. How do you create a function in Python?

Answer: In Python, you can create a function by using the def keyword, followed by the name of the function, its parameters, and its code. For example:

```
def add_numbers(x, y):

    return x + y
```

5. What is a module in Python?

Answer: In Python, a module is a file containing Python code, which can be imported and used in other Python programs. Modules can be used to organize code, share code between programs, and more.

6. What is the difference between a tuple and a list in Python?

Answer: Tuples and lists are both ordered collections of elements, but tuples are immutable, meaning that you cannot add, remove, or modify elements once they are defined. Lists, on the other hand, are mutable.

7. What is a decorator in Python?

Answer: A decorator in Python is a special function that can modify the behavior of another function, without changing its code. Decorators are often used to add functionality to functions, such as logging, caching, or access control.

8. What is a virtual environment in Python?

Answer: A virtual environment in Python is a self-contained environment that contains a specific version of Python and its dependencies, without interfering with other Python installations on the same system. Virtual environments can be used to manage dependencies and ensure that a Python application runs consistently across different systems.

9. What is the difference between is and == in Python?

Answer: is checks if two objects are the same object in memory, while == checks if the two objects/variable have the same value.

10.What is a lambda function in Python?

Answer: A lambda function in Python is a small, anonymous function that can be defined in a single line. It is often used for simple functions that do not need to be named or reused.

11.What is a class in Python?

Answer: A class in Python is a blueprint for creating objects that have certain attributes and methods. Classes can be used to create custom data types, which can be used in various applications.

12.How do you handle exceptions in Python?

Answer: You can handle exceptions in Python using the try and except statements. The code in the try block is executed, and if an exception is raised, the code in the corresponding except block is executed. For example:

```
try:

    x = 5 / 0

except ZeroDivisionError:

    print("Cannot divide by zero")
```

13.How do you sort a list in Python?

Answer: You can sort a list in Python using the sort() method, or the built-in sorted() function. By default, lists are sorted in ascending order. For example:

```
numbers = [4, 2, 7, 1, 9]

numbers.sort()

print(numbers)
```

14.What is a dictionary in Python?

Answer: A dictionary in Python is a collection of key-value pairs, which can be used to store and retrieve data quickly and efficiently. Dictionaries are mutable, and can be modified by adding, removing, or modifying key-value pairs.

15.What is a package in Python?

Answer: A package in Python is a way to organize related modules into a single directory hierarchy. Packages can be used to make it easier to import and use modules in larger projects, and to avoid naming conflicts between modules.