- **Question:** What is the capital of France?

  - **Answer:** The capital of France is Paris.

- **Question:** What is the purpose of the `__init__` method in Python?

  - **Answer:** The `__init__` method is a constructor in Python. It's automatically called when a new object is created and is used to initialize the object's attributes.

- **Question:** Explain the difference between a list and a tuple.

  - **Answer:** A **list** is a mutable data structure, meaning its elements can be changed after creation. A **tuple** is an immutable data structure, which means its elements cannot be changed after creation.

- **Question:** What is a `lambda` function?

  - **Answer:** A `lambda` function is a small, anonymous function defined with the `lambda` keyword. It can take any number of arguments but can only have one expression.

- **Question:** How does Python manage memory?

  - **Answer:** Python's memory management is handled by a private heap space that contains all Python objects and data structures. It uses an in-built garbage collector to automatically handle memory allocation and deallocation.

- **Question:** What is a `for` loop?

  - **Answer:** A `for` loop is used for iterating over a sequence, such as a list, tuple, dictionary, or string. It allows you to execute a block of code for each item in the sequence.

- **Question:** Define the term 'object-oriented programming.'

  - **Answer: Object-oriented programming (OOP)** is a programming paradigm based on the concept of "objects," which can contain both data (attributes) and code (methods) that operate on that data