

1. What is python? What are the benefits of using python?

→ Python is an interpreted, object-oriented, high level programming language with dynamic semantics. It is available in open source and binary formats for all major platforms and can be used and distributed commercially for free.

Python is simple, easy to learn and use, It supports program modularity, code reuse and an incredibly rapid interactive development environment with its quick debugging.

2. What type of language is python?

→ python is a Third Generation, High Level, interpreted, object-oriented language.

3. What is the difference between a list and a tuple?

→ The key differentiating factor in the comparison of lists and tuples in python is that lists are mutable whereas tuples are immutable i.e. lists can be modified after initialisation while tuples do not support modifications.

4. What are the supported data types in python?

→ python's built-in data types are listed as follows:

- Text type - str.
- Numeric types - int, float, complex
- sequence types - list, tuple, range.
- mapping type - dict
- set types - set, frozenset.
- Boolean type - bool.
- Binary types - bytes, bytearray, memoryview.

5. What is a dictionary in python?

→ A dictionary or a dict in python is an unordered collection of mapped items. each element of a dictionary is a key: value pair that can be used to retrieve data if a key is known.

example: mydict = {"name": "xyz", "marks": 84}

6. What would be the output of the following code block?

```
list1 = [2, 3, 222, 14, 25]  
print(list1[-2])
```

→ The output will be "14".