

Q1. what is dynamically typed language.

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- in python, you don't need to declare variable type
 - the type is decided automatically at runtime.

e.g. $x = 10 \rightarrow$ integer type

$x = \text{"Nishant"} \rightarrow$ string type

Q2. what is the difference between a mutable datatype & an immutable datatype.

→ * mutable datatype:

- we can modify after creation
- Example of mutable datatype is List, Dictionary, Set.

* immutable datatype:

- we can not modify after creation.
- Example of immutable datatype is string, Tuple, etc.

Q3. what is break, continue & pass in python

→ ① break :- using break for exit the loop completely.

② continue :- ~~skip~~ used for skipping the current iteration & go to next.

③ pass :- it is used to declare a empty loop. & it also used to define empty, class, function & control statement.

Q6. what is difference between set & dictionary

→ i) set :-

- stores unique values
- In set we can not store key value pairs
- it is mutable.
- the set is created by using built in function. `set()`. e.g. `{1, 2, 3}`

ii) dictionary :-

- store data in key value pairs
- it also mutable
- e.g. `{"name": "Ram", "age": 23}`

Q7. what are built-in data types in python

→ int, float, list, tuple, range, string, set, dictionary, boolean, etc.

Q2. what is variable scope in python

→ i) local variable :-

- local variable are those that are declare inside the function.

- e.g. `def f():`

`s = "Hello"`

`print(s)`

`f()`

ii) Global variable :-

- Global variable are declare outside any function.

e.g. `def f():`

`print(s)`

`s = "Hello"`

`f()`

Q4. what is list comprehension & give an example

→ list comprehension is a short way to create list using loops & functions.

e.g. `square = [x*x for x in range(10)]`
`print(square)`

output: `[0, 1, 4, 9, 16]`