

Q2) Explain Inheritance in Python with an example?

- Inheritance is the capability of one class to derive or inherit the properties from another class, benefits of inheritance are,
 - (i) It represents the real world relationship
 - (ii) It provides reusability of a code.
 - (iii) It allows us to add more features to a class without modifying it.
 - (iv) It is transitive in nature, which means if class B inherits from another class A, then all the subclasses of B would automatically inherit from class A.
- there are different types of inheritance supported by Python.
 - (i) Single Inheritance. - derived class acquires number of single super-class.
 - (ii) Multi-level Inheritance. - derived class d1 inherits from base1, d2 inherits base2
 - (iii) Hierarchical Inheritance. - one base class can inherits any number of child class
 - (iv) Multiple Inheritance. - derived class is inherited from more than one base class.
- the class from which we are inheriting is called superclass and class that is inherited called derived / child class.

Q3) Does Python support multiple Inheritance?

- multiple inheritance means that a class can be derived from more than one parent class. Python does support multiple inheritance.

Q4) What is Polymorphism in Python?

- polymorphism means ability to take multiple forms.
- if parent class has a method name ABC then the child class also can have a method with same name ABC having its own parameters and variables.
- Python allows polymorphism.

Q5) Define encapsulation in Python?

- Encapsulation means binding the code and data together.
- Python class is an example of encapsulation.

Q46) How do you do data abstraction in Python?

- Data abstraction is providing only the required details and hiding the implementation from the world.
- It can be achieved in Python by using interfaces and abstract classes.

Q47) Python make use of Access specifiers?

- Python does not deprive access to an instance variable or function.
- Python lays down the concept of prefixing the name of the variable, function or method with a single or double underscore to imitate the behaviour of protected and private Access specifiers.

Q48) What does an object() do?

- It returns a featureless object that is base for all classes.
- It does not take any parameters.