1.*Explain the difference between a **class** and an **object**.*
A class is the definition of an object. A class specifies member functions and member variables that belong to an object. An object is an instance of a class. A class can have many instances.

2.*What is the primary difference between a **member variable** and a regular variable?*
Objects have state which is stored in member variables. Member variables belong to a object. Amember variable is similar to a field in a C structure. Member variables can also store complex objects. Object state can be changed by modifying member variables directly or by invoking a function.

3. *What is the primary difference between a **member function** and a regular function? Why do member functions require the self argument?*
Objects have functions which are reflected by member functions. A member function belongs to an object. When a member function is called, it has the access to the internal state of an object. When we define a class we are specifying the member variables and member functions for every possible instance of an object. To differentiate between all of the potential objects
that exist a reference called self to a specific object is provided.State for a particular object can then be modified or accessed through the self reference.

4. *What relationship is expressed by inheritance? How is this different from composition?*
Objects can inherit properties and functions from other objects. Inheritance expresses the IS-A relationship. A derived object is an object that inherits from one or more base objects. Inheritance expresses a hierarchy of IS-A relationships. Objects can also be composed of other objects. But the difference is that a composition holds a HAS-A relationship instead of IS-A relationship for inheritance.

5. *What is the purpose of the constructor?*
A constructor is a special member function that is called to instantiate a class. The constructor is responsible for initializing the state (member variables) of an object.

6. *What is the special function name used when defining a constructor in Python? How many times is an object's constructor called during its lifetime?*
__init__ is reserved for defining the constructor. The constructor is only called once during the lifetime of an object.