

Serialization

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- Serialization is used to convert an object to a byte-stream representation and vice-versa.
- This is useful when we need to pass object data in the form of string of text between scripts and applications.
- There are various situations in which we need to pass objects in the form of string such as:
 - Converting object to string and storing it in a text file or a database table.
 - Converting and passing objects in URL query string.
 - Carrying objects between webpages in the session, etc.

- To convert a object to a string and then back to object when required we can use following functions:
- **serialize()**: the `serialize()` function takes the object and converts it to a string representation containing class name and its properties.
- **unserialize()**: the `unserialize()` function takes the serialized string or string that is obtained from object and converts it again to the object.

- When the object is serialized, the content is placed with some type of a specifier followed by a colon, then followed with the actual data followed by a semi-colon.
- When we serialize an object it stores the class name and all its properties. It doesn't store methods of the class. Hence to unserialize the serialized object the class should be present in the script before unserializing it.
- So we have to unserialize the object in the script where the class is defined or we can include the class in the script where we want to unserialize the object.

__sleep() and __wakeup()

- We have more 2 methods that notify an object that it is being serialized or unserialized.
- The two methods are **__sleep()** and **__wakeup()**.
- The **__sleep()** method is automatically called before the serialization using **serialize()** function and the **__wakeup()** method is called automatically after unserialization of an object using **unserialize()** function.

- The `__sleep()` method does the work of cleanup before serialization of an object, the work can be closing database connection, saving/storing any data in a file or database, etc.
- The `__sleep()` method returns an array of data members of a class that should be written into the byte-stream during serialization. The data in the array is converted to the byte-stream and stored permanently; but if no data is passed into the array, nothing will be stored.

- The `__wakeup()` method performs any required action after the execution of `unserialized()` function such as restoring the database connections, etc.