Serialization

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Serialization

- The process of storing the state of an object to some permanent persistent store is called as Serialization.

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Serialization API

- To perform Serialization and De-Serialization, Java provides a relevant API known as Serialization API.

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Serialization API

- `Serializable`
- `ObjectOutputStream`
- `ObjectInputStream`

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Serializable

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Serializable

- A marker interface
- Needs to be implemented by a class of which an object is to be serialized.

ObjectOutputStream

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ObjectOutputStream

- A class used to perform serialization.
- Uses `OutputStream` as a target and provides void `writeObject(Object)` method to perform the serialization.

ObjectInputStream

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ObjectInputStream

- A class used to perform de-serialization.
- Uses `InputStream` as a source and provides `Object readObject()` method to perform the de-serialization.

Externalizable

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Externalizable

- A sub-interface of `Serializable`.

- Allows to have full control over encryption and decryption while performing serialization and de-serialization respectively.

Externalizable

- Methods:
  - `readExternal(ObjectInput);`
  - `writeExternal(ObjectOutput);`

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Serialization Further Concepts

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Serialization Further Concepts

- If a variable of a class is declared as `static`, its value does not get serialized.

- It gets initialized with default values during de-serialization.

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Serialization Further Concepts

- In order to avoid serialization for an instance variable, the instance variable is to be declared as `transient`.

- Transient variables are also initialized with default values during de-serialization.

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