

IO Operation

Assignment Solutions



1. What is Input and Output Stream in Java?

Ans: A stream can be defined as a sequence of data. The InputStream is used to read data from a source and the OutputStream is used for writing data to a destination.

2. What are the methods of OutputStream?

- write() - writes the specified byte to the output stream.
- write(byte[] array) - writes the bytes from the specified array to the output stream.
- flush() - forces to write all data present in the output stream to the destination.
- close() - closes the output stream.

3. What is serialization in Java?

Ans: Serialization is the process of converting an object into a stream of bytes to transfer it over a network or to store it in a file or database. In Java, serialization is done by implementing the Serializable interface.

4. What is the Serializable interface in Java?

Ans: The Serializable interface in Java is a marker interface that has no methods. It is used to mark classes that can be serialized, meaning their object instances can be converted into a stream of bytes.

5. What is deserialization in Java?

Ans: Deserialization is the process of converting a stream of bytes back into an object instance. This is done after an object has been serialized.

6. How is serialization achieved in Java?

Ans: Serialization is achieved in Java by implementing the Serializable interface. When an object is serialized, its state is converted into a stream of bytes, which can then be transferred over a network or stored in a file or database.

7. How is deserialization achieved in Java?

Ans: Deserialization is achieved in Java by reading a stream of bytes and using them to recreate the original object instance. This is done by calling the readObject() method of an ObjectInputStream instance.

8. How can you avoid certain member variables of class from getting Serialized?

Ans: Mark member variables as static or transient, and those member variables will no more be a part of Serialization.

9. What classes are available in the Java IO File Classes API?

Ans: The following classes are available in the Java IO API and are important to work with files in Java.

File
RandomAccessFile
FileInputStream
FileReader
FileOutputStream
FileWriter

10. What is Difference between Externalizable and Serialization interface ?

Ans:

	Serializable	Externalizable
Methods	It is a marker interface and it doesn't have any method.	It's not a marker interface. It has method's called writeExternal() and readExternal()
Default Serialization process	YES, Serializable provides its own default serialization process, we just need to implement a Serializable interface.	NO, we need to override writeExternal() and readExternal() for the serialization process to happen
Customize serialization process	We can customize default serialization process by defining following methods in our class >readObject() and writeObject()	Serialization process is completely customized We need to override the Externalizable interface's writeExternal() and readExternal() methods.
Control over	It provides less control	Externalizable provides
Serialization	over Serialization as it's not mandatory to define readObject() and writeObject() methods.	you great control over the serialization process as it is important to override writeExternal() and readExternal() methods.
Constructor call during deSerialization	Constructor is not called during deSerialization.	Constructor is called during deSerialization.