



LECTURE

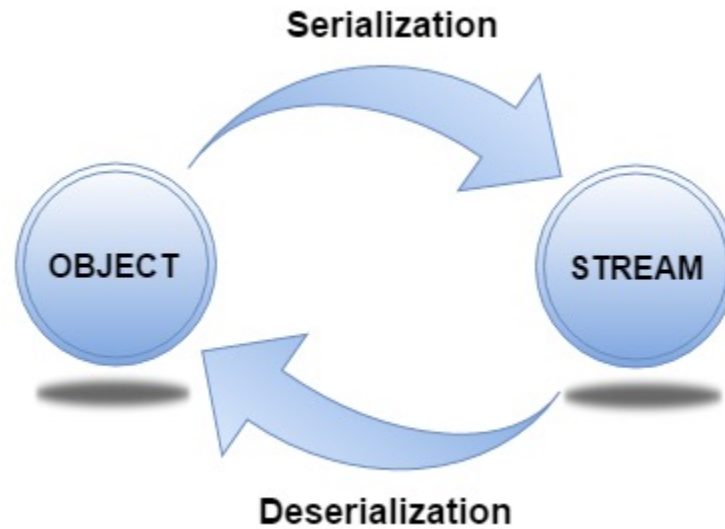
SERIALISATION

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SERIALIZATION IN JAVA

- Object Serialization in Java is a process used to convert Object into a binary format which can be persisted into disk or sent over network to any other running Java virtual machine.
- The reverse process of creating object from binary stream is called deserialization in Java.
- It is mainly used in Hibernate, RMI, JPA, EJB and JMS technologies.

SERIALIZATION/DESERIALIZATION



JAVA.IO.SERIALIZABLE

- Java class needs to implements **java.io.Serializable** interface and JVM will take care of serializing object in default format.

```
import java.io.Serializable;

public class Student implements Serializable{
    int id;
    String name;
    public Student(int id, String name) {
        this.id = id;
        this.name = name;
    }
}
```

METHOD INVOKED DURING SERIALIZATION AND DESERIALIZATION

- Method invoke to serialize and write to file
 - `ObjectOutputStream.writeObject()`
- Method invoke to read from file and deserialize
 - `ObjectInputStream.readObject()`

EXAMPLE

```
public class Car implements Serializable {
    // rest of class unaltered
    snip
}

// write to and read from disk
import java.io.*;
public class SerializeDemo{
    Car myToyota, anotherToyota;
    myToyota = new Car("Toyota", "Carina", 42312);
    ObjectOutputStream out = getOutput();
    out.writeObject(myToyota);

    ObjectInputStream in = getInput();
    anotherToyota = (Car)in.readObject();
}
```

TRANSIENT KEYWORD

- **Java transient** keyword is used in serialization. If any data member is defined as transient, it will not be serialized.
- For example, a class Student has three data members id, name and age.
- If you serialize the object, all the values will be serialized but I don't want to serialize one value, e.g. age then we can declare the age data member as transient.

EXAMPLE

```
import java.io.Serializable;

public class Student implements Serializable{
    int id;
    String name;
    transient int age;//Now it will not be serialized
    public Student(int id, String name,int age) {
        this.id = id;
        this.name = name;
        this.age=age;
    }
}
```


REFERENCES

- <https://www.javatpoint.com/serialization-in-java>
- <https://www.javatpoint.com/transient-keyword>
- https://www.tutorialspoint.com/java/java_serialization.htm