Persistence

An Introduction to XML and Serialization

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Topic List

- Introduction to XML:
  - XML versus HTML
  - Example of XML
  - XML does not “do” anything
- Object Serialization.

XML versus HTML

- XML was designed to describe data, with a focus on what the data is. XML is about carrying information.
- HTML was designed to display data, with a focus on how the data looks. HTML is about displaying information.
- XML is NOT a replacement for HTML.

Source: http://www.w3schools.com/xml/xml_whatis.asp

XML…

…stands for EXtensible Markup Language

…is a markup language much like HTML

…was designed to describe data, not to display data

…tags are not predefined. You must define your own tags

…is designed to be self-descriptive.

Source: http://www.w3schools.com/xml/xml_whatis.asp

Example of XML

- The following example is a note to Mairead, from Siobhan, stored as XML:

```
<note>
        <to>Mairead</to>
        <from>Siobhan</from>
        <heading>Reminder</heading>
        <body>Meeting at 10am today</body>
</note>
```

- The note above is quite self descriptive. It has sender and receiver information, it also has a heading and a message body.

Shop V4.0

Shop V4.0 has implemented the CRUD process, but when we close down our application, all the entered data is lost.

Shop V5.0 - We will use XML to make our data persistent. We will store our objects to XML files.

XML does not “do” anything

- XML is just information wrapped in tags. Someone must write a piece of software to send, receive or display it.

- We will write Java code to:
  - send our objects to an XML file on the hard disk.
  - read our objects from an XML file on the hard disk.

Source: http://www.w3schools.com/xml/xml_whatis.asp

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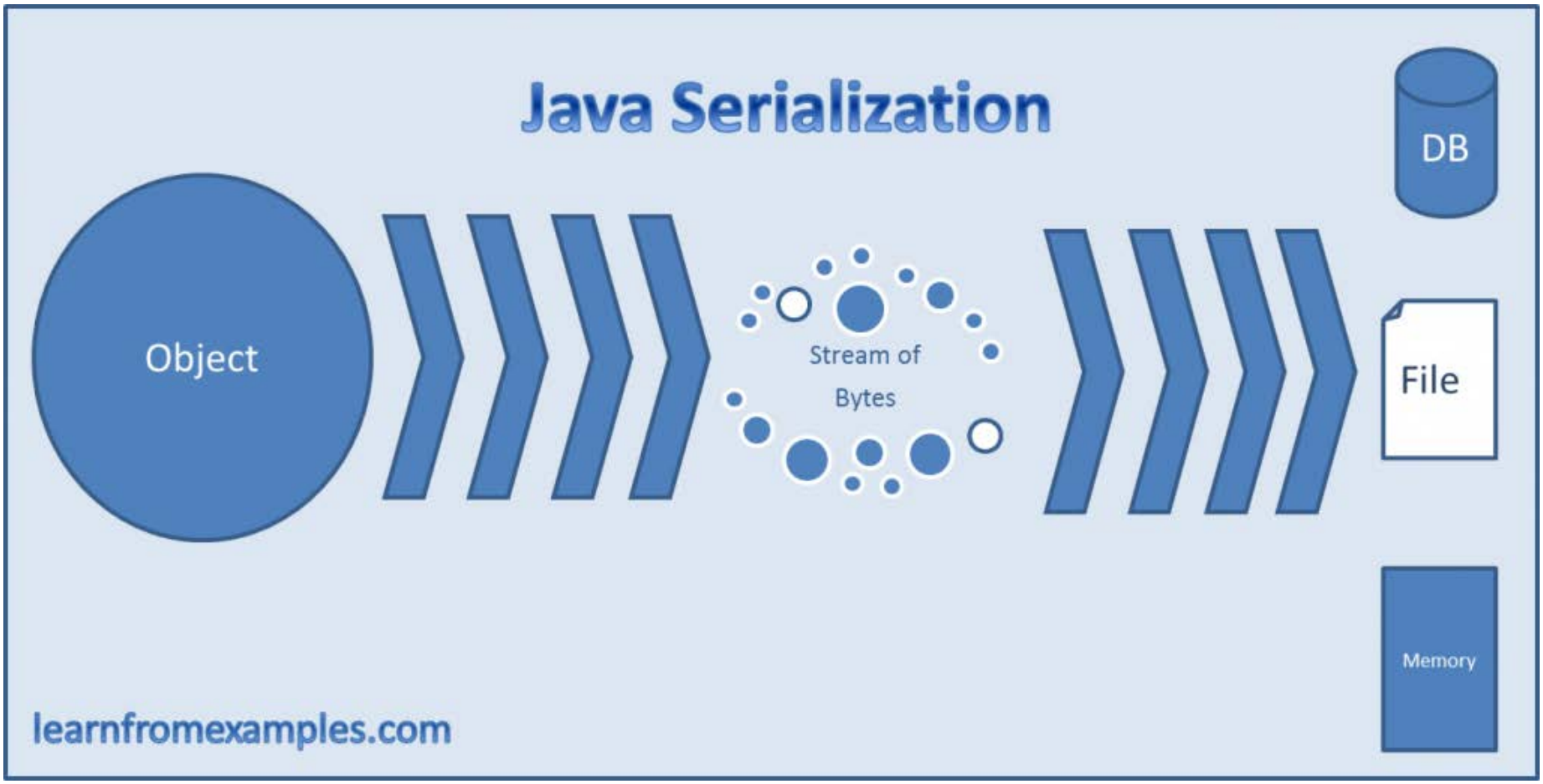
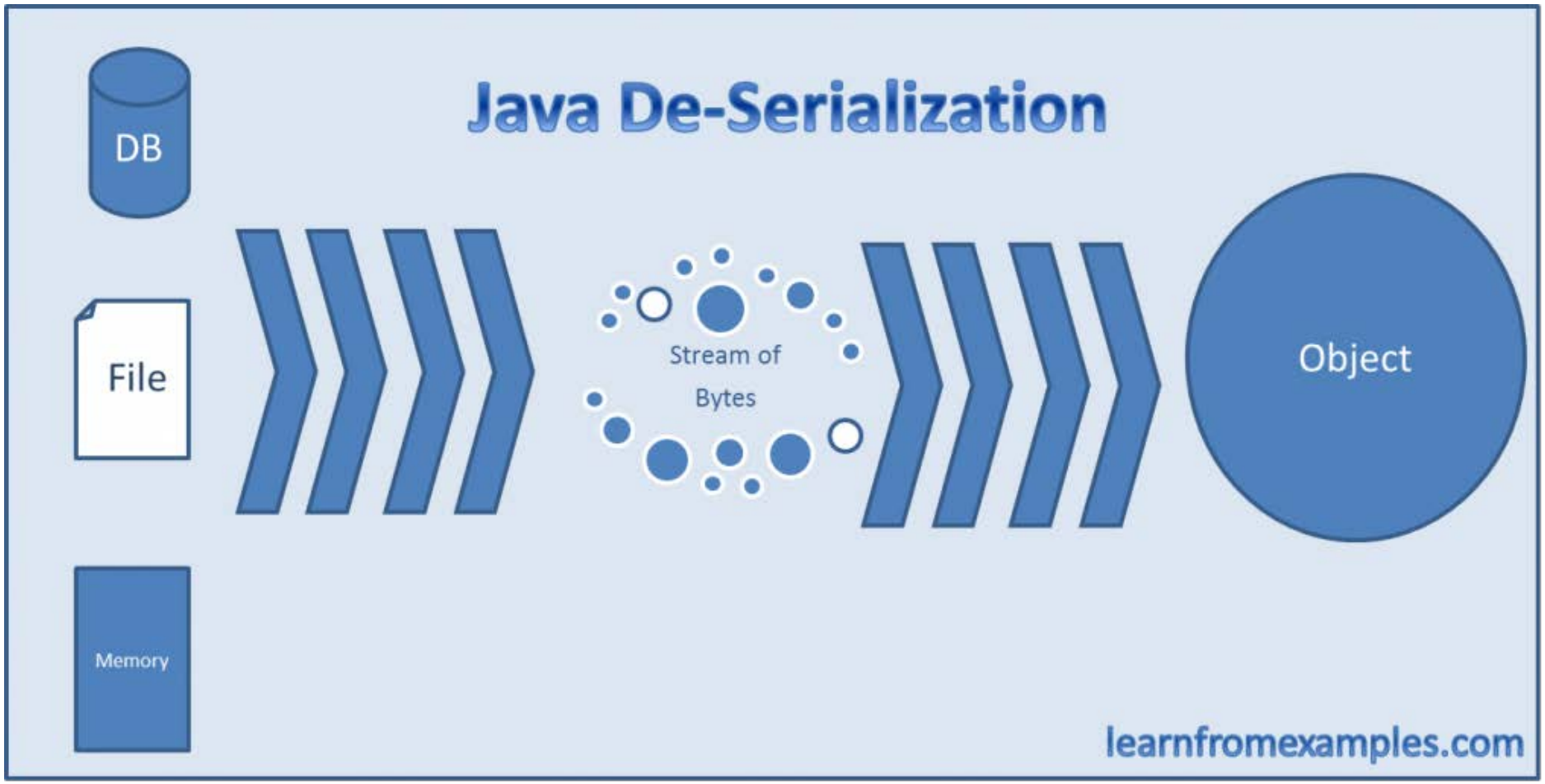

Java Serialization
DB
Object
Stream of
Bytes
File
Memory
learnfromexamples.com


Java De-Serialization
DB
File
Memory
Stream of
Bytes
Object
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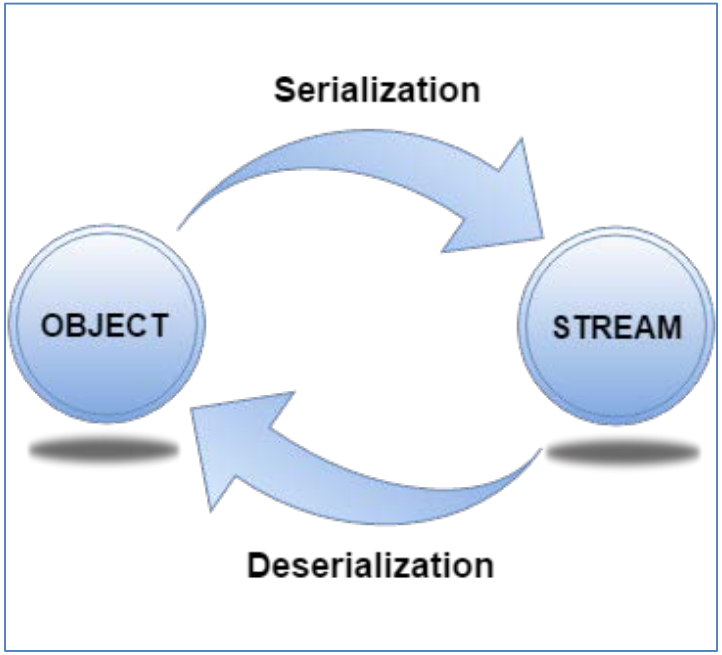
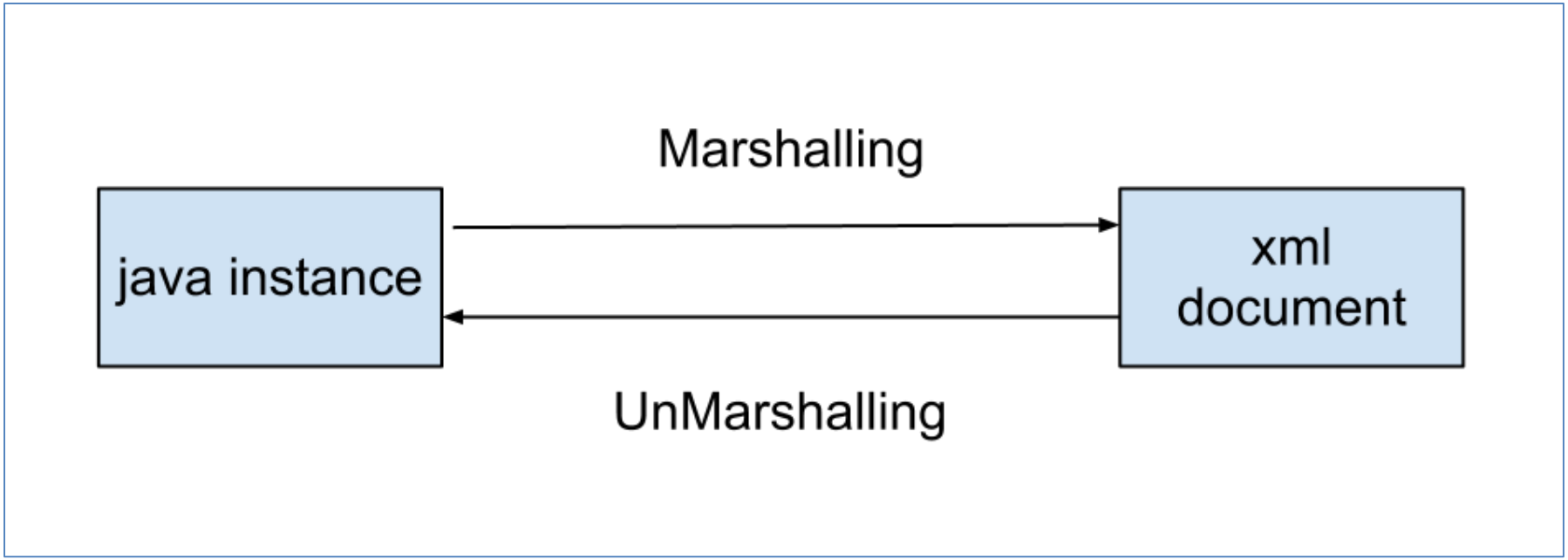
Object serialization

An object can be represented as a sequence of bytes that includes the object's data as well as information about the object's type and the types of data stored in the object.



Serialization process involves Marshalling and unMarshalling

Marshalling…the process of converting the objects & data into a stream.



UnMarshalling is the reverse process of converting the stream back to their original objects & data.

Any Questions?

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