<https://mkyong.com/java/how-to-read-and-write-java-object-to-a-file/>

Java object Serialization is an API provided by Java Library stack as a means to serialize Java objects. Serialization is a process to convert objects into a writable byte stream. Once converted into a byte-stream, these objects can be written to a file. The reverse process of this is called de-serialization.

A Java object is serializable if its class or any of its superclasses implement either the java.io.Serializable interface or its subinterface, java.io.Externalizable.

1. **Java Object**

// Class Person.java

import java.io.Serializable;

public class Person implements Serializable

{ private static final long serialVersionUID = 1L;

private String name;

private int age;

private String gender;

Person() {

};

Person(String name, int age, String gender) {

this.name = name;

this.age = age;

this.gender = gender;

}

@Override

public String toString() {

return "Name:" + name + "\nAge: " + age + "\nGender: " + gender;

}

}

**2. Writing and Reading objects in Java**

The objects can be converted into byte-stream using java.io.ObjectOutputStream. In order to

enable writing of objects into a file using ObjectOutputStream, it is mandatory that the

concerned class implements Serializable interface as shown in the class definition below.

Reading objects in Java are similar to writing object using ObjectOutputStreamObjectInputStream.

Below example shows the complete cycle of writing objects and reading objects in Java.

On reading objects, the ObjectInputStream directly tries to map all the attributes into the class into

which we try to cast the read object. If it is unable to map the respective object exactly then it throws

a ClassNotFound exception.

Let us now understand the writing and reading process using an example. We are using the Person

class shown above as an object.

// WriterReader.java

import java.io.File;

import java.io.FileInputStream;

import java.io.FileNotFoundException;

import java.io.FileOutputStream;

import java.io.IOException;

import java.io.ObjectInputStream;

import java.io.ObjectOutputStream;

public class WriterReader {

public static void main(String[] args) {

Person p1 = new Person("John", 30, "Male");

Person p2 = new Person("Rachel", 25, "Female");

try { FileOutputStream f = new FileOutputStream(new File("myObjects.txt"));

ObjectOutputStream o = new ObjectOutputStream(f);

// Write objects to file

o.writeObject(p1);

o.writeObject(p2);

o.close();

f.close();

FileInputStream fi = new FileInputStream(new File("myObjects.txt"));

ObjectInputStream oi = new ObjectInputStream(fi);

// Read objects

Person pr1 = (Person) oi.readObject();

Person pr2 = (Person) oi.readObject();

System.out.println(pr1.toString());

System.out.println(pr2.toString());

oi.close();

fi.close();

} catch (FileNotFoundException e) {

System.out.println("File not found");

} catch (IOException e) {

System.out.println("Error initializing stream");

} catch (ClassNotFoundException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

1. Currency Converter