

# AVRO - DESERIALIZATION BY GENERATING CLASS

[http://www.tutorialspoint.com/avro/deserialization\\_by\\_generating\\_class.htm](http://www.tutorialspoint.com/avro/deserialization_by_generating_class.htm)

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As described earlier, one can read an Avro schema into a program either by generating a class corresponding to the schema or by using the parsers library. This chapter describes how to read the schema **by generating a class** and **Deserialize** the data using Avro.

## Deserialization by Generating a Class

In our last example, the serialized data was stored in the file **emp.avro**. We shall now see how to deserialize it and read it using Avro. The procedure is as follows –

### Step 1

Create an object of **DatumReader** interface using **SpecificDatumReader** class.

```
DatumReader<emp>empDatumReader = new SpecificDatumReader<emp>(emp.class);
```

### Step 2

Instantiate **DataFileReader** class. This class reads serialized data from a file. It requires the **DatumReader** object, and **path** of the file (**emp.avro**) where the serialized data is existing , as a parameters to the constructor.

```
DataFileReader<emp> dataFileReader = new DataFileReader(new File("/path/to/emp.avro"),  
empDatumReader);
```

### Step 3

Print the deserialized data, using the methods of **DataFileReader**.

- The **hasNext** method will return a boolean if there are any elements in the Reader.
- The **next** method of **DataFileReader** returns the data in the Reader.

```
while(dataFileReader.hasNext()){  
    em=dataFileReader.next(em);  
    System.out.println(em);  
}
```

## Example - Deserialization by Generating a Class

The following complete program shows how to deserialize the data in a file using Avro.

```
import java.io.File;  
import java.io.IOException;  
  
import org.apache.avro.file.DataFileReader;  
import org.apache.avro.io.DatumReader;  
import org.apache.avro.specific.SpecificDatumReader;  
  
public class Deserialize {  
    public static void main(String args[]) throws IOException{  
  
        //DeSerializing the objects  
        DatumReader<emp> empDatumReader = new SpecificDatumReader<emp>(emp.class);  
  
        //Instantiating DataFileReader  
        DataFileReader<emp> dataFileReader = new DataFileReader<emp>(new  
            File("/home/Hadoop/Avro_Work/with_code_genfile/emp.avro"), empDatumReader);  
        emp em=null;
```

```
while(dataFileReader.hasNext()){  
    em=dataFileReader.next(em);  
    System.out.println(em);  
}  
}  
}
```

Browse into the directory where the generated code is placed. In this case, at **home/Hadoop/Avro\_work/with\_code\_gen**.

```
$ cd home/Hadoop/Avro_work/with_code_gen/
```

Now, copy and save the above program in the file named **DeSerialize.java**. Compile and execute it as shown below –

```
$ javac Deserialize.java  
$ java Deserialize
```

## Output

```
{"name": "omar", "id": 1, "salary": 30000, "age": 21, "address": "Hyderabad"}  
{"name": "ram", "id": 2, "salary": 40000, "age": 30, "address": "Hyderabad"}  
{"name": "robbin", "id": 3, "salary": 35000, "age": 25, "address": "Hyderabad"}  
Loading [MathJax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js
```