

In the previous chapter, we described the input type of Avro, i.e., Avro schemas. In this chapter, we will explain the classes and methods used in the serialization and deserialization of Avro schemas.

## SpecificDatumWriter Class

This class belongs to the package **org.apache.avro.specific**. It implements the **DatumWriter** interface which converts Java objects into an in-memory serialized format.

### Constructor

S.No.	Description
1	<b>SpecificDatumWriter</b> <i>Schemaschema</i>

### Method

S.No.	Description
1	<b>SpecificData</b> <b>getSpecificData</b> Returns the SpecificData implementation used by this writer.

## SpecificDatumReader Class

This class belongs to the package **org.apache.avro.specific**. It implements the **DatumReader** interface which reads the data of a schema and determines in-memory data representation. **SpecificDatumReader** is the class which supports generated java classes.

### Constructor

S.No.	Description
1	<b>SpecificDatumReader</b> <i>Schemaschema</i> Construct where the writer's and reader's schemas are the same.

### Methods

S.No.	Description
1	<b>SpecificData</b> <b>getSpecificData</b> Returns the contained SpecificData.
2	<b>void</b> <b>setSchema</b> <i>Schemaactual</i>

This method is used to set the writer's schema.

## DataFileWriter

Instantiates **DataFileWrite** for **emp** class. This class writes a sequence serialized records of data conforming to a schema, along with the schema in a file.

### Constructor

S.No.	Description
1	<b>DataFileWriterDatumWriter</b> < D > dout

### Methods

S.No	Description
1	<b>void appendDdatum</b> Appends a datum to a file.
2	<b>DataFileWriter&lt;D&gt; appendToFilefile</b> This method is used to open a writer appending to an existing file.

## Data FileReader

This class provides random access to files written with **DataFileWriter**. It inherits the class **DataFileStream**.

### Constructor

S.No.	Description
1	<b>DataFileReaderFilefile, DatumReader</b> < D > reader)

### Methods

S.No.	Description
1	<b>next</b> Reads the next datum in the file.
2	<b>Boolean hasNext</b> Returns true if more entries remain in this file.

## Class Schema.parser

This class is a parser for JSON-format schemas. It contains methods to parse the schema. It belongs to **org.apache.avro** package.

### Constructor

S.No.	Description
1	<b>Schema.Parser</b>

### Methods

S.No.	Description
1	<b>parse Filefile</b> Parses the schema provided in the given <b>file</b> .
2	<b>parse Inputstreamin</b> Parses the schema provided in the given <b>InputStream</b> .
3	<b>parse Strings</b> Parses the schema provided in the given <b>String</b> .

## Interface GenericRecord

This interface provides methods to access the fields by name as well as index.

### Methods

S.No.	Description
1	<b>Object getStringkey</b> Returns the value of a field given.
2	<b>void putStringkey, Objectv</b> Sets the value of a field given its name.

## Class GenericData.Record

### Constructor

S.No.	Description
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1	<b>GenericData.Record</b> <i>Schemaschema</i>
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## Methods

S.No.	Description
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1	<b>Object</b> <i>getStringkey</i> Returns the value of a field of the given name.
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2	<b>Schema</b> <i>getSchema</i> Returns the schema of this instance.
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3	<b>void</b> <i>putinti, Objectv</i> Sets the value of a field given its position in the schema.
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4	<b>void</b> <i>putStringkey, Objectvalue</i> Sets the value of a field given its name.
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