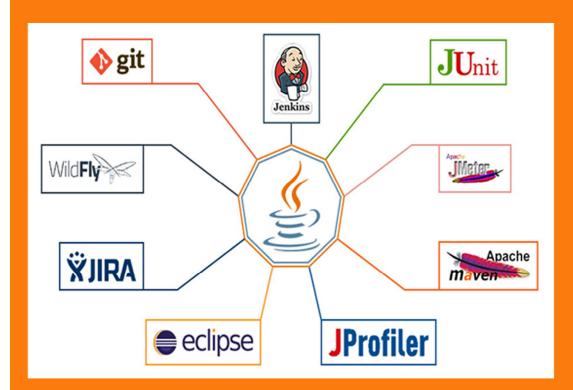
# Java Real Time Tools

Jasper Reports



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### **Jasper Reports**

#### **Introduction:**

Jasper Reports is a popular open-source reporting engine whose main purpose is to help creating page oriented, ready to print documents in a simple and flexible manner. Jasper Reports is written in 100% Java and can be embedded in any Java application. Jasper Reports has the ability to deliver rich content in various formats such as PDF, HTML, XLS, CSV, XML files, or directly on the screen or printer.

Jasper Reports is distributed under two licenses, an Apache-style license and the LGPL license. Due to its flexible licensing, JasperReports is the perfect candidate to complete the reporting features for any commercial or open-source application.

#### Steps To design Reports Based on Jasper Reports:

#### a) Preparing .jrxml file & compiling the .jrxml file:

Jasper Reports organizes data retrieved from a data source according to a report-design defined in a JRXML file. In order to fill a report with data, the report-design must be compiled first.

The compilation of the JRXML file representing the report-design is performed by the compileReport() method exposed by the JasperCompileManager class.

Through compilation, the report design is loaded into a report-design object that is then serialized and stored on disk (Jasper Report class). This serialized object is used when the application wants to fill the specified report-design with data. In fact, the compilation of a report-design implies the compilation of all Java expressions defined in the JRXML file representing the report design. Various verifications are made at compilation time, to check the report-design consistency. The result is a ready-to-fill report-design that will be used to generate documents on different sets of data.

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```
Eg:
<!DOCTYPE jasperReport PUBLIC "-//JasperReports//DTD Report</pre>
Design//EN"
"http://jasperreports.sourceforge.net/dtds/jasperreport.dtd">
<jasperReport name=''Simple_Report''>
       <detail>
              <band
                    height="2
                     0">
                     <staticTex
                     t>
              <reportElement x="180" y="0" width="200"</pre>
                     height="20"/> <text><![CDATA[Hello
                     World!]]></text>
              </staticText>
              </band>
       </detail>
</jasperReport>
<jasperReport> - the root element.
<title> - its contents are printed only once at the beginning of the report
<pageHeader> - its contents are printed at the beginning of every page in
the report.
```

<detail> - contains the body of the report.

- <band> defines a report section, all of the above elements contain a band element as its only child element.

#### b) Fill The Report:

In order to fill a report-design, one can use the fillReportXXX () methods exposed by the JasperFillManager class. Those methods receive as a parameter the report-design object, or a file representing the specified report-design object, in a serialized form, and also a JDBC connection to the database from which to retrieve the data to fill the report with. The result is an object that represents a ready-to-print document ( Jasper Print class) and that can be stored on disk in a serialized



form (for later use), can be delivered to the printer or to the screen, or can be exported into a PDF, HTML, XLS, RTF, ODT, CSV, TXT or XML document.

As you can see, the main classes to use when working with JasperReports are: net.sf.jasperreports.engine.JasperCompileManager

net.sf.jasperreports.engine.JasperFillManager net.sf.jasperreports.engine.JasperPrintManager net.sf.jasperreports.engine.JasperExportManager

These classes represent a façade to the Jasper Reports engine. They have various static methods that simplify the access to the API functionality and can be used to compile an JRXML report design, to fill a report, to print it, or to export to other document formats (PDF, HTML, XML).

#### c) View, Print and Export Reports:

Generated reports can be viewed using the JasperViewer application. In its main () method, it receives the name of the file which contains the report to view.

Generated reports can be printed using the printReport(), printPage() or printPages() static methods exposed by the JasperPrintManager class.

After having filled a report, we can also export it in PDF, HTML or XML format using the exportReportXXX() methods of the JasperExportManager class.



## Java Real Time Tools



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