

{J}DD 2021

POLAND

ONLINE

Refactoring Disasters – A Story how I failed

{;}DD

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 **ELMAR DOTT**

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About more than 15 years he is working in different large Web Application projects all over the world. He is an independent consultant / trainer. To share his knowledge he gives talks on conferences, if he is not writing on a new article about software engineering. Mail: elmar.dott@gmail.com

+ Consultant + Writer + Speaker + Trainer +

-  motivation
-  preparing
-  actions
-  the moment you realize, d***e
-  take a deep breath

Witamy, herzlich willkommen, welcome, bienvenido, Добро пожаловать, أهلا بك ,
歡迎 , ברוך הבא , καλως ΗΡΘΑΤΕ, स्वागत हे, Fàilte, خوش آمدی , Üdvözöljük, Vítejte,
Dobrodošli, ...

WHAT IS REFACTORING?

„**Refactoring** is a disciplined technique for restructuring an existing body of code, altering its internal structure without changing its external behavior.“

- Martin Fowler



Legacy notice!

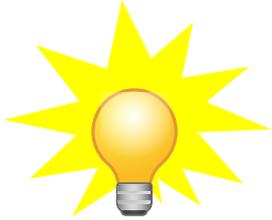
iText 5 is the previous major version of iText's leading PDF SDK. iText 5 has been EOL, and is no longer developed. Switch your project to iText 7, integrating the latest developments.

<https://kb.itextsupport.com/home/it5kb>

- AGPL & proprietary commercial license of current iText 7
- LibrePDF/ OpenPDF is Mozilla Public License Version 2.0
- OpenPDF 5 is a fork of iText 5

- create Branch for version 2.2
- master Branch for version 3.0
- adding a new Implementation Class: OpenPdfRenderer
- secure existing functionality

GOOD NAMES, BAD NAMES



```
IPdfRenderer renderer = new PdfRendererImpl();
```

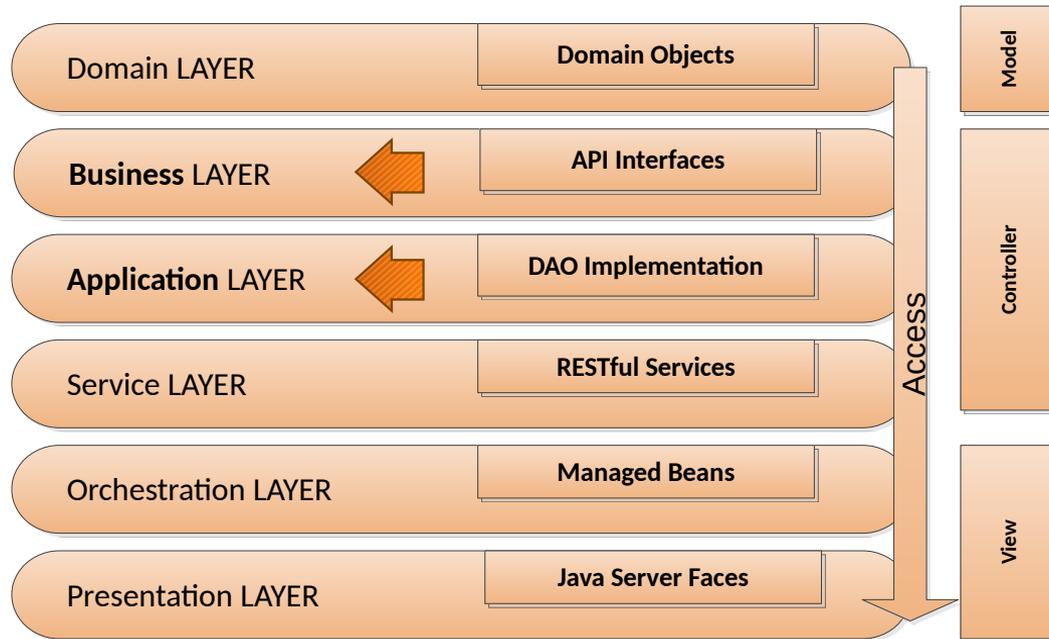
vs.

```
PdfRenderer renderer = new ITextRenderer();
```

```
PdfRenderer renderer = new OpenPdfRenderer();
```



APPLICATION ARCHITECTURE



- Java 11 Library
- Release 2.1.0
- Maven Build
- published on MVN Central

API CHANGES

<https://github.com/ElmarDott/TP-CORE/blob/master/src/main/java/org/europa/together/business/PdfRenderer.java>

Design Problem:

```
void renderDocumentFromHtml(String file, String  
htmlTemplate);  
  
void writeDocument(PdfReader pdf, String destination);  
  
PdfReader readDocument(File pdfDocument);  
  
PdfReader removePage(PdfReader pdf, int... pages);
```

Adaptor: also known as Wrapper, couples an interface to another when they not compatible to each other.

Facade: group multiple interfaces together, to a simplified one.

Proxy: also an generalization of a complex interface. Can understood as complement to the facade that combines several interfaces into a single one.

WHY ME?

```
import com.lowagie.text.pdf.PdfReader;  
Import com.itextpdf.text.pdf.PdfReader;
```



METHOD OVERLOADING IN JAVA



```
void writeDocument(com.itextpdf.text.pdf.PdfReader pdf, String destination);  
void writeDocument(PdfReader pdf, String destination);
```



```
@deprecated  
com.itextpdf.text.pdf.PdfReader readDocument(File pdfDocument);  
PdfReader loadDocument(File pdfDocument);
```



```
@Override
public void renderDocumentFromHtml(final String file, final String template) {
    try {

        // ...

88:     XMLWorkerHelper worker = XMLWorkerHelper.getInstance();
89:     worker.parseXHtml(pdfWriter, document,
        new StringReader(html.toString()));

        document.close();
        pdfWriter.close();
    }
}
```

„Never touch a runnig system!“

(N)OR

„Never run a touched system!“

RESOURCES

[1] Marco Schulz, 2021, Continuous Integration mit Jenkins, Rheinwerk, ISBN: ISBN 978-3-8362-7834-8
<https://www.rheinwerk-verlag.de/continuous-integration-mit-jenkins/>

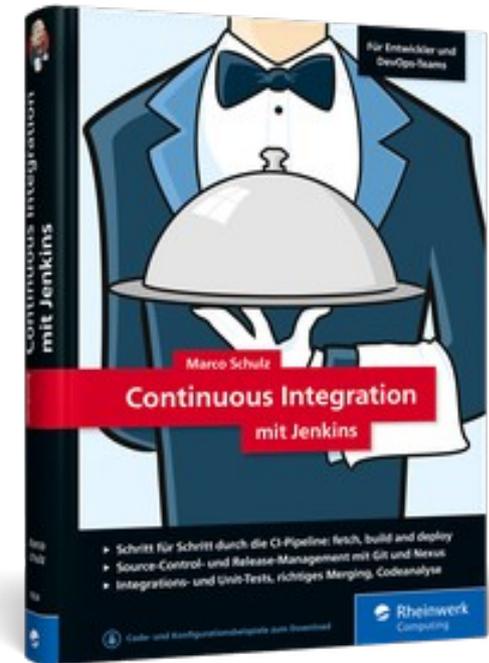
[2] <https://www.refactoring.com>

[3] <https://github.com/ElmarDott/TP-CORE>

[4] <https://itextpdf.com/en>

[5] <https://github.com/LibrePDF/OpenPDF>

[6] OpenPDF tutorial: <https://www.netjstech.com/2021/02/html-to-pdf-java-flying-saucer-openpdf.html>





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