
TestLeaf
Always Ahead

- Microsoft Access
- Microsoft Excel
- Microsoft OneNote
- Microsoft Outlook
- Microsoft PowerPoint
- Microsoft Project
- Microsoft Publisher
- Microsoft Visio
- Microsoft Word

Microsoft Office

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- Microsoft Access
- **Microsoft Excel**
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- Microsoft Visio
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Microsoft Office

Purpose of Excel

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- .xls : Excel Binary File Format
- .xlsx : Office Open XML
- .xlsm :

1997
2000
2002
2003 .xls
==========
2007 .xlsx
2010
2013

Extension

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- Read from an existing excel
- Create
- Write Into An Existing Excel (modify)

Basic Actions With Excel

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- Number
- Char
- Date
- String
- Empty

Data Format

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- Selenium?
- Java?

HOW? (USING WHAT?!)

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- Selenium?
- Java?
  - Java Excel or JExcel or JXL
  - Apache POI
  - Aspose.Cells for Java

HOW? (USING WHAT?!)

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- POI – Poor Obfuscation Implementation
- Open Source
- Funder by Apache Software Foundation
- Provides Java libraries for reading and writing files in Microsoft Office formats, such as Word, PowerPoint, Excel, etc…

Apache POI

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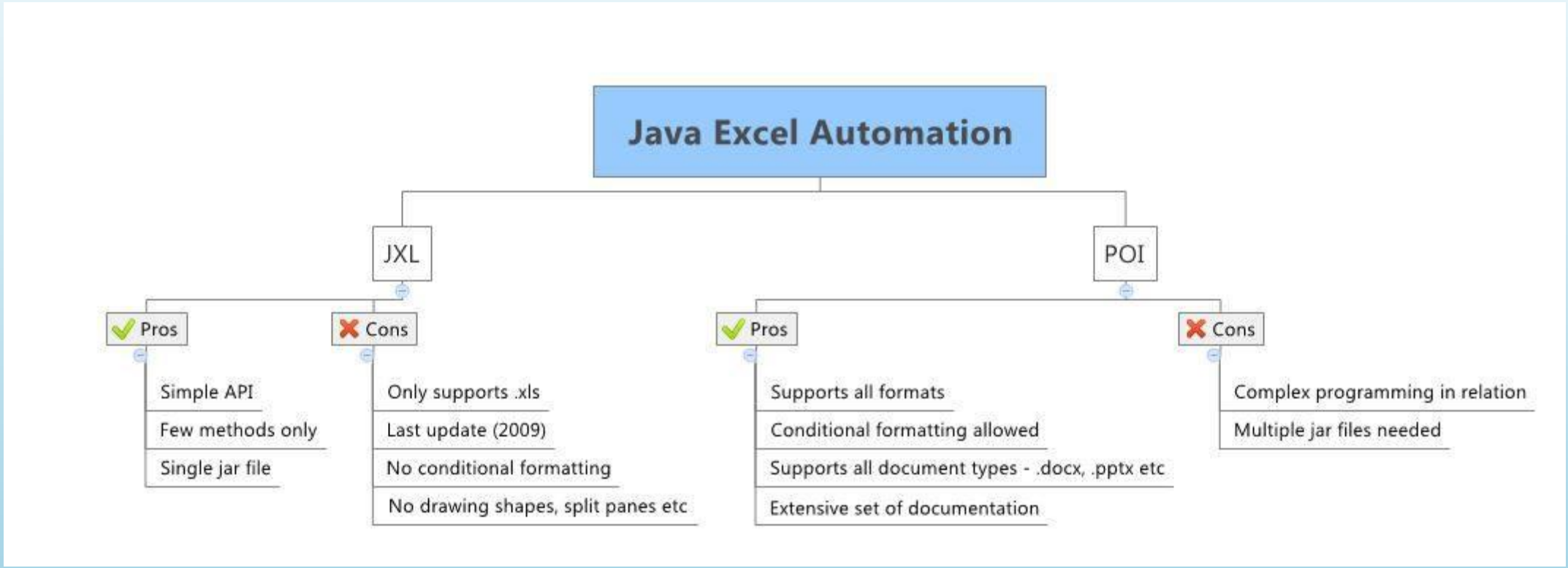
- **HSSF (Horrible SpreadSheet Format) – reads and writes Microsoft Excel (XLS) format files.**
- **XSSF (XML SpreadSheet Format) – reads and writes Office Open XML (XLSX) format files**.
- HPSF (Horrible Property Set Format) – reads “Document Summary” information from Microsoft Office files.
- HWPF (Horrible Word Processor Format) – aims to read and write Microsoft Word 97 (DOC) format files.
- HSLF (Horrible Slide Layout Format) – a pure Java implementation for Microsoft PowerPoint files.
- HDGF (Horrible DiaGram Format) – an initial pure Java implementation for Microsoft Visio binary files.
- HPBF (Horrible PuBlisher Format) – a pure Java implementation for Microsoft Publisher files.
- HSMF (Horrible Stupid Mail Format) – a pure Java implementation for Microsoft Outlook MSG files
- DDF (Dreadful Drawing Format) – a package for decoding the Microsoft Office Drawing format.

Formats and the packages



Let us compare options

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```
<dependency>
   <groupId>org.apache.poi</groupId>
   <artifactId>poi-ooxml</artifactId>
   <version>3.14</version>
</dependency>
```

```
<dependency>
   <groupId>org.apache.poi</groupId>
   <artifactId>poi</artifactId>
   <version>3.14</version>
</dependency>
```

Step #1: Maven dependency

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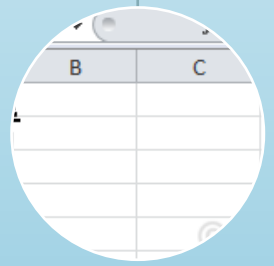
Workbook

Sheet



Cell

Row

Column

General Excel Hierarchy

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1. Open a work (Using **XSSFWorkbook**)
2. Go to the specific sheet using name or index (**XSSFSheet -> getSheet**)
3. Go to the specific row from where data to be read (**XSSFRow -> getRow**)
4. Go to specific cell from where data to be read (**XSSFCell** -> **getCell**)
5. Read the contents of the cell (**getStringCellValue**)

What You Need To Have or Know?

- Excel File Name
- File Path
- Permission
- Sheet Name
- Structure (Rows and Columns)

Steps to Read from Excel

- Pre-requisite : Create a excel with atleast 2 data records with header row
  - Example

UserName	Password
DemoSalesManager	crmsfa
DemsoCSR	crmsfa

- Read the excel file using XSSFWorkBook implementation through FileInputSteam

Note: InputStream is used to read binary data, while Reader is used to read text data.

Lets Get Started….

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Excel Read Methods

getSheet(String name)
getSheetAt(int index)

XSSF Workbook

getRow(int rownum)
getLastRowNum()

XSSF Sheet

getCell(in t cellnum)
getLastCellNum()

XSSFRow

getStringCellValue()
getNumericCellValue()
getBooleanCellValue()

XSSFCell

1. Create a Workbook
2. Create a Sheet
3. Repeat the following steps until all data is processed:
    a. Create a Row.
    b. Create Cells in a Row.
    c. Apply formatting using CellStyle.
    d. Add Cell Value
4. Write to an OutputStream.
5. Close the OutputStream.
6. Close WorkBook

Steps to Create an Excel