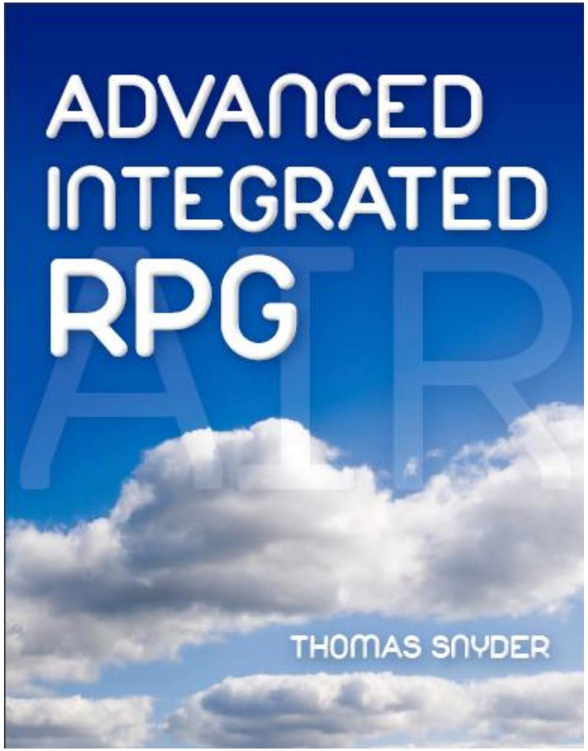
Advanced Integrated RPG

Integrating RPG with Java and Open Source



Session 2

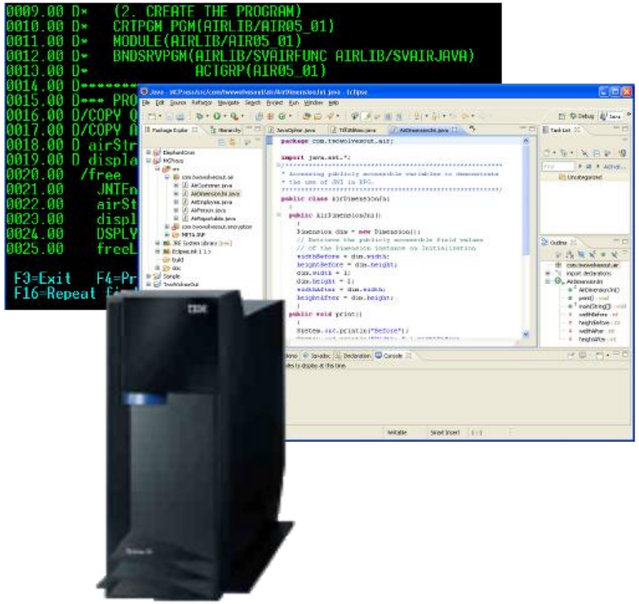
Create PDFs from RPG using iText

Tom Snyder

Electronic Documents

- Portability of PDFs
- Usability with Microsoft Excel Spreadsheets
- Standardization
- Distribution with Email

Using Java with RPG

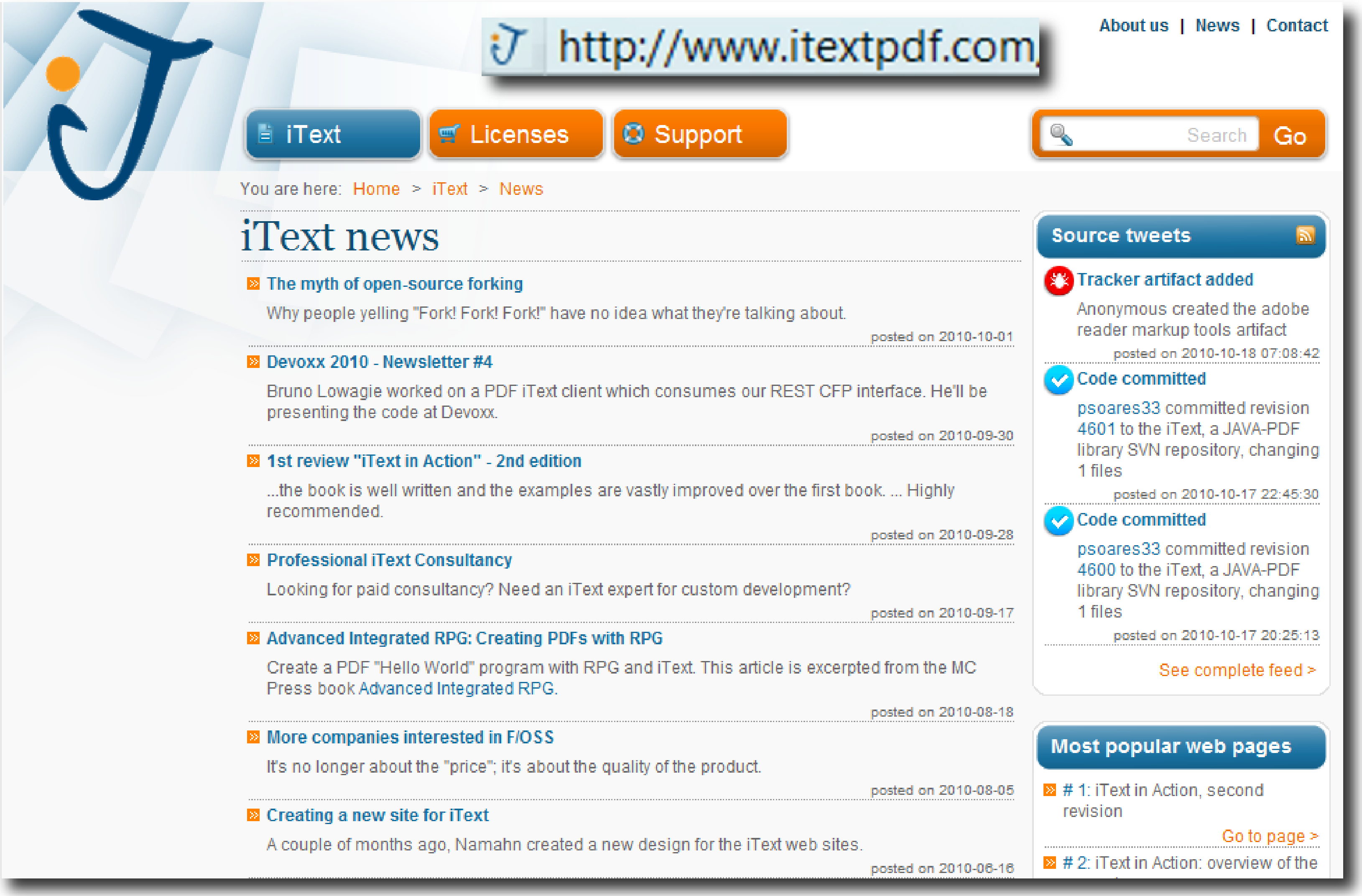


```
0009.00 D*    (2. CREATE THE PROGRAM)
0010.00 D*    CRTPGM PGM(AIRLIB/AIR05_01)
0011.00 D*    MODULE(AIRLIB/AIR05_01)
0012.00 D*    BNDSRVPGM(AIRLIB/SVAIRFUNC AIRLIB/SVAIRJAVA)
0013.00 D*              ACTGRP(AIR05_01)
0014.00 D*******
0015.00 D*** PRO
0016.00 D/COPY Q
0017.00 D/COPY A
0018.00 D airStr
0019.00 D displa
0020.00  /free
0021.00    JNTFn
0022.00    airSt
0023.00    displ
0024.00    DSPLY
0025.00    freeL

 F3=Exit    F4=Pr
 F16=Repeat fi
```

```
package com.twowolvesout.air;

import java.awt.*;
/*******************************************************
 * Accessing publicly accessible variables to demonstrate
 * the use of JNI in RPG.
 *******************************************************/
public class AirDimensionJni
{
  public AirDimensionJni()
  {
    Dimension dim = new Dimension();
    // Retrieve the publicly accessible field values
    // of the Dimension instance on Initialization
    widthBefore = dim.width;
    heightBefore = dim.height;
    dim.width = 1;
    dim.height = 1;
    widthAfter = dim.width;
    heightAfter = dim.height;
  }
  public void print()
  {
    System.out.println("Before");
```

- Accessing Java Objects from RPG
- Working with the Java Virtual Machine
- Java Native Interface

iText Official Website



http://www.itextpdf.com

About us | News | Contact

You are here: Home > iText > News

iText news

The myth of open-source forking

Why people yelling "Fork! Fork! Fork!" have no idea what they're talking about.

posted on 2010-10-01

Devoxx 2010 - Newsletter #4

Bruno Lowagie worked on a PDF iText client which consumes our REST CFP interface. He'll be presenting the code at Devoxx.

posted on 2010-09-30

1st review "iText in Action" - 2nd edition

...the book is well written and the examples are vastly improved over the first book. ... Highly recommended.

posted on 2010-09-28

Professional iText Consultancy

Looking for paid consultancy? Need an iText expert for custom development?

posted on 2010-09-17

Advanced Integrated RPG: Creating PDFs with RPG

Create a PDF "Hello World" program with RPG and iText. This article is excerpted from the MC Press book Advanced Integrated RPG.

posted on 2010-08-18

More companies interested in F/OSS

It's no longer about the "price"; it's about the quality of the product.

posted on 2010-08-05

Creating a new site for iText

A couple of months ago, Namahn created a new design for the iText web sites.

posted on 2010-06-16

Source tweets

Tracker artifact added

Anonymous created the adobe reader markup tools artifact

posted on 2010-10-18 07:08:42

Code committed

psoares33 committed revision 4601 to the iText, a JAVA-PDF library SVN repository, changing 1 files

posted on 2010-10-17 22:45:30

Code committed

psoares33 committed revision 4600 to the iText, a JAVA-PDF library SVN repository, changing 1 files

posted on 2010-10-17 20:25:13

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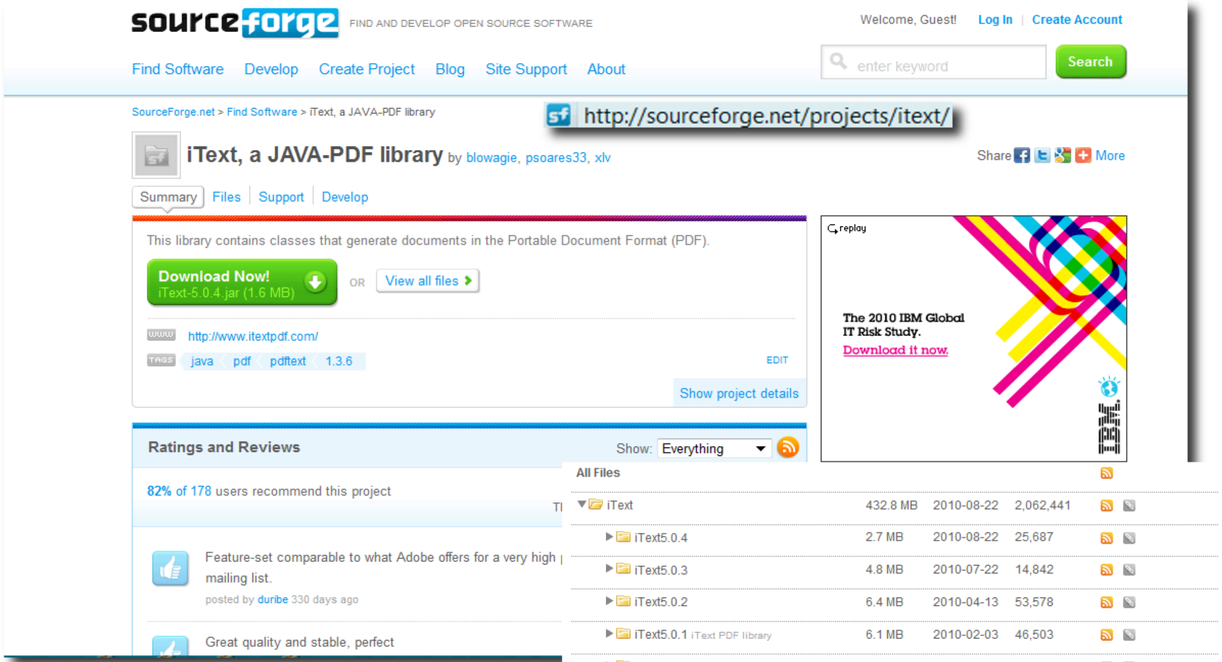
Most popular web pages

1: iText in Action, second revision

Go to page >

2: iText in Action: overview of the

SourceForge Download Files


sourceforge FIND AND DEVELOP OPEN SOURCE SOFTWARE
Welcome, Guest! Log In | Create Account
Find Software Develop Create Project Blog Site Support About
enter keyword
Search
SourceForge.net > Find Software > iText, a JAVA-PDF library
Share More
Summary | Files | Support | Develop

http://sourceforge.net/projects/itext/

iText, a JAVA-PDF library by blowagie, psoares33, xlv

This library contains classes that generate documents in the Portable Document Format (PDF).

Download Now! iText-5.0.4.jar (1.6 MB) OR View all files

http://www.itextpdf.com/

TAGS java pdf pdftext 1.3.6 EDIT

Show project details

Ratings and Reviews Show: Everything

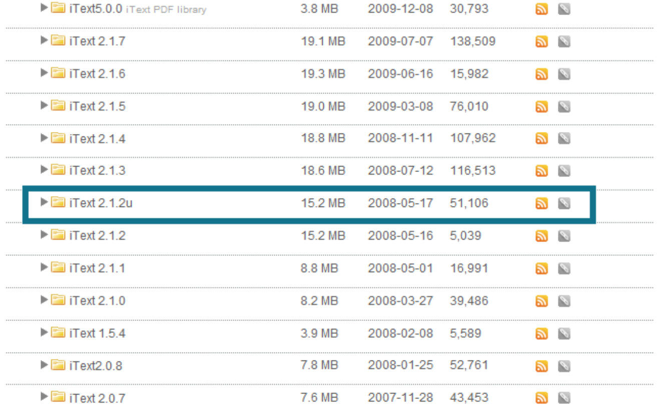
82% of 178 users recommend this project

Feature-set comparable to what Adobe offers for a very high
mailing list.
posted by duribe 330 days ago

Great quality and stable, perfect

All Files

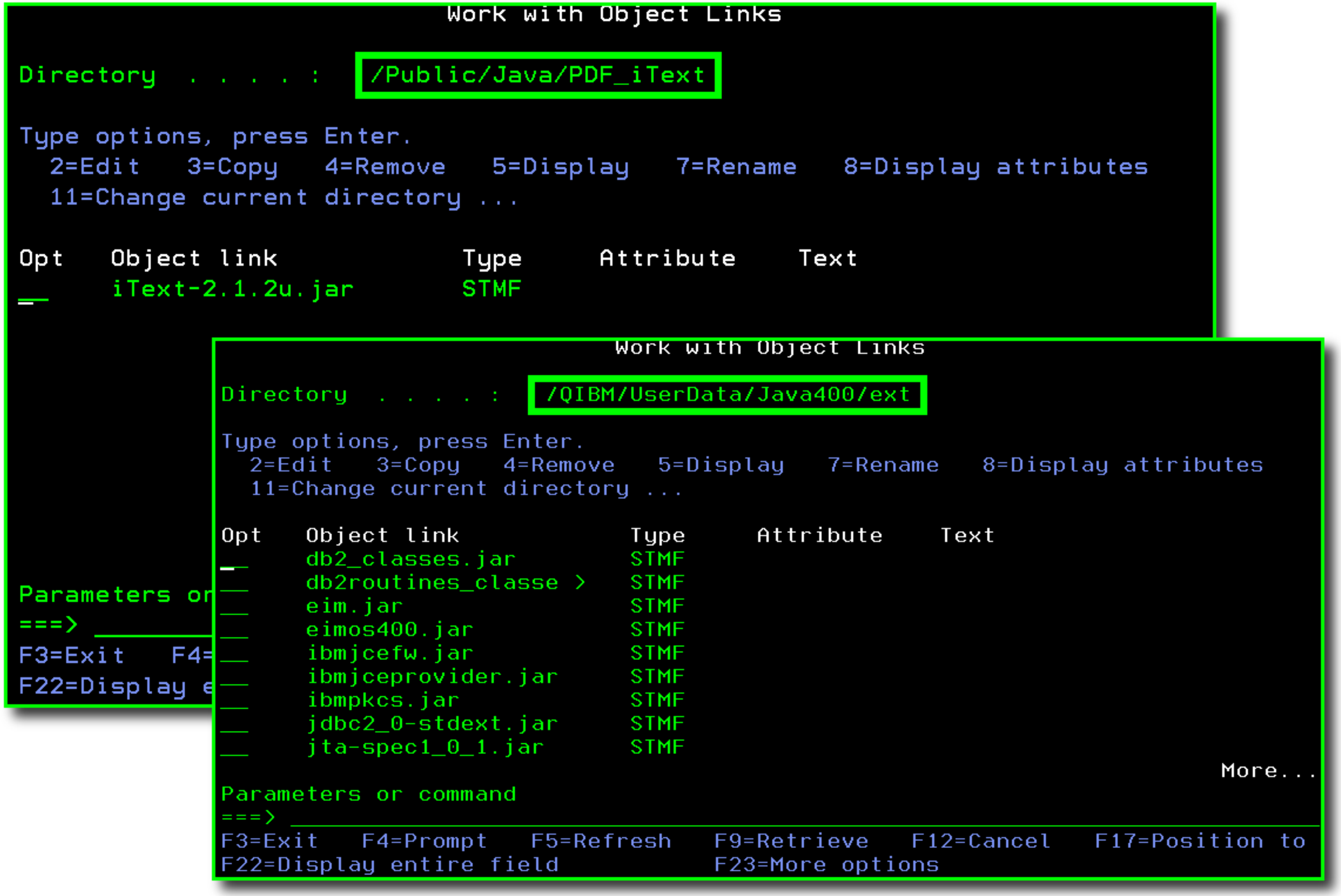
iText	432.8 MB	2010-08-22	2,062,441
iText5.0.4	2.7 MB	2010-08-22	25,687
iText5.0.3	4.8 MB	2010-07-22	14,842
iText5.0.2	6.4 MB	2010-04-13	53,578
iText5.0.1 iText PDF library	6.1 MB	2010-02-03	46,503
iText5.0.0 iText PDF library	3.8 MB	2009-12-08	30,793
iText 2.1.7	19.1 MB	2009-07-07	138,509
iText 2.1.6	19.3 MB	2009-06-16	15,982
iText 2.1.5	19.0 MB	2009-03-08	76,010
iText 2.1.4	18.8 MB	2008-11-11	107,962
iText 2.1.3	18.6 MB	2008-07-12	116,513
iText 2.1.2u	15.2 MB	2008-05-17	51,106
iText 2.1.2	15.2 MB	2008-05-16	5,039
iText 2.1.1	8.8 MB	2008-05-01	16,991
iText 2.1.0	8.2 MB	2008-03-27	39,486
iText 1.5.4	3.9 MB	2008-02-08	5,589
iText2.0.8	7.8 MB	2008-01-25	52,761
iText 2.0.7	7.6 MB	2007-11-28	43,453



Java 1.4.2
Compatible
Advanced
Integrated RPG
Uses iText 2.1.2u

iText Jar File

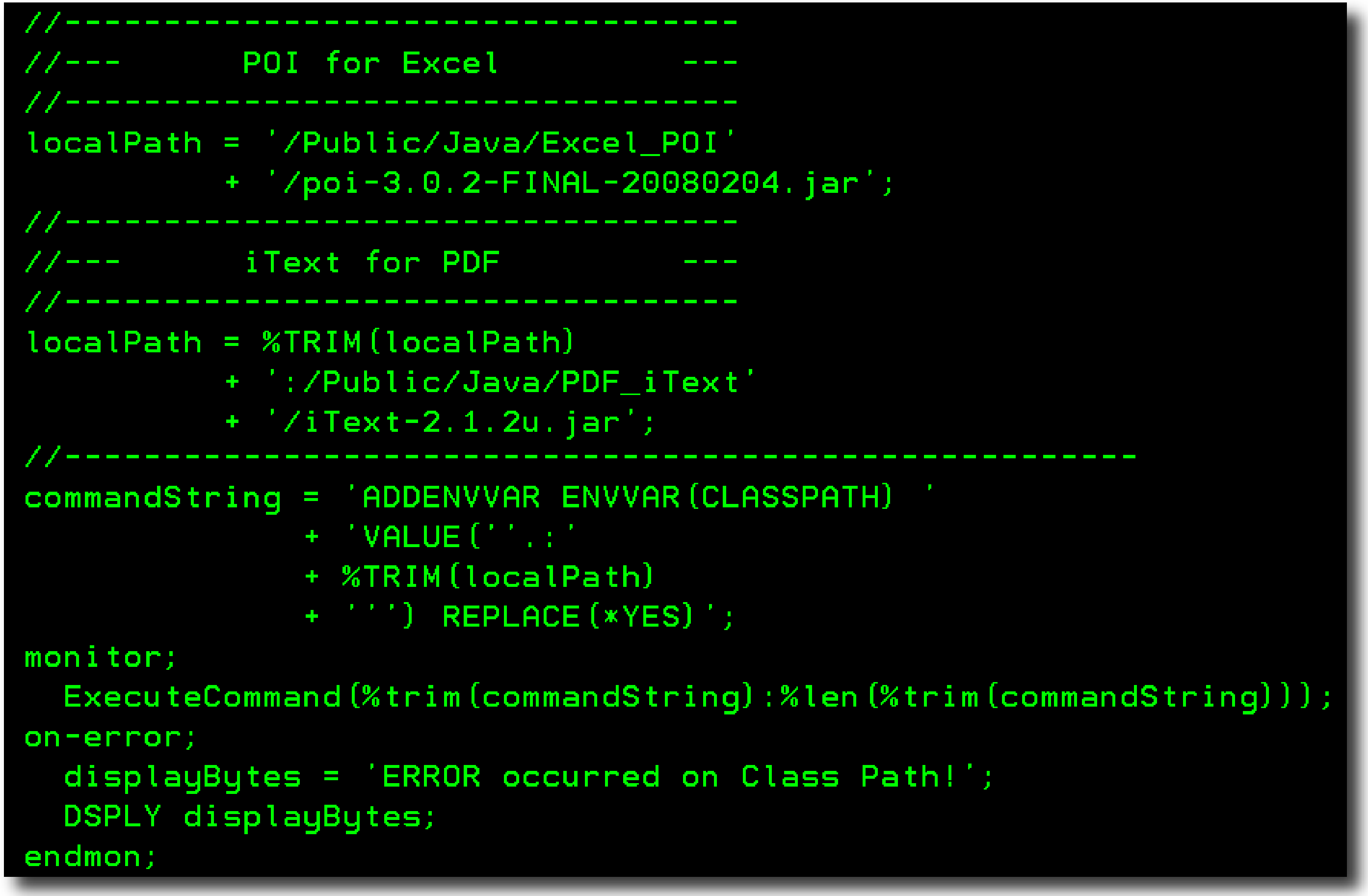
IFS Location Options



```
                         Work with Object Links

Directory  . . . . :   /Public/Java/PDF_iText

Type options, press Enter.
  2=Edit    3=Copy    4=Remove    5=Display    7=Rename    8=Display attributes
  11=Change current directory ...

Opt   Object link              Type      Attribute     Text
      iText-2.1.2u.jar         STMF

Parameters or
===>
F3=Exit    F4=
F22=Display e
```

```
                         Work with Object Links

Directory  . . . . :   /QIBM/UserData/Java400/ext

Type options, press Enter.
  2=Edit    3=Copy    4=Remove    5=Display    7=Rename    8=Display attributes
  11=Change current directory ...

Opt   Object link              Type      Attribute     Text
      db2_classes.jar          STMF
      db2routines_classe >     STMF
      eim.jar                  STMF
      eimos400.jar             STMF
      ibmjcefw.jar             STMF
      ibmjceprovider.jar       STMF
      ibmpkcs.jar              STMF
      jdbc2_0-stdext.jar       STMF
      jta-spec1_0_1.jar        STMF
                                                                       More...
Parameters or command
===>
F3=Exit    F4=Prompt    F5=Refresh    F9=Retrieve    F12=Cancel    F17=Position to
F22=Display entire field              F23=More options
```

Setting the Class Path

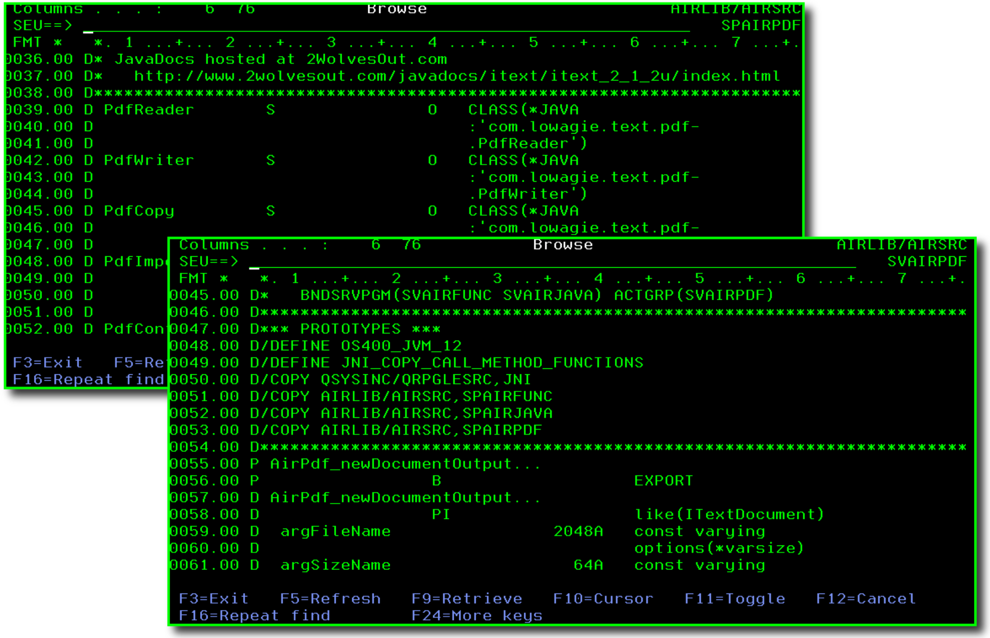


```
//-----------------------------------
//---      POI for Excel         ---
//-----------------------------------
localPath = '/Public/Java/Excel_POI'
          + '/poi-3.0.2-FINAL-20080204.jar';
//-----------------------------------
//---      iText for PDF         ---
//-----------------------------------
localPath = %TRIM(localPath)
          + ':/Public/Java/PDF_iText'
          + '/iText-2.1.2u.jar';
//------------------------------------------------------
commandString = 'ADDENVVAR ENVVAR(CLASSPATH) '
              + 'VALUE(''.:'
              + %TRIM(localPath)
              + ''') REPLACE(*YES)';
monitor;
  ExecuteCommand(%trim(commandString):%len(%trim(commandString)));
on-error;
  displayBytes = 'ERROR occurred on Class Path!';
  DSPLY displayBytes;
endmon;
```

AIR File Naming Conventions

iText, Java, and Generic Functionality

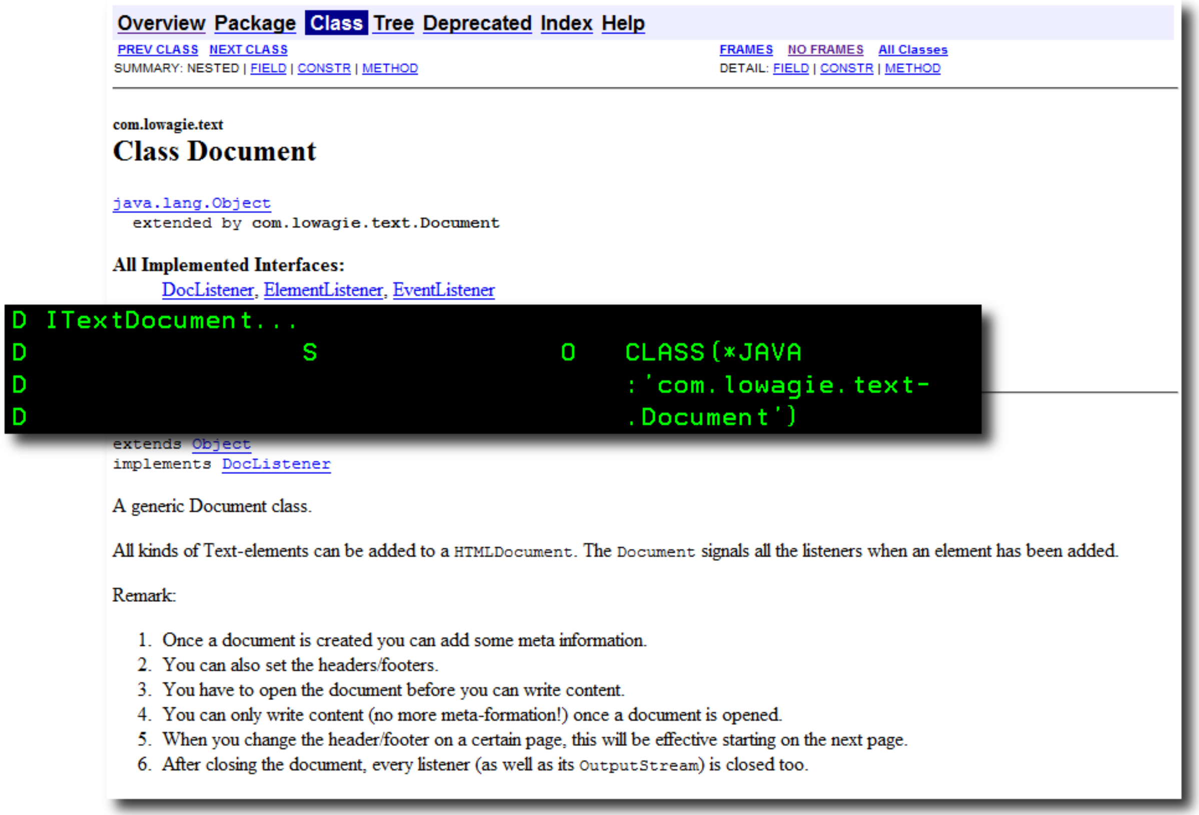
- SPAIR**PDF** contains iText Prototypes
- SVAIR**PDF** is the iText Service Program
- SPAIR**JAVA** contains generic Java Prototypes
- SVAIR**JAVA** is the generic Java Service Program
- SPAIR**FUNC** contains generic Prototypes
- SVAIR**FUNC** is the generic Service Program



```
 Columns . . . :    6  76                    Browse                     AIRLIB/AIRSRC
 SEU==> _                                                                   SPAIRPDF
 FMT *   *. 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7 ...+.
0036.00 D* JavaDocs hosted at 2WolvesOut.com
0037.00 D*   http://www.2wolvesout.com/javadocs/itext/itext_2_1_2u/index.html
0038.00 D**********************************************************************
0039.00 D PdfReader        S                O   CLASS(*JAVA
0040.00 D                                       :'com.lowagie.text.pdf-
0041.00 D                                       .PdfReader')
0042.00 D PdfWriter        S                O   CLASS(*JAVA
0043.00 D                                       :'com.lowagie.text.pdf-
0044.00 D                                       .PdfWriter')
0045.00 D PdfCopy          S                O   CLASS(*JAVA
0046.00 D                                       :'com.lowagie.text.pdf-
0047.00 D
0048.00 D PdfImp
0049.00 D
0050.00 D
0051.00 D
0052.00 D PdfCon

 F3=Exit   F5=Re
 F16=Repeat find
```

```
 Columns . . . :    6  76                    Browse                     AIRLIB/AIRSRC
 SEU==> _                                                                   SVAIRPDF
 FMT *   *. 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7 ...+.
0045.00 D*   BNDSRVPGM(SVAIRFUNC SVAIRJAVA) ACTGRP(SVAIRPDF)
0046.00 D**********************************************************************
0047.00 D*** PROTOTYPES ***
0048.00 D/DEFINE OS400_JVM_12
0049.00 D/DEFINE JNI_COPY_CALL_METHOD_FUNCTIONS
0050.00 D/COPY QSYSINC/QRPGLESRC,JNI
0051.00 D/COPY AIRLIB/AIRSRC,SPAIRFUNC
0052.00 D/COPY AIRLIB/AIRSRC,SPAIRJAVA
0053.00 D/COPY AIRLIB/AIRSRC,SPAIRPDF
0054.00 D**********************************************************************
0055.00 P AirPdf_newDocumentOutput...
0056.00 P                  B                    EXPORT
0057.00 D AirPdf_newDocumentOutput...
0058.00 D                  PI                   like(ITextDocument)
0059.00 D  argFileName                 2048A    const varying
0060.00 D                                       options(*varsize)
0061.00 D  argSizeName                   64A    const varying

 F3=Exit   F5=Refresh   F9=Retrieve   F10=Cursor   F11=Toggle   F12=Cancel
 F16=Repeat find        F24=More keys
```

iText Document Class



Overview Package Class Tree Deprecated Index Help
PREV CLASS NEXT CLASS
FRAMES NO FRAMES All Classes
SUMMARY: NESTED | FIELD | CONSTR | METHOD
DETAIL: FIELD | CONSTR | METHOD

com.lowagie.text

Class Document

```
java.lang.Object
  extended by com.lowagie.text.Document
```

All Implemented Interfaces:

DocListener, ElementListener, EventListener

```
D ITextDocument...
D                 S                O  CLASS(*JAVA
D                                     :'com.lowagie.text-
D                                     .Document')
```

```
extends Object
implements DocListener
```

A generic Document class.

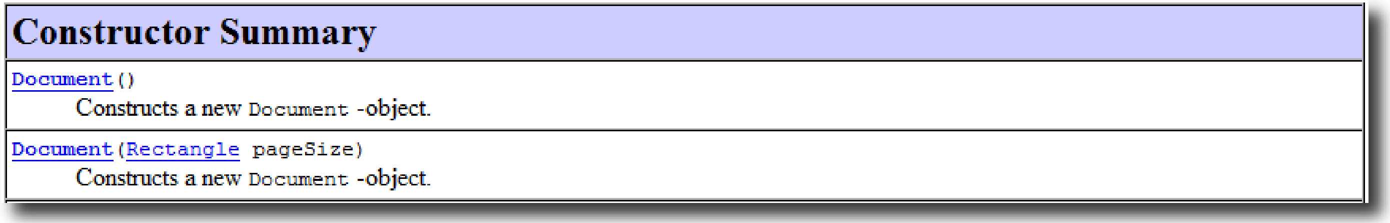
All kinds of Text-elements can be added to a `HTMLDocument`. The `Document` signals all the listeners when an element has been added.

Remark:

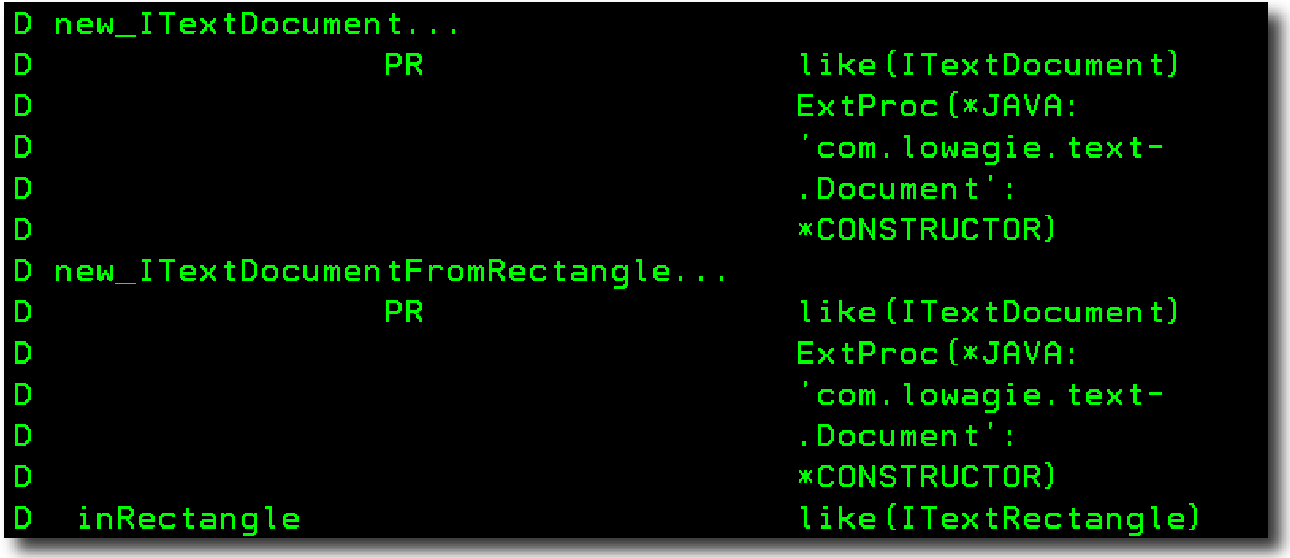
1. Once a document is created you can add some meta information.
2. You can also set the headers/footers.
3. You have to open the document before you can write content.
4. You can only write content (no more meta-formation!) once a document is opened.
5. When you change the header/footer on a certain page, this will be effective starting on the next page.
6. After closing the document, every listener (as well as its `OutputStream`) is closed too.

Document Constructor

Default Constructor and Rectangle



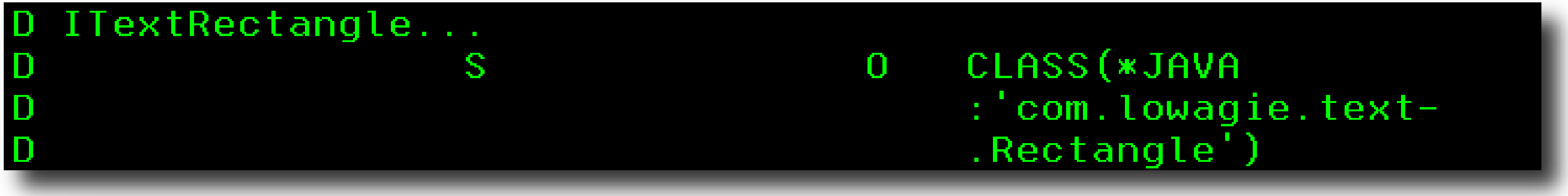
Constructor Summary
Document() Constructs a new Document -object.
Document(Rectangle pageSize) Constructs a new Document -object.



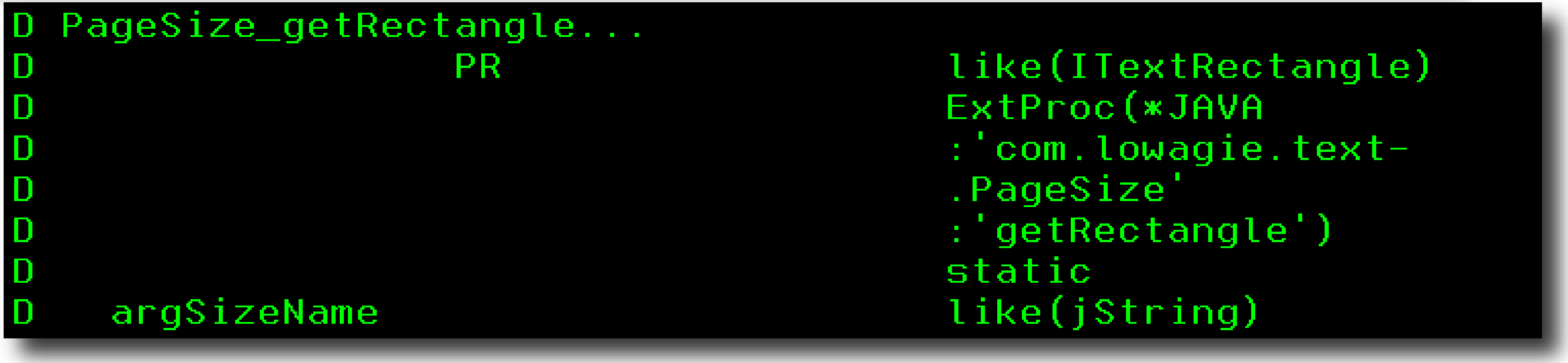
```
D new_ITextDocument...
D                 PR                  like(ITextDocument)
D                                     ExtProc(*JAVA:
D                                     'com.lowagie.text-
D                                     .Document':
D                                     *CONSTRUCTOR)
D new_ITextDocumentFromRectangle...
D                 PR                  like(ITextDocument)
D                                     ExtProc(*JAVA:
D                                     'com.lowagie.text-
D                                     .Document':
D                                     *CONSTRUCTOR)
D  inRectangle                        like(ITextRectangle)
```

iText Rectangle

Using PageSize getRectangle Method



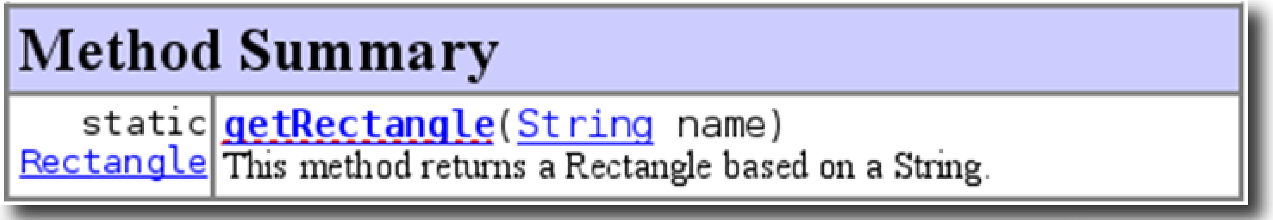
```
D ITextRectangle...
D                 S               O   CLASS(*JAVA
D                                     :'com.lowagie.text-
D                                     .Rectangle')
```



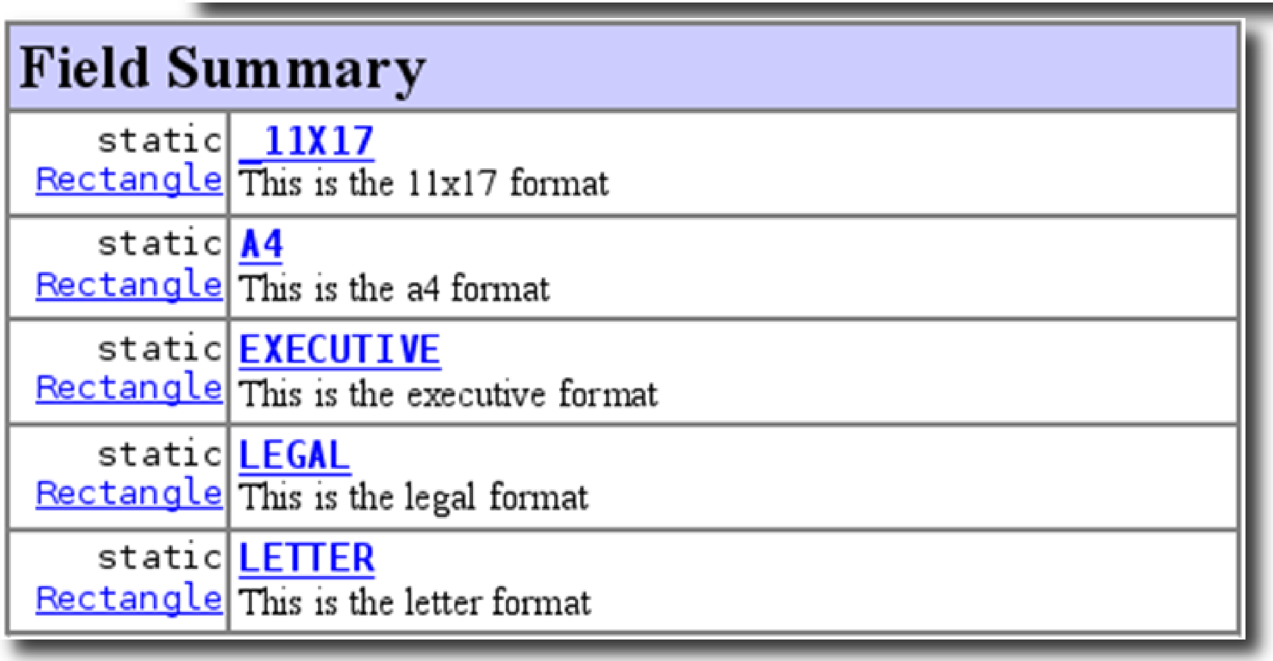
```
D PageSize_getRectangle...
D                 PR                  like(ITextRectangle)
D                                     ExtProc(*JAVA
D                                     :'com.lowagie.text-
D                                     .PageSize'
D                                     :'getRectangle')
D                                     static
D   argSizeName                       like(jString)
```

PageSize getRectangle

Predefined Rectangles Available



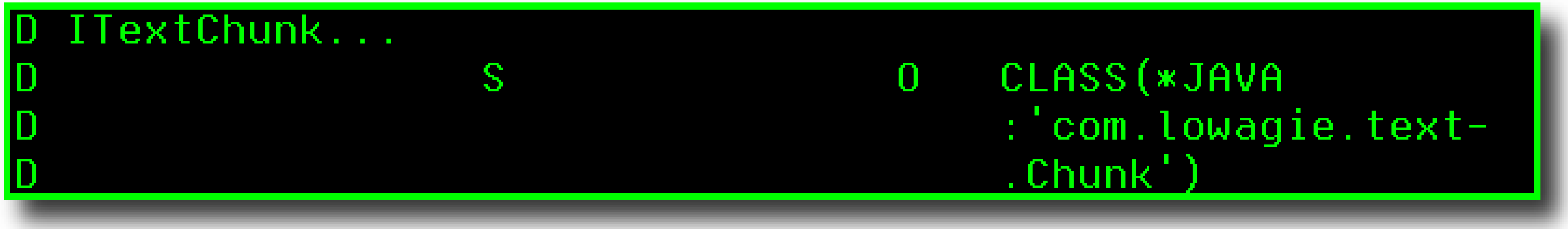
Method Summary	
static Rectangle	getRectangle(String name) This method returns a Rectangle based on a String.



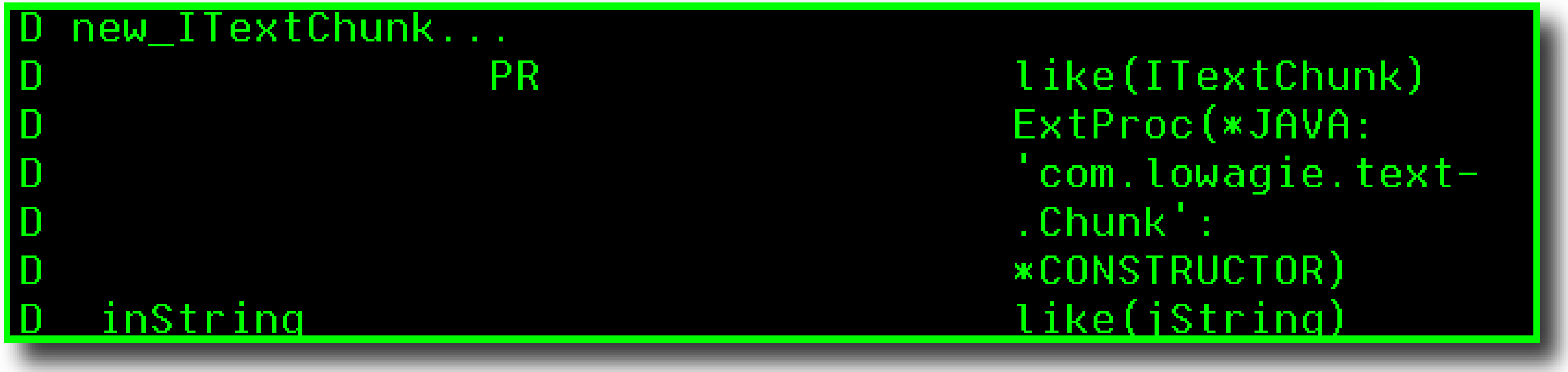
Field Summary	
static Rectangle	_11X17 This is the 11x17 format
static Rectangle	A4 This is the a4 format
static Rectangle	EXECUTIVE This is the executive format
static Rectangle	LEGAL This is the legal format
static Rectangle	LETTER This is the letter format

iText Chunk

Reference Variable and Constructor



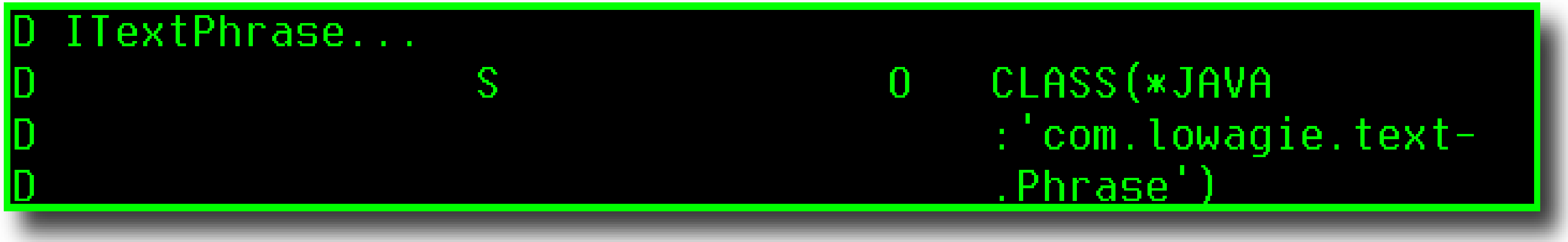
```
D ITextChunk...
D                 S                O   CLASS(*JAVA
D                                      :'com.lowagie.text-
D                                      .Chunk')
```



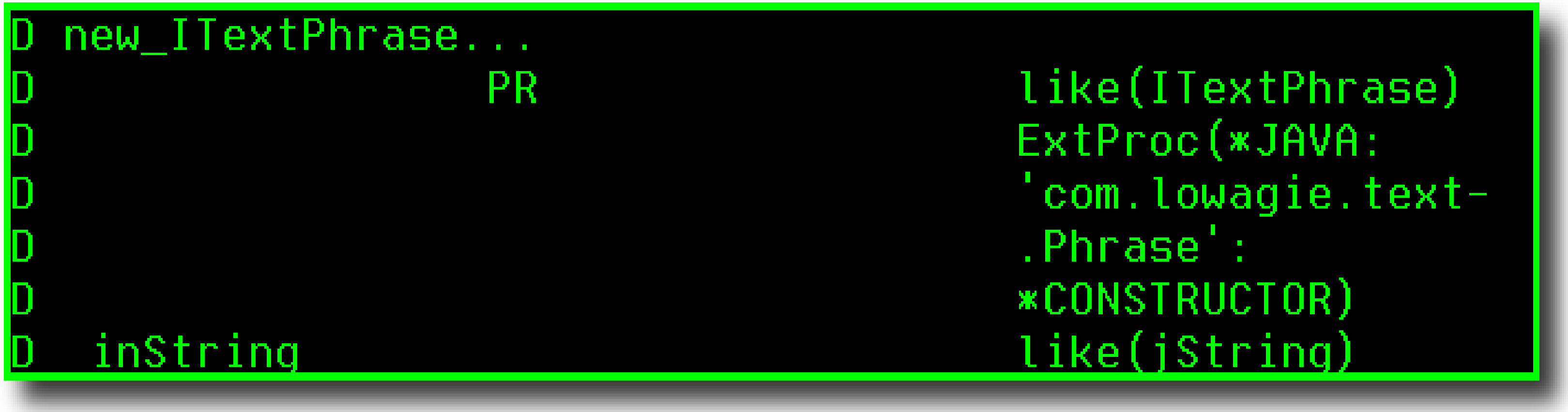
```
D new_ITextChunk...
D                 PR                  like(ITextChunk)
D                                     ExtProc(*JAVA:
D                                     'com.lowagie.text-
D                                     .Chunk':
D                                     *CONSTRUCTOR)
D  inString                           like(iString)
```

iText Phrase

Reference Variable and Constructor



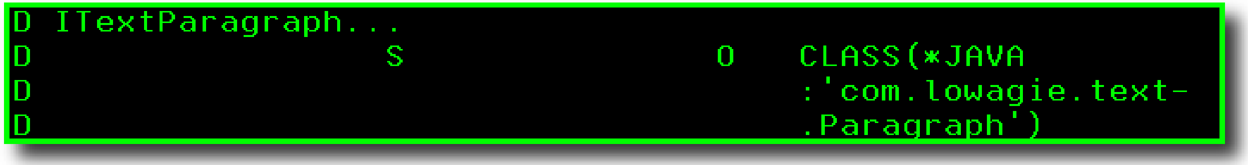
```
D ITextPhrase...
D                 S                O   CLASS(*JAVA
D                                      :'com.lowagie.text-
D                                      .Phrase')
```



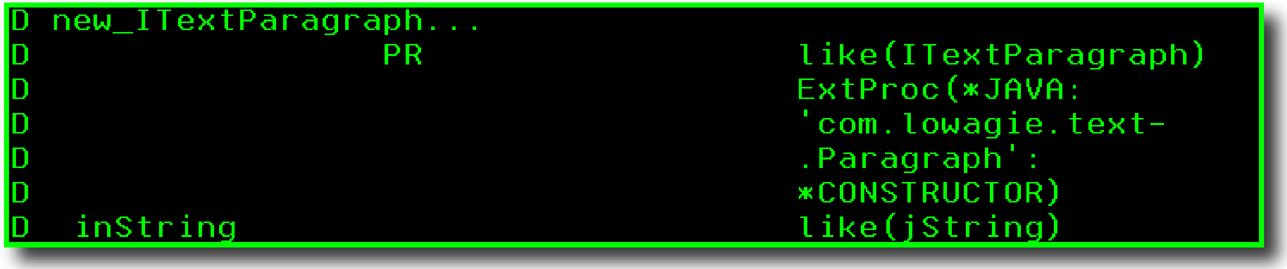
```
D new_ITextPhrase...
D                 PR                   like(ITextPhrase)
D                                      ExtProc(*JAVA:
D                                      'com.lowagie.text-
D                                      .Phrase':
D                                      *CONSTRUCTOR)
D  inString                            like(jString)
```

iText Paragraph

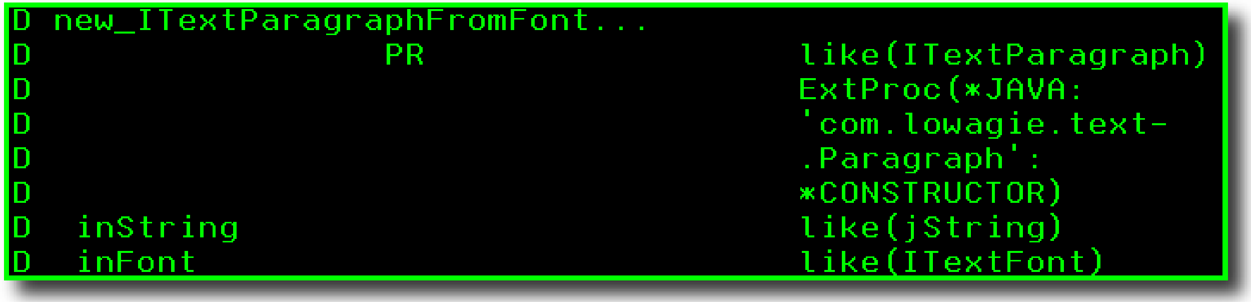
Reference Variable and Constructors



```
D ITextParagraph...
D                 S               O   CLASS(*JAVA
D                                     :'com.lowagie.text-
D                                     .Paragraph')
```



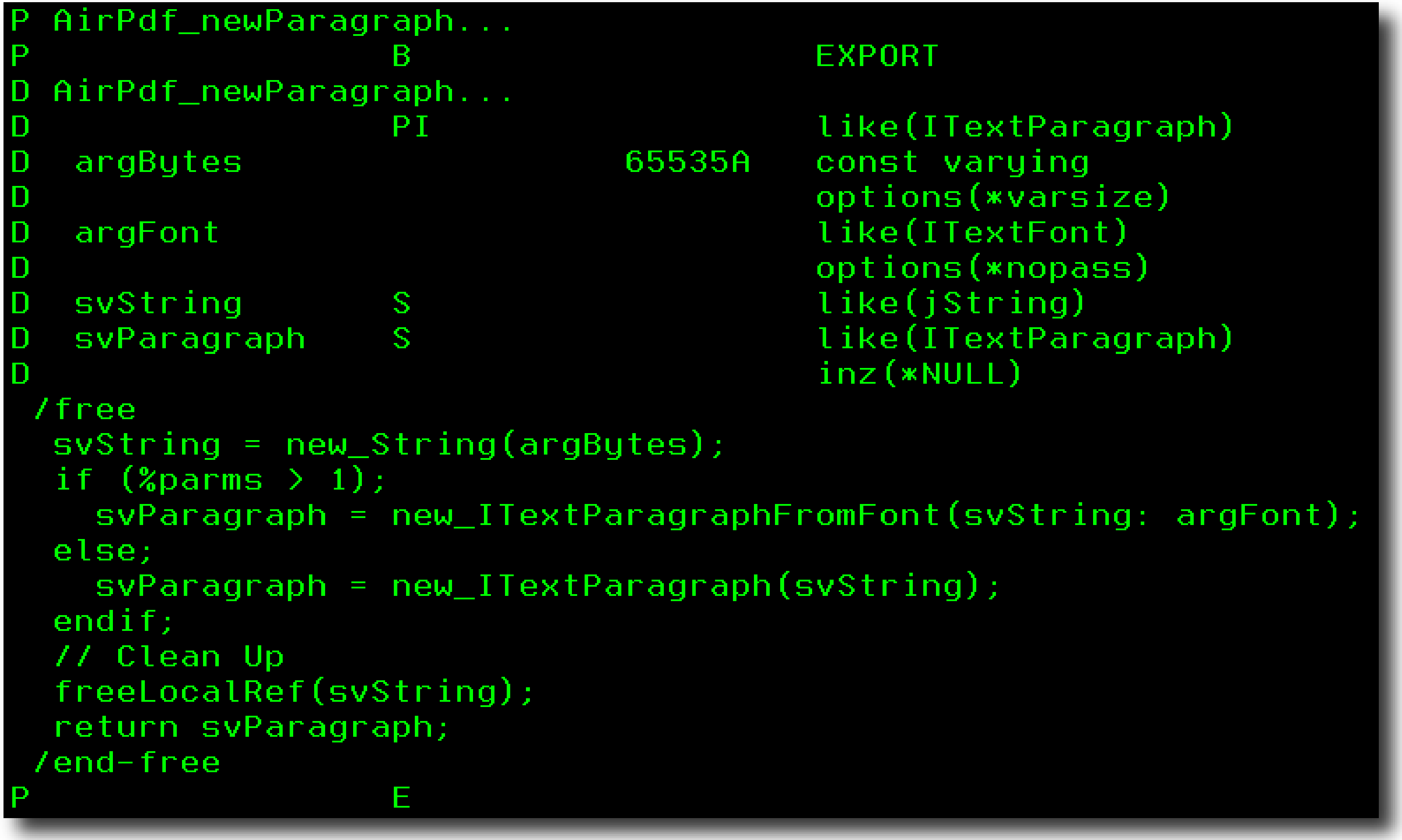
```
D new_ITextParagraph...
D                 PR                  like(ITextParagraph)
D                                     ExtProc(*JAVA:
D                                     'com.lowagie.text-
D                                     .Paragraph':
D                                     *CONSTRUCTOR)
D  inString                           like(jString)
```



```
D new_ITextParagraphFromFont...
D                 PR                  like(ITextParagraph)
D                                     ExtProc(*JAVA:
D                                     'com.lowagie.text-
D                                     .Paragraph':
D                                     *CONSTRUCTOR)
D  inString                           like(jString)
D  inFont                             like(ITextFont)
```

AirPdf_newParagraph Procedure

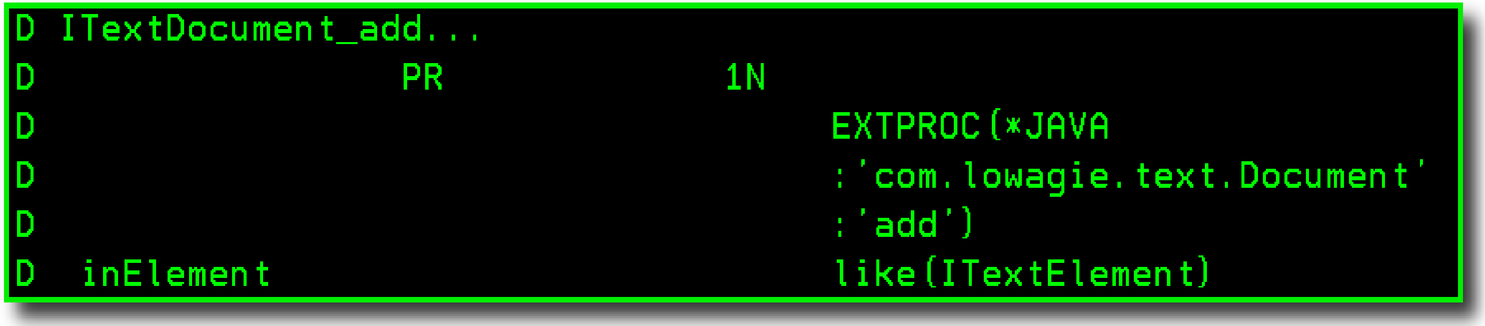
Automatic String Conversion with Font Option



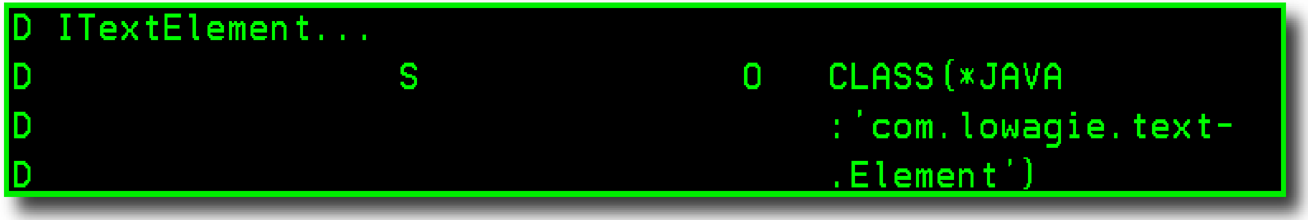
```
P AirPdf_newParagraph...
P                 B                   EXPORT
D AirPdf_newParagraph...
D                 PI                  like(ITextParagraph)
D  argBytes                   65535A   const varying
D                                     options(*varsize)
D  argFont                            like(ITextFont)
D                                     options(*nopass)
D  svString       S                   like(jString)
D  svParagraph    S                   like(ITextParagraph)
D                                     inz(*NULL)
 /free
  svString = new_String(argBytes);
  if (%parms > 1);
    svParagraph = new_ITextParagraphFromFont(svString: argFont);
  else;
    svParagraph = new_ITextParagraph(svString);
  endif;
  // Clean Up
  freeLocalRef(svString);
  return svParagraph;
 /end-free
P                 E
```

Document add Method

iText Element Parameter



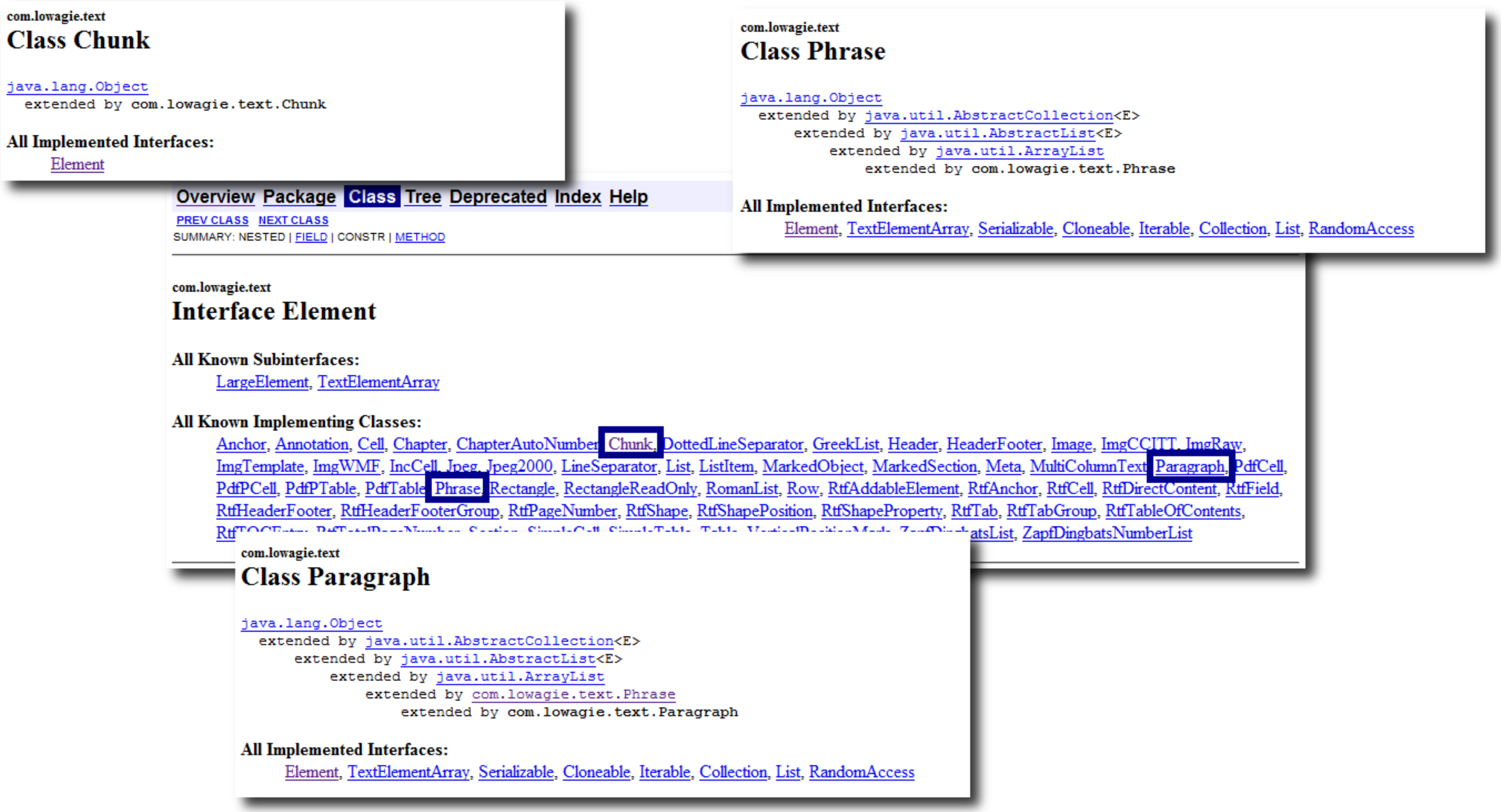
```
D ITextDocument_add...
D                 PR              1N
D                                      EXTPROC(*JAVA
D                                      :'com.lowagie.text.Document'
D                                      :'add')
D  inElement                           like(ITextElement)
```



```
D ITextElement...
D                 S                O   CLASS(*JAVA
D                                      :'com.lowagie.text-
D                                      .Element')
```

iText Element Interface

Implemented by Chunk, Phrase, and Paragraph



com.lowagie.text

Class Chunk

```
java.lang.Object
  extended by com.lowagie.text.Chunk
```

All Implemented Interfaces:

Element

com.lowagie.text

Class Phrase

```
java.lang.Object
  extended by java.util.AbstractCollection<E>
      extended by java.util.AbstractList<E>
          extended by java.util.ArrayList
              extended by com.lowagie.text.Phrase
```

All Implemented Interfaces:

Element, TextElementArray, Serializable, Cloneable, Iterable, Collection, List, RandomAccess

Overview Package Class Tree Deprecated Index Help
PREV CLASS NEXT CLASS
SUMMARY: NESTED | FIELD | CONSTR | METHOD

com.lowagie.text

Interface Element

All Known Subinterfaces:

LargeElement, TextElementArray

All Known Implementing Classes:

Anchor, Annotation, Cell, Chapter, ChapterAutoNumber, Chunk, DottedLineSeparator, GreekList, Header, HeaderFooter, Image, ImgCCITT, ImgRaw, ImgTemplate, ImgWMF, IncCell, Jpeg, Jpeg2000, LineSeparator, List, ListItem, MarkedObject, MarkedSection, Meta, MultiColumnText, Paragraph, PdfCell, PdfPCell, PdfPTable, PdfTable, Phrase, Rectangle, RectangleReadOnly, RomanList, Row, RtfAddableElement, RtfAnchor, RtfCell, RtfDirectContent, RtfField, RtfHeaderFooter, RtfHeaderFooterGroup, RtfPageNumber, RtfShape, RtfShapePosition, RtfShapeProperty, RtfTab, RtfTabGroup, RtfTableOfContents, RtfTOCEntry, RtfTotalPageNumber, Section, SimpleCell, SimpleTable, Table, VerticalPositionMark, ZapfDingbatsList, ZapfDingbatsNumberList

com.lowagie.text

Class Paragraph

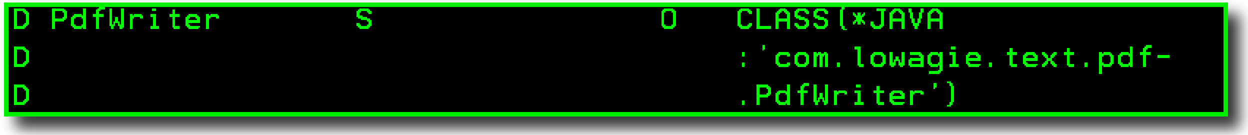
```
java.lang.Object
  extended by java.util.AbstractCollection<E>
      extended by java.util.AbstractList<E>
          extended by java.util.ArrayList
              extended by com.lowagie.text.Phrase
                  extended by com.lowagie.text.Paragraph
```

All Implemented Interfaces:

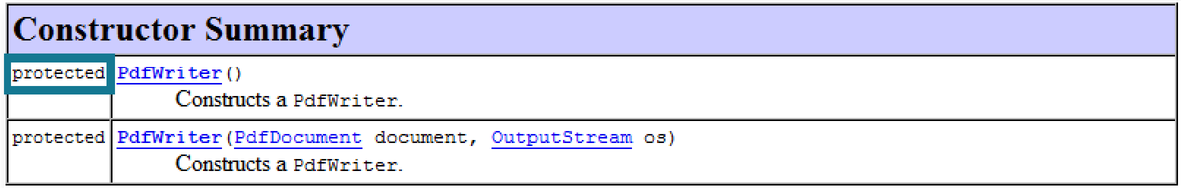
Element, TextElementArray, Serializable, Cloneable, Iterable, Collection, List, RandomAccess

PdfWriter Class

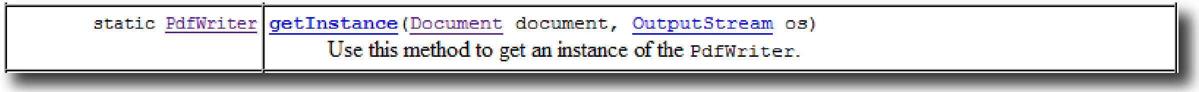
No Constructor Method, use getInstance



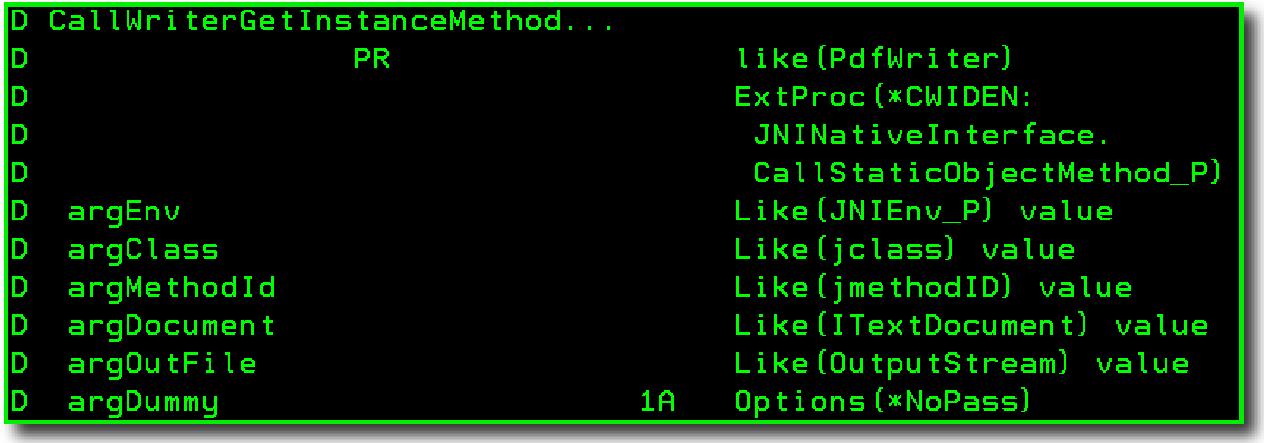
```
D PdfWriter       S                O   CLASS(*JAVA
D                                      :'com.lowagie.text.pdf-
D                                      .PdfWriter')
```



Constructor Summary	
protected	PdfWriter() Constructs a PdfWriter.
protected	PdfWriter(PdfDocument document, OutputStream os) Constructs a PdfWriter.



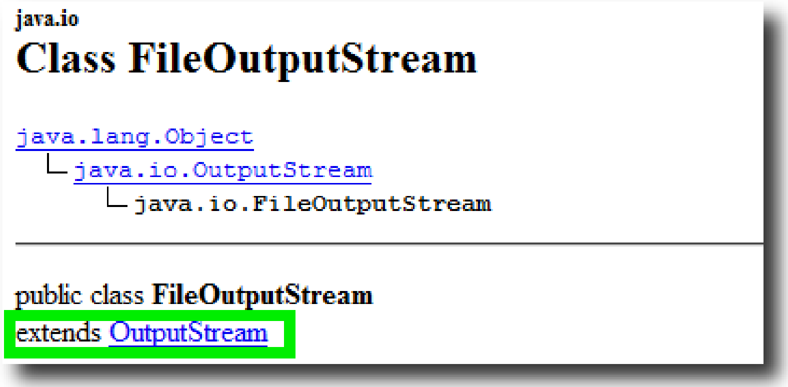
static PdfWriter	getInstance(Document document, OutputStream os) Use this method to get an instance of the PdfWriter.



```
D CallWriterGetInstanceMethod...
D                 PR                  like(PdfWriter)
D                                     ExtProc(*CWIDEN:
D                                      JNINativeInterface.
D                                      CallStaticObjectMethod_P)
D  argEnv                             Like(JNIEnv_P) value
D  argClass                           Like(jclass) value
D  argMethodId                        Like(jmethodID) value
D  argDocument                        Like(ITextDocument) value
D  argOutFile                         Like(OutputStream) value
D  argDummy                      1A   Options(*NoPass)
```

Java FileOutputStream

extends OutputStream

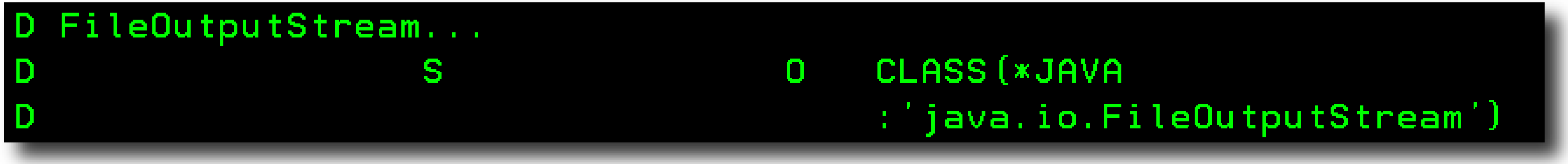


java.io

Class FileOutputStream

```
java.lang.Object
  └java.io.OutputStream
      └java.io.FileOutputStream
```

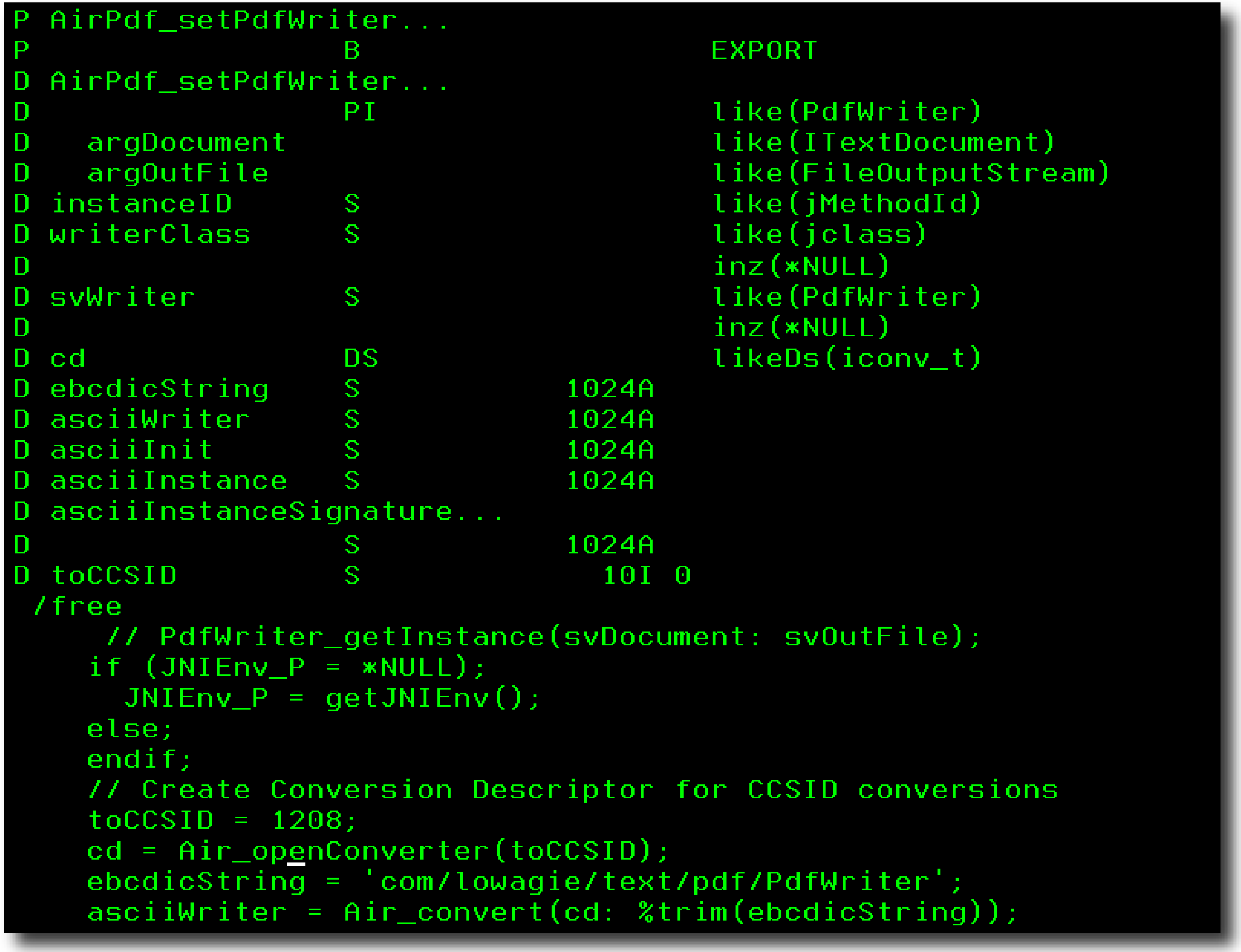
public class **FileOutputStream**
extends OutputStream



```
D FileOutputStream...
D                        S                      O     CLASS(*JAVA
D                                                     :'java.io.FileOutputStream')
```

AirPdf_setPdfWriter

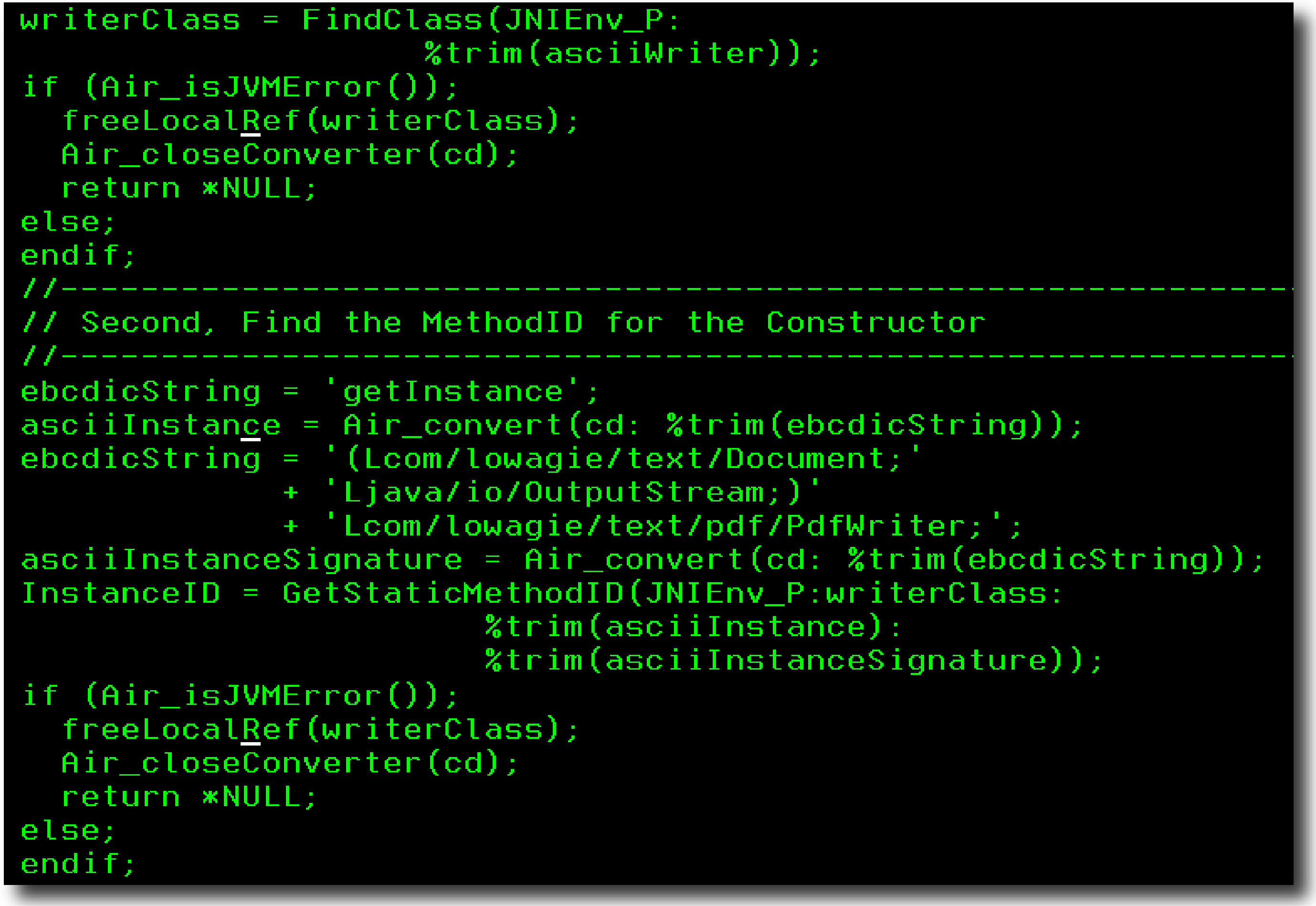
Variables, Initialization, EBCDIC to ASCII



```
P AirPdf_setPdfWriter...
P                 B                   EXPORT
D AirPdf_setPdfWriter...
D                 PI                  like(PdfWriter)
D   argDocument                       like(ITextDocument)
D   argOutFile                        like(FileOutputStream)
D instanceID      S                   like(jMethodId)
D writerClass     S                   like(jclass)
D                                     inz(*NULL)
D svWriter        S                   like(PdfWriter)
D                                     inz(*NULL)
D cd              DS                  likeDs(iconv_t)
D ebcdicString    S           1024A
D asciiWriter     S           1024A
D asciiInit       S           1024A
D asciiInstance   S           1024A
D asciiInstanceSignature...
D                 S           1024A
D toCCSID         S             10I 0
 /free
     // PdfWriter_getInstance(svDocument: svOutFile);
    if (JNIEnv_P = *NULL);
      JNIEnv_P = getJNIEnv();
    else;
    endif;
    // Create Conversion Descriptor for CCSID conversions
    toCCSID = 1208;
    cd = Air_openConverter(toCCSID);
    ebcdicString = 'com/lowagie/text/pdf/PdfWriter';
    asciiWriter = Air_convert(cd: %trim(ebcdicString));
```

AirPdf_setPdfWriter

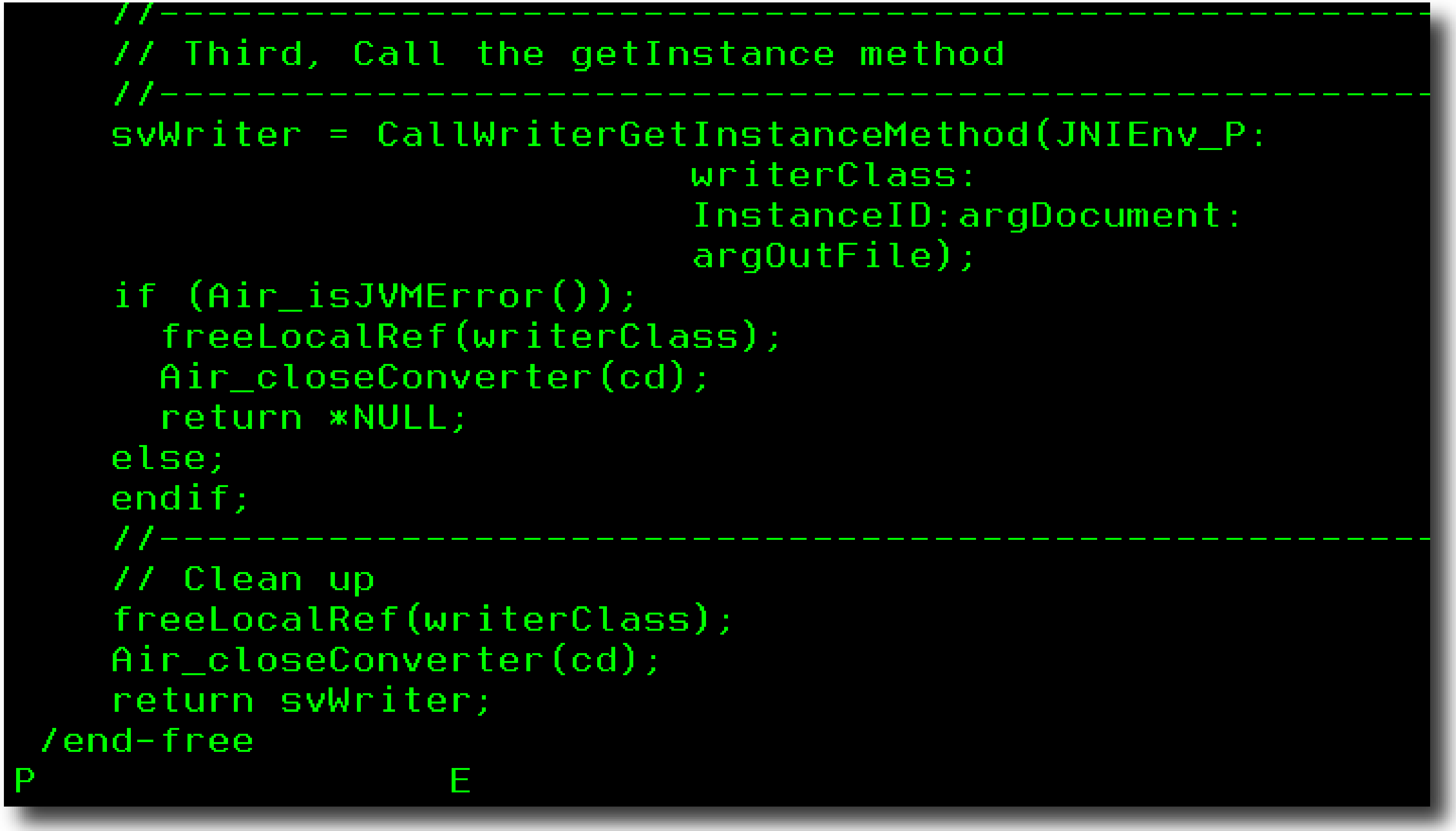
Using JNI to getInstance



```
writerClass = FindClass(JNIEnv_P:
                    %trim(asciiWriter));
if (Air_isJVMError());
  freeLocalRef(writerClass);
  Air_closeConverter(cd);
  return *NULL;
else;
endif;
//-------------------------------------------------------------
// Second, Find the MethodID for the Constructor
//-------------------------------------------------------------
ebcdicString = 'getInstance';
asciiInstance = Air_convert(cd: %trim(ebcdicString));
ebcdicString = '(Lcom/lowagie/text/Document;'
             + 'Ljava/io/OutputStream;)'
             + 'Lcom/lowagie/text/pdf/PdfWriter;';
asciiInstanceSignature = Air_convert(cd: %trim(ebcdicString));
InstanceID = GetStaticMethodID(JNIEnv_P:writerClass:
                       %trim(asciiInstance):
                       %trim(asciiInstanceSignature));
if (Air_isJVMError());
  freeLocalRef(writerClass);
  Air_closeConverter(cd);
  return *NULL;
else;
endif;
```

AirPdf_setPdfWriter

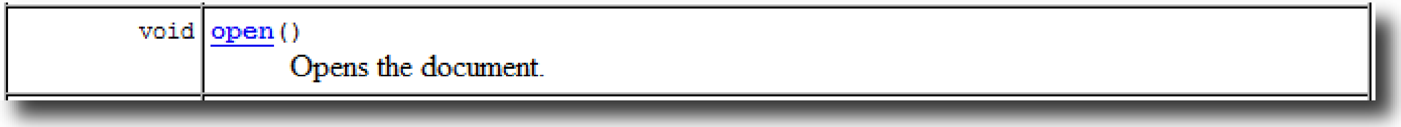
Calling the Static getInstance Method



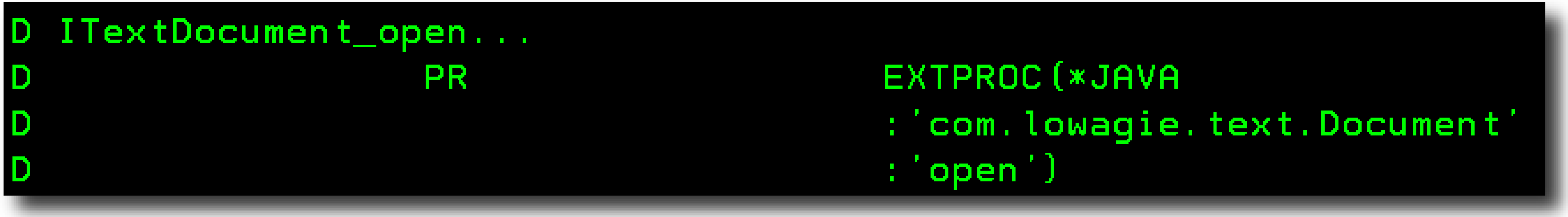
```
    //----------------------------------------------------
    // Third, Call the getInstance method
    //----------------------------------------------------
    svWriter = CallWriterGetInstanceMethod(JNIEnv_P:
                                            writerClass:
                                            InstanceID:argDocument:
                                            argOutFile);
    if (Air_isJVMError());
      freeLocalRef(writerClass);
      Air_closeConverter(cd);
      return *NULL;
    else;
    endif;
    //----------------------------------------------------
    // Clean up
    freeLocalRef(writerClass);
    Air_closeConverter(cd);
    return svWriter;
 /end-free
P                 E
```

iText Document Open

Method and Prototype



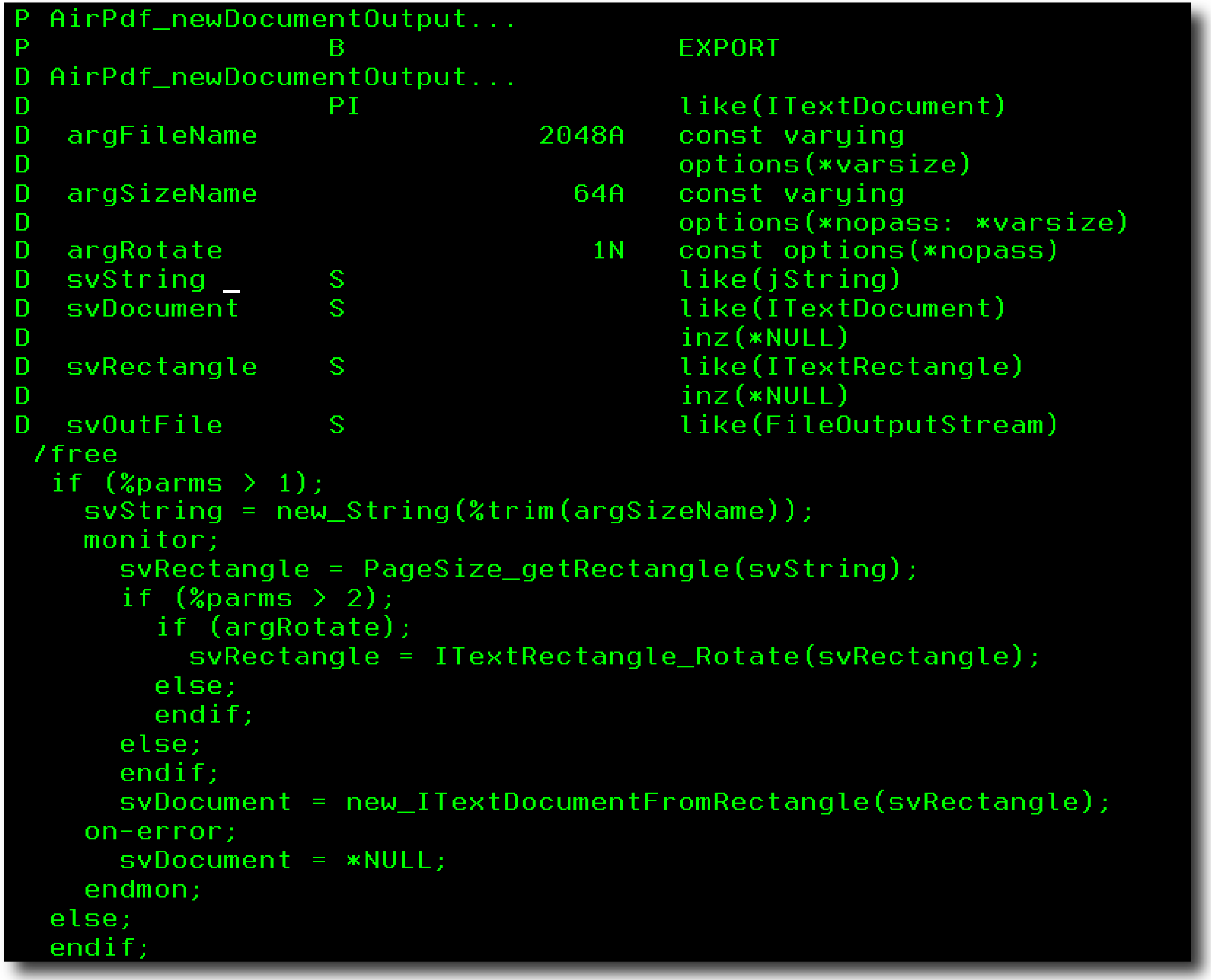
void	open() Opens the document.



```
D ITextDocument_open...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.Document'
D                                     :'open')
```

AirPdf_newDocumentOutput

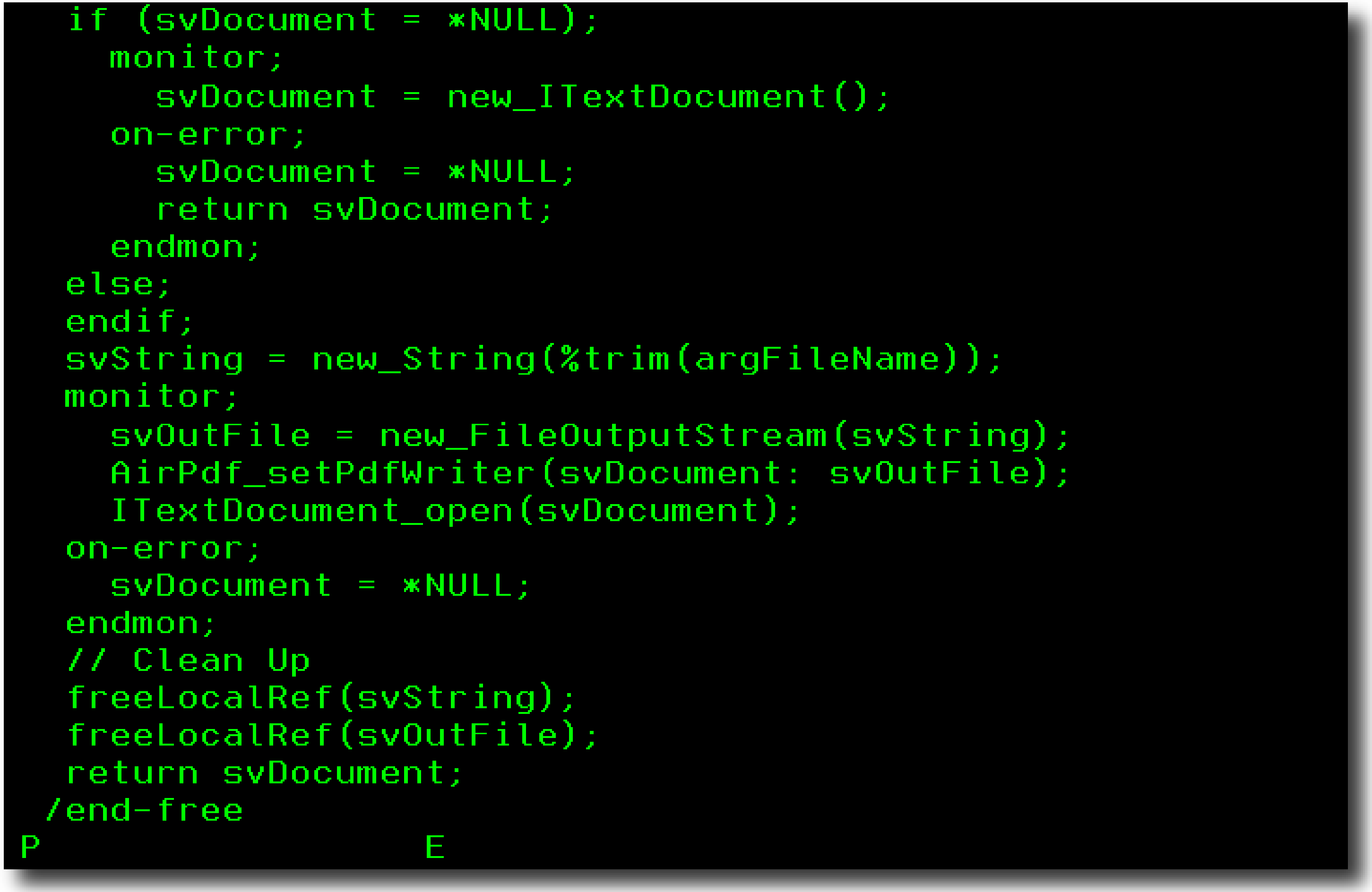
Parameters



```
P AirPdf_newDocumentOutput...
P                 B                   EXPORT
D AirPdf_newDocumentOutput...
D                 PI                  like(ITextDocument)
D  argFileName                2048A   const varying
D                                     options(*varsize)
D  argSizeName                  64A   const varying
D                                     options(*nopass: *varsize)
D  argRotate                     1N   const options(*nopass)
D  svString       S                   like(jString)
D  svDocument     S                   like(ITextDocument)
D                                     inz(*NULL)
D  svRectangle    S                   like(ITextRectangle)
D                                     inz(*NULL)
D  svOutFile      S                   like(FileOutputStream)
 /free
  if (%parms > 1);
    svString = new_String(%trim(argSizeName));
    monitor;
      svRectangle = PageSize_getRectangle(svString);
      if (%parms > 2);
        if (argRotate);
          svRectangle = ITextRectangle_Rotate(svRectangle);
        else;
        endif;
      else;
      endif;
      svDocument = new_ITextDocumentFromRectangle(svRectangle);
    on-error;
      svDocument = *NULL;
    endmon;
  else;
  endif;
```

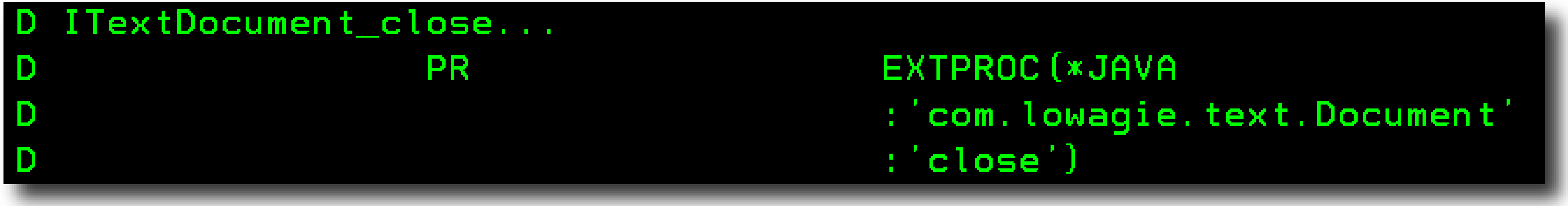
AirPdf_newDocumentOutput

Open Document with Output Stream



```
  if (svDocument = *NULL);
    monitor;
      svDocument = new_ITextDocument();
    on-error;
      svDocument = *NULL;
      return svDocument;
    endmon;
  else;
  endif;
  svString = new_String(%trim(argFileName));
  monitor;
    svOutFile = new_FileOutputStream(svString);
    AirPdf_setPdfWriter(svDocument: svOutFile);
    ITextDocument_open(svDocument);
  on-error;
    svDocument = *NULL;
  endmon;
  // Clean Up
  freeLocalRef(svString);
  freeLocalRef(svOutFile);
  return svDocument;
 /end-free
P                 E
```

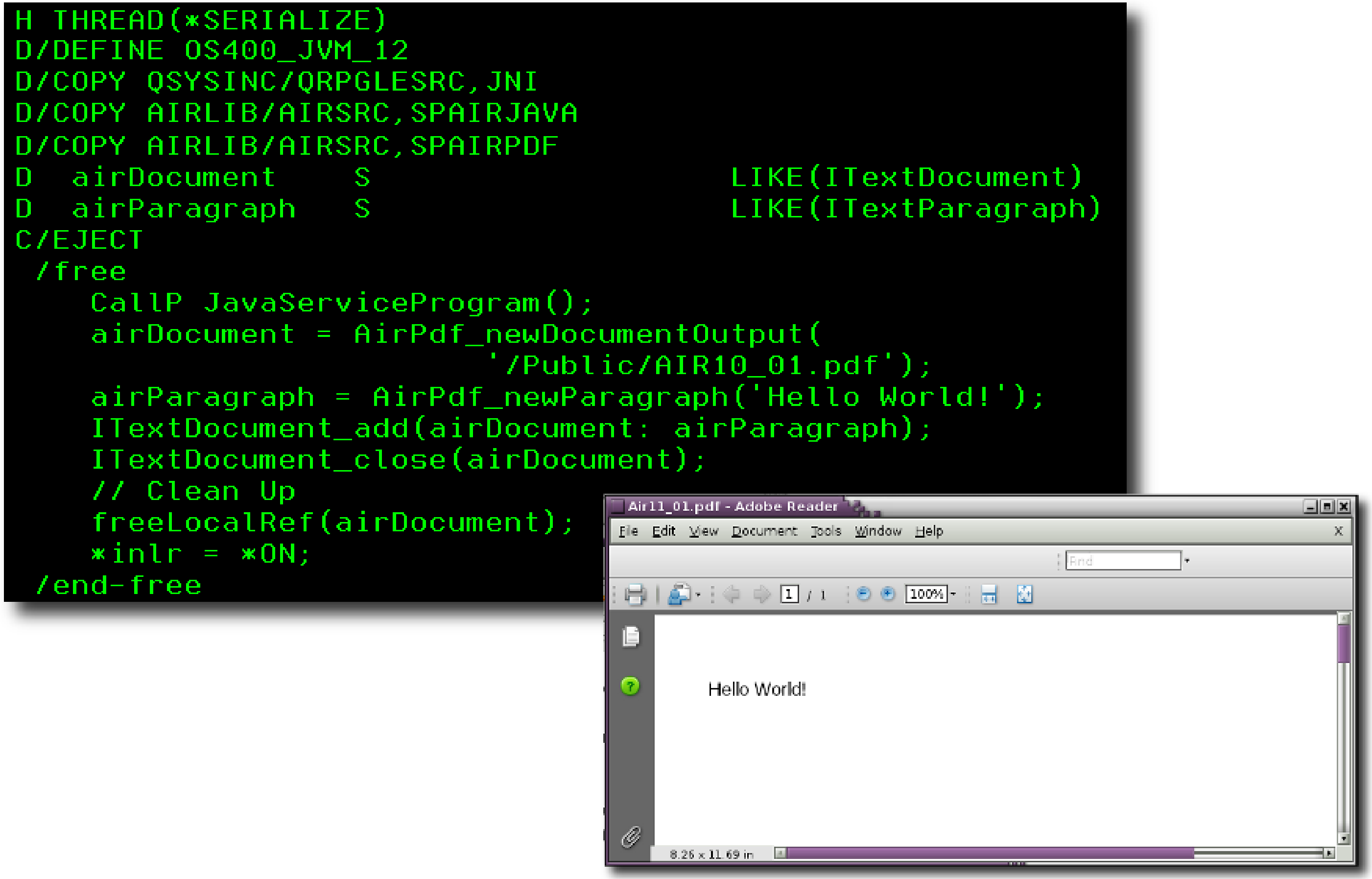
Document close



```
D ITextDocument_close...
D                 PR                    EXTPROC(*JAVA
D                                       :'com.lowagie.text.Document'
D                                       :'close')
```

Hello World!

RPG Code Used to Create PDF



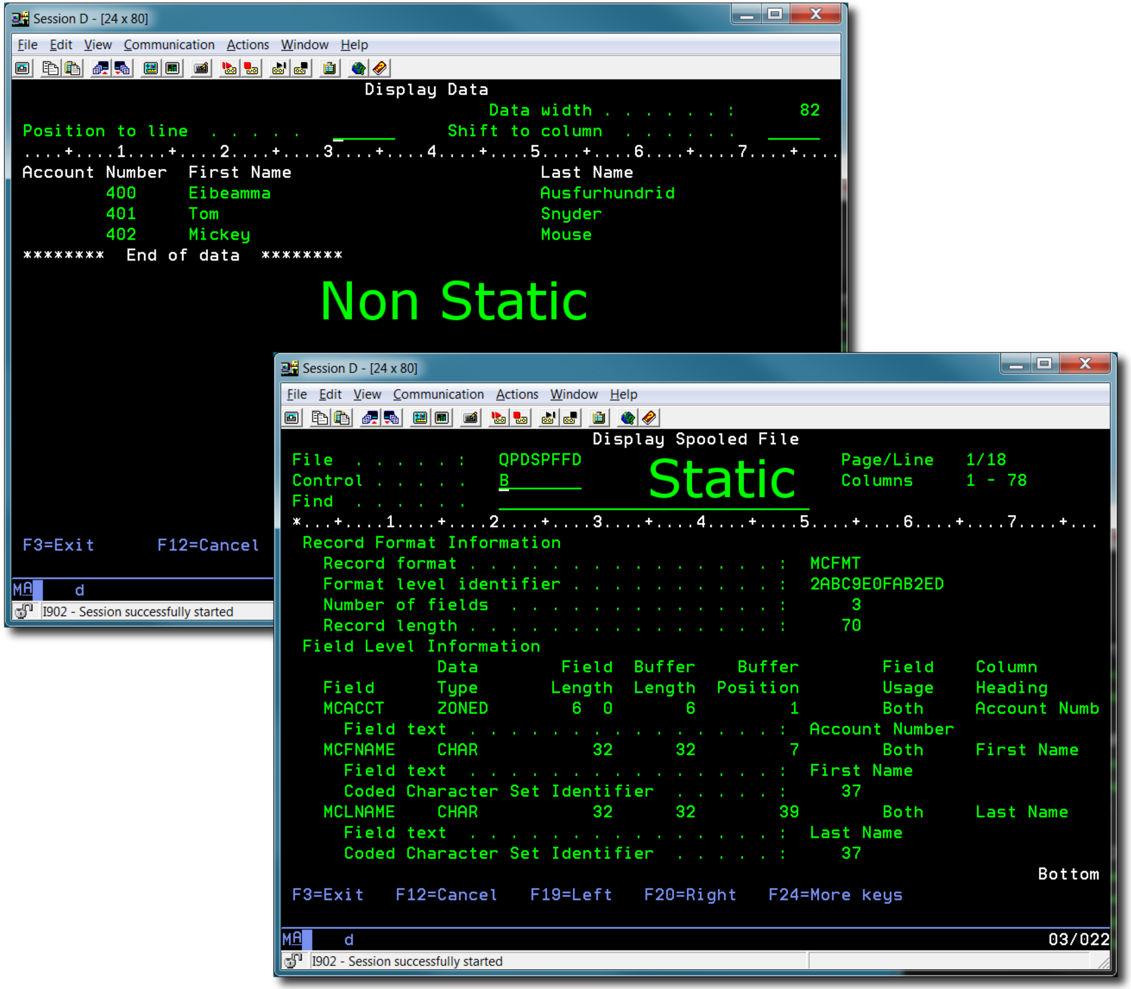
```
H THREAD(*SERIALIZE)
D/DEFINE OS400_JVM_12
D/COPY QSYSINC/QRPGLESRC,JNI
D/COPY AIRLIB/AIRSRC,SPAIRJAVA
D/COPY AIRLIB/AIRSRC,SPAIRPDF
D  airDocument    S                   LIKE(ITextDocument)
D  airParagraph   S                   LIKE(ITextParagraph)
C/EJECT
 /free
    CallP JavaServiceProgram();
    airDocument = AirPdf_newDocumentOutput(
                         '/Public/AIR10_01.pdf');
    airParagraph = AirPdf_newParagraph('Hello World!');
    ITextDocument_add(airDocument: airParagraph);
    ITextDocument_close(airDocument);
    // Clean Up
    freeLocalRef(airDocument);
    *inlr = *ON;
 /end-free
```

Air11_01.pdf - Adobe Reader
File Edit View Document Tools Window Help
Find
1 / 1
100%
8.26 x 11.69 in

Hello World!

Static and Non Static

Conceptual Example


Session D - [24 x 80]
File Edit View Communication Actions Window Help

```
                                Display Data
                                          Data width . . . . . . :     82
Position to line  . . . . .  ______      Shift to column  . . . . . . ______
....+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....
Account Number  First Name                         Last Name
        400     Eibeamma                           Ausfurhundrid
        401     Tom                                Snyder
        402     Mickey                             Mouse
********  End of data  ********

F3=Exit      F12=Cancel
MA     d
I902 - Session successfully started
```

Non Static

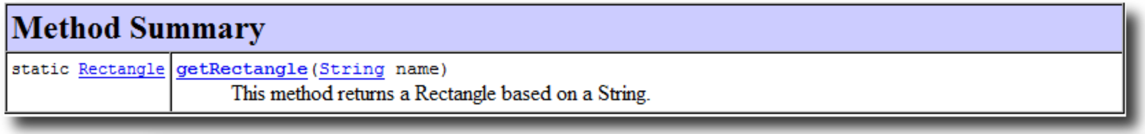
Session D - [24 x 80]
File Edit View Communication Actions Window Help

```
                           Display Spooled File
File  . . . . . :   QPDSPFFD                        Page/Line   1/18
Control . . . . .   B_______                        Columns     1 - 78
Find  . . . . . .   ______________________________
*...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+...
 Record Format Information
   Record format . . . . . . . . . . . . . . . :  MCFMT
   Format level identifier . . . . . . . . . . :  2ABC9E0FAB2ED
   Number of fields  . . . . . . . . . . . . . :      3
   Record length . . . . . . . . . . . . . . . :     70
 Field Level Information
              Data          Field   Buffer    Buffer          Field    Column
   Field      Type          Length  Length  Position          Usage    Heading
   MCACCT     ZONED          6  0       6          1          Both     Account Numb
     Field text  . . . . . . . . . . . . . . . :  Account Number
   MCFNAME    CHAR             32      32          7          Both     First Name
     Field text  . . . . . . . . . . . . . . . :  First Name
     Coded Character Set Identifier  . . . . . :     37
   MCLNAME    CHAR             32      32         39          Both     Last Name
     Field text  . . . . . . . . . . . . . . . :  Last Name
     Coded Character Set Identifier  . . . . . :     37
                                                                      Bottom
F3=Exit   F12=Cancel   F19=Left   F20=Right   F24=More keys

MA     d                                                                03/022
I902 - Session successfully started
```

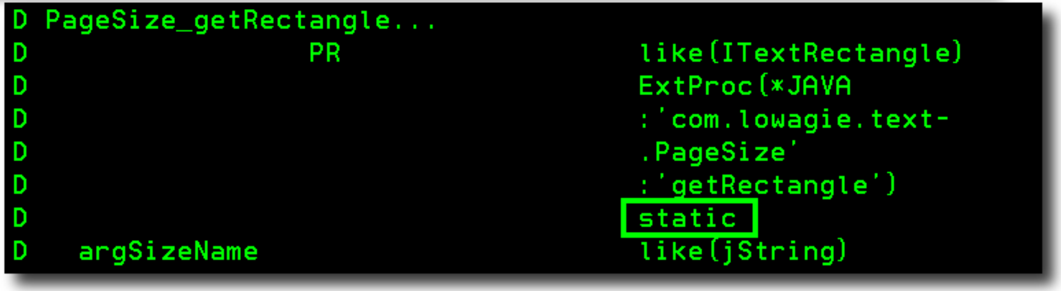
Static

Static and Non Static

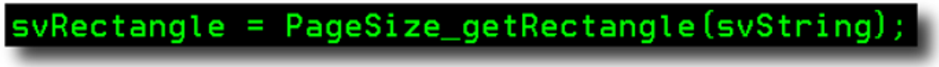
Parameter Behavior



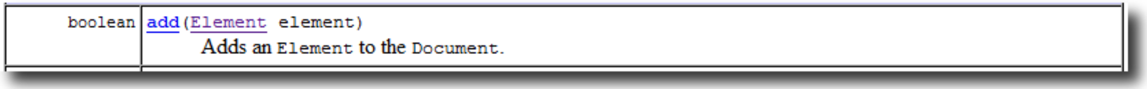
Method Summary	
static Rectangle	getRectangle(String name) This method returns a Rectangle based on a String.



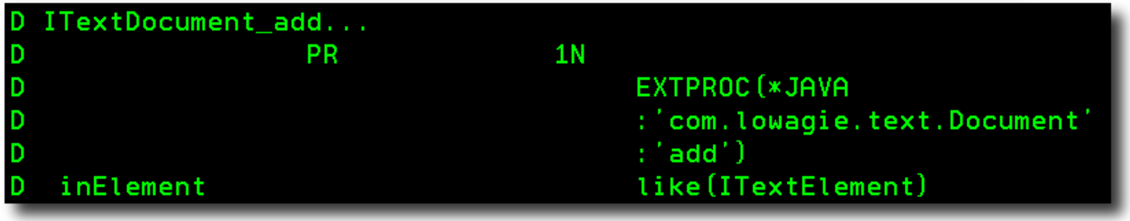
```
D PageSize_getRectangle...
D                 PR                  like(ITextRectangle)
D                                     ExtProc(*JAVA
D                                     :'com.lowagie.text-
D                                     .PageSize'
D                                     :'getRectangle')
D                                     static
D   argSizeName                       like(jString)
```



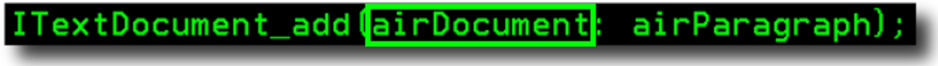
```
svRectangle = PageSize_getRectangle(svString);
```



boolean	add(Element element) Adds an Element to the Document.



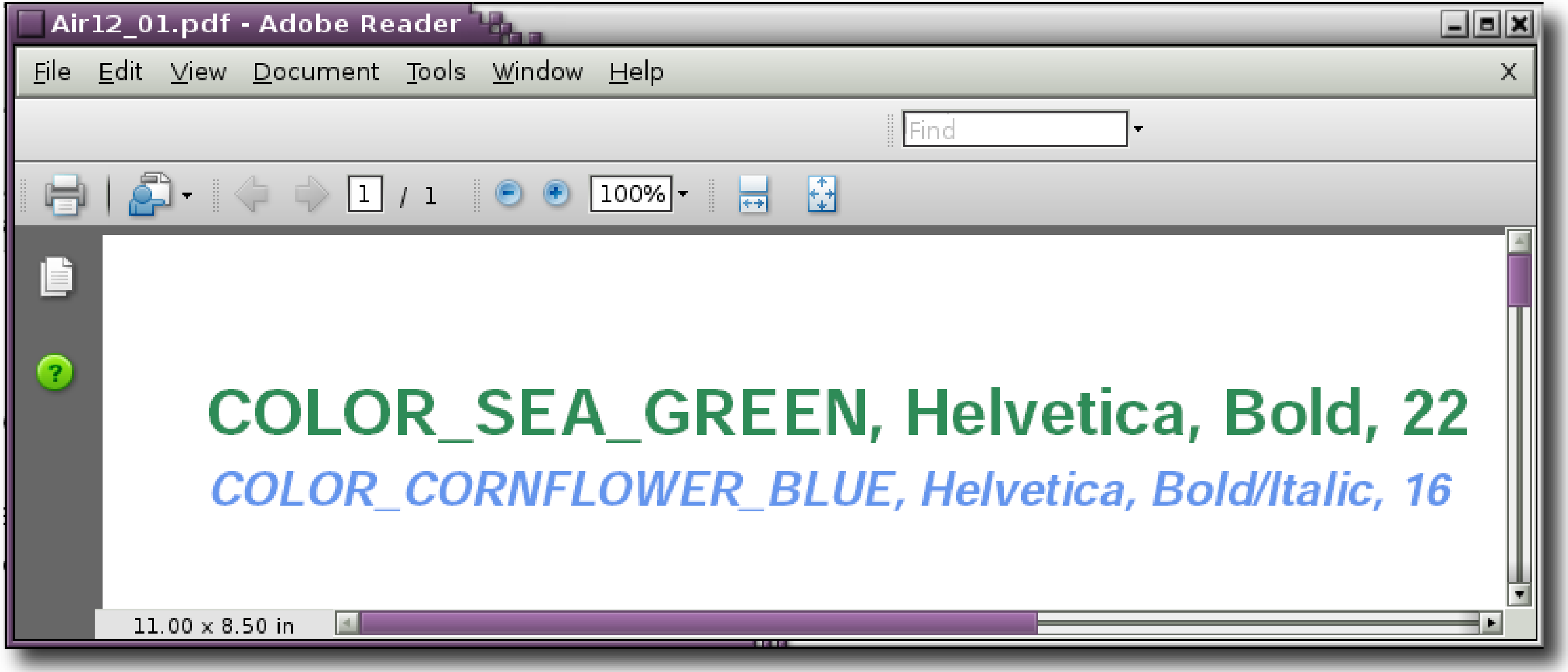
```
D ITextDocument_add...
D                 PR             1N
D                                     EXTPROC(*JAVA
D                                     :'com.lowagie.text.Document'
D                                     :'add')
D  inElement                          like(ITextElement)
```



```
ITextDocument_add(airDocument: airParagraph);
```

Colors and Fonts

Working with Colors and Fonts in iText

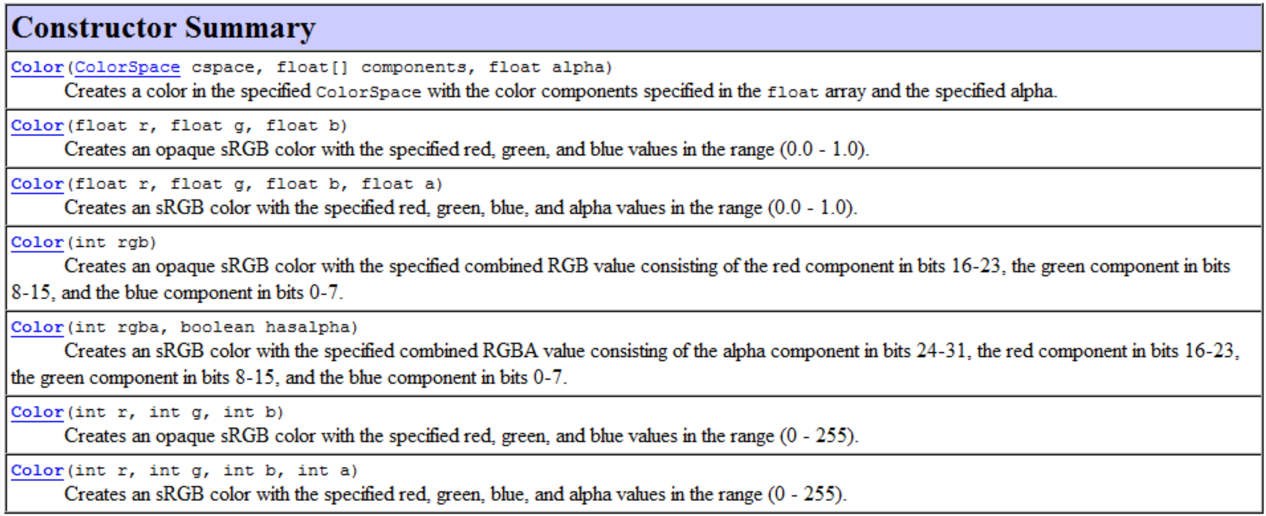

Air12_01.pdf - Adobe Reader
File Edit View Document Tools Window Help
Find
1 / 1
100%
11.00 x 8.50 in

COLOR_SEA_GREEN, Helvetica, Bold, 22

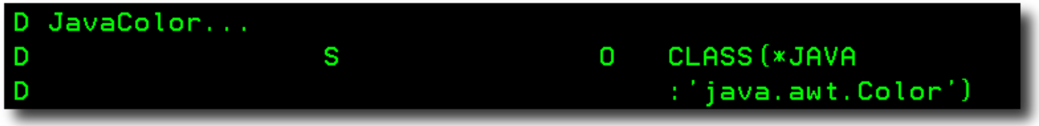
COLOR_CORNFLOWER_BLUE, Helvetica, Bold/Italic, 16

Java Color Class

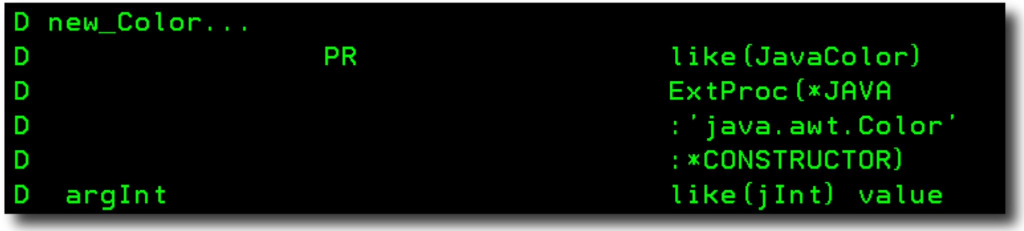
Reference Variable and Constructor



Constructor Summary
Color(ColorSpace cspace, float[] components, float alpha) Creates a color in the specified ColorSpace with the color components specified in the float array and the specified alpha.
Color(float r, float g, float b) Creates an opaque sRGB color with the specified red, green, and blue values in the range (0.0 - 1.0).
Color(float r, float g, float b, float a) Creates an sRGB color with the specified red, green, blue, and alpha values in the range (0.0 - 1.0).
Color(int rgb) Creates an opaque sRGB color with the specified combined RGB value consisting of the red component in bits 16-23, the green component in bits 8-15, and the blue component in bits 0-7.
Color(int rgba, boolean hasalpha) Creates an sRGB color with the specified combined RGBA value consisting of the alpha component in bits 24-31, the red component in bits 16-23, the green component in bits 8-15, and the blue component in bits 0-7.
Color(int r, int g, int b) Creates an opaque sRGB color with the specified red, green, and blue values in the range (0 - 255).
Color(int r, int g, int b, int a) Creates an sRGB color with the specified red, green, blue, and alpha values in the range (0 - 255).



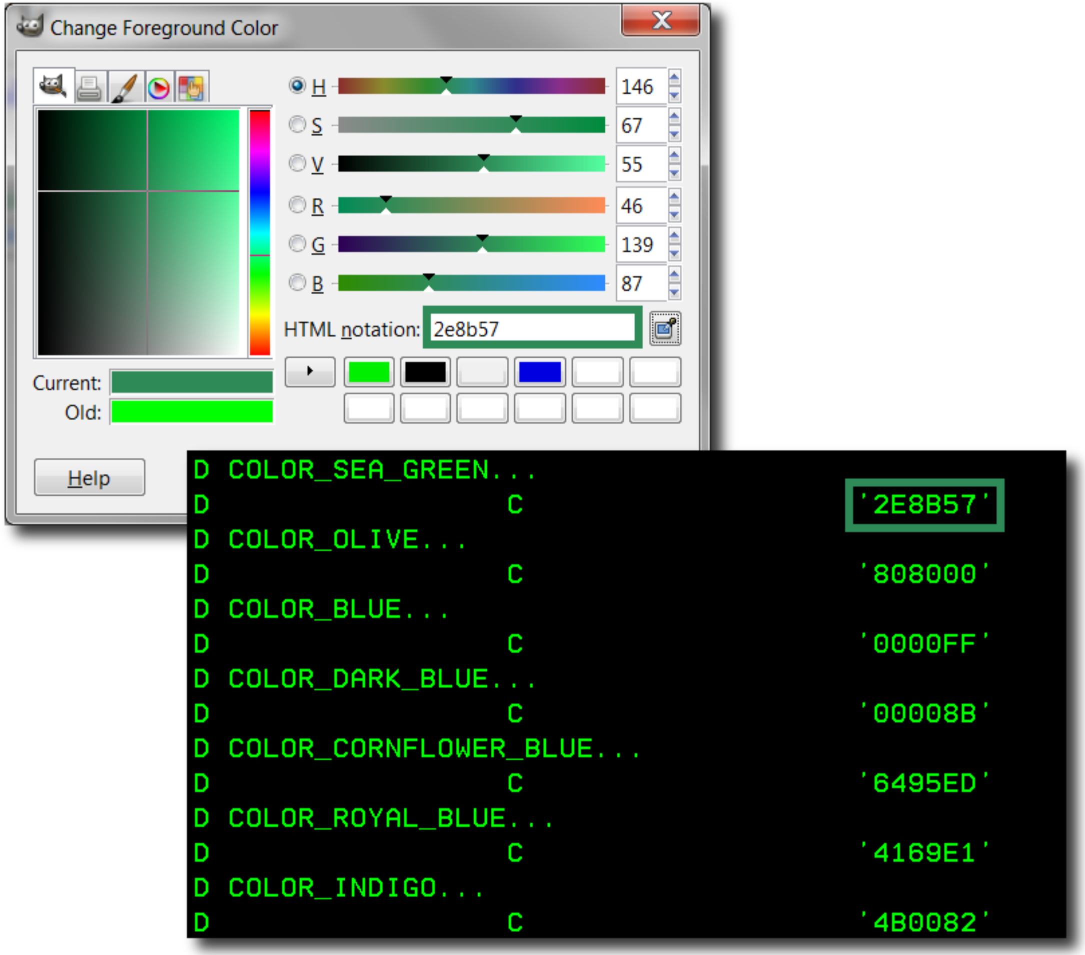
```
D JavaColor...
D                 S               O   CLASS(*JAVA
D                                     :'java.awt.Color')
```



```
D new_Color...
D                 PR                  like(JavaColor)
D                                     ExtProc(*JAVA
D                                     :'java.awt.Color'
D                                     :*CONSTRUCTOR)
D  argInt                             like(jInt)  value
```

Hexadecimal Color Codes

Graphical Tools and Constants



● H 146
○ S 67
○ V 55
○ R 46
○ G 139
○ B 87

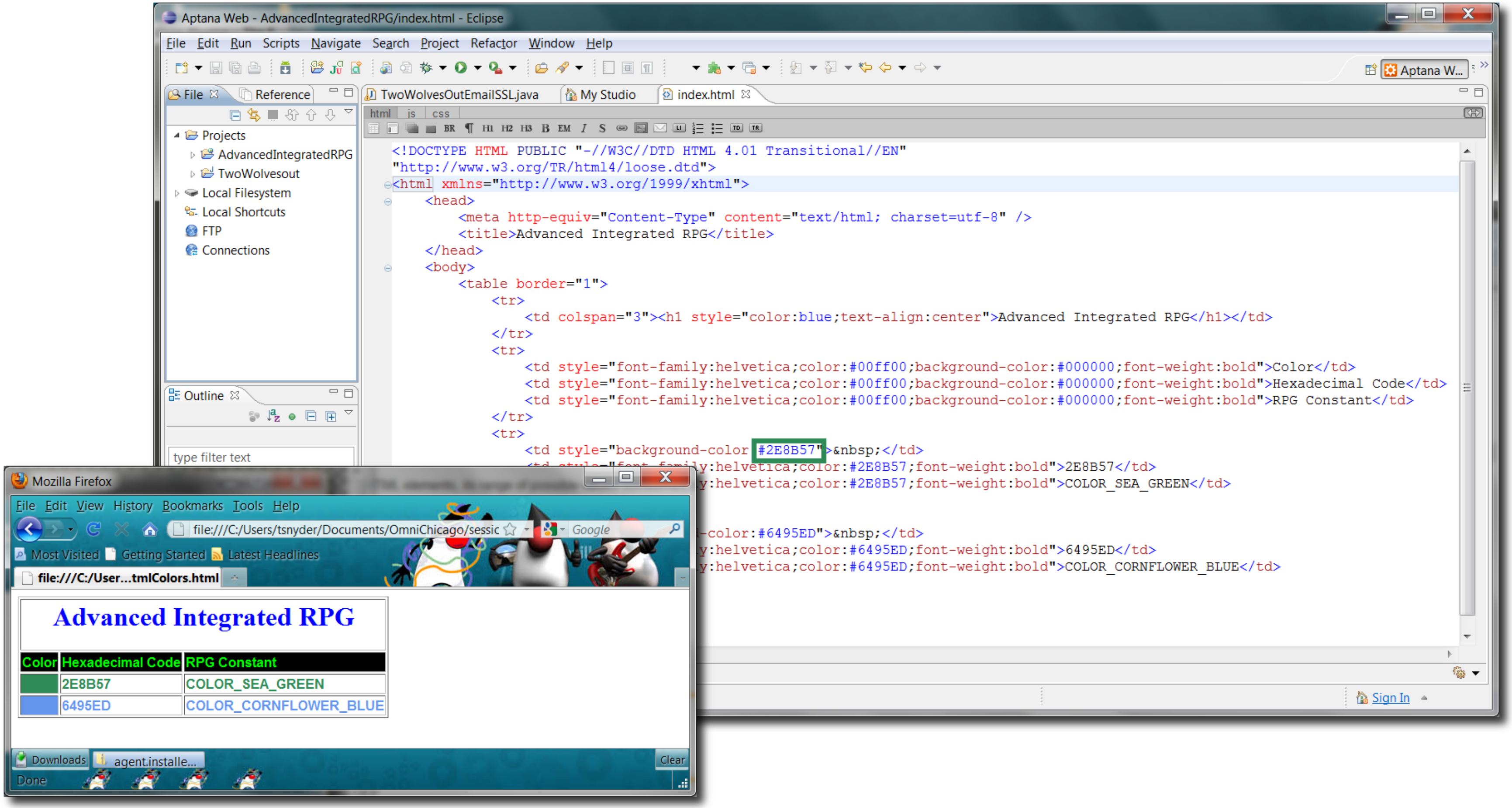
HTML notation: 2e8b57

Current:
Old:

```
D COLOR_SEA_GREEN...
D                C                   '2E8B57'
D COLOR_OLIVE...
D                C                   '808000'
D COLOR_BLUE...
D                C                   '0000FF'
D COLOR_DARK_BLUE...
D                C                   '00008B'
D COLOR_CORNFLOWER_BLUE...
D                C                   '6495ED'
D COLOR_ROYAL_BLUE...
D                C                   '4169E1'
D COLOR_INDIGO...
D                C                   '4B0082'
```

HTML using Hexadecimal Colors

Using the Same Codes as Java


Aptana Web - AdvancedIntegratedRPG/index.html - Eclipse
File Edit Run Scripts Navigate Search Project Refactor Window Help
Aptana W...
File
Reference
Projects
AdvancedIntegratedRPG
TwoWolvesout
Local Filesystem
Local Shortcuts
FTP
Connections
Outline
type filter text
TwoWolvesOutEmailSSL.java
My Studio
index.html
html
js
css
Sign In
Mozilla Firefox
File Edit View History Bookmarks Tools Help
file:///C:/Users/tsnyder/Documents/OmniChicago/sessic
Google
Most Visited
Getting Started
Latest Headlines
file:///C:/User...tmlColors.html
Downloads
agent.installe...
Clear
Done

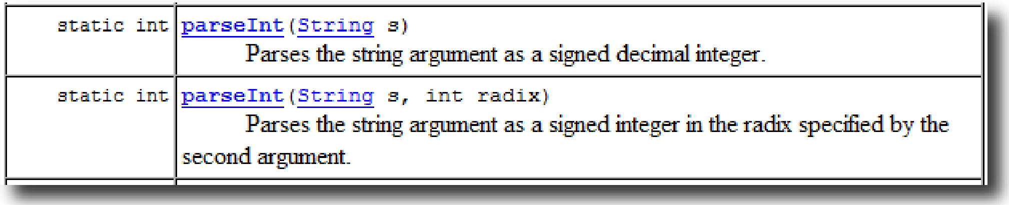
```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
        <title>Advanced Integrated RPG</title>
    </head>
    <body>
        <table border="1">
            <tr>
                <td colspan="3"><h1 style="color:blue;text-align:center">Advanced Integrated RPG</h1></td>
            </tr>
            <tr>
                <td style="font-family:helvetica;color:#00ff00;background-color:#000000;font-weight:bold">Color</td>
                <td style="font-family:helvetica;color:#00ff00;background-color:#000000;font-weight:bold">Hexadecimal Code</td>
                <td style="font-family:helvetica;color:#00ff00;background-color:#000000;font-weight:bold">RPG Constant</td>
            </tr>
            <tr>
                <td style="background-color #2E8B57">&nbsp;</td>
                <td style="font-family:helvetica;color:#2E8B57;font-weight:bold">2E8B57</td>
                                  y:helvetica;color:#2E8B57;font-weight:bold">COLOR_SEA_GREEN</td>



                                  -color:#6495ED">&nbsp;</td>
                                  y:helvetica;color:#6495ED;font-weight:bold">6495ED</td>
                                  y:helvetica;color:#6495ED;font-weight:bold">COLOR_CORNFLOWER_BLUE</td>
```

Advanced Integrated RPG

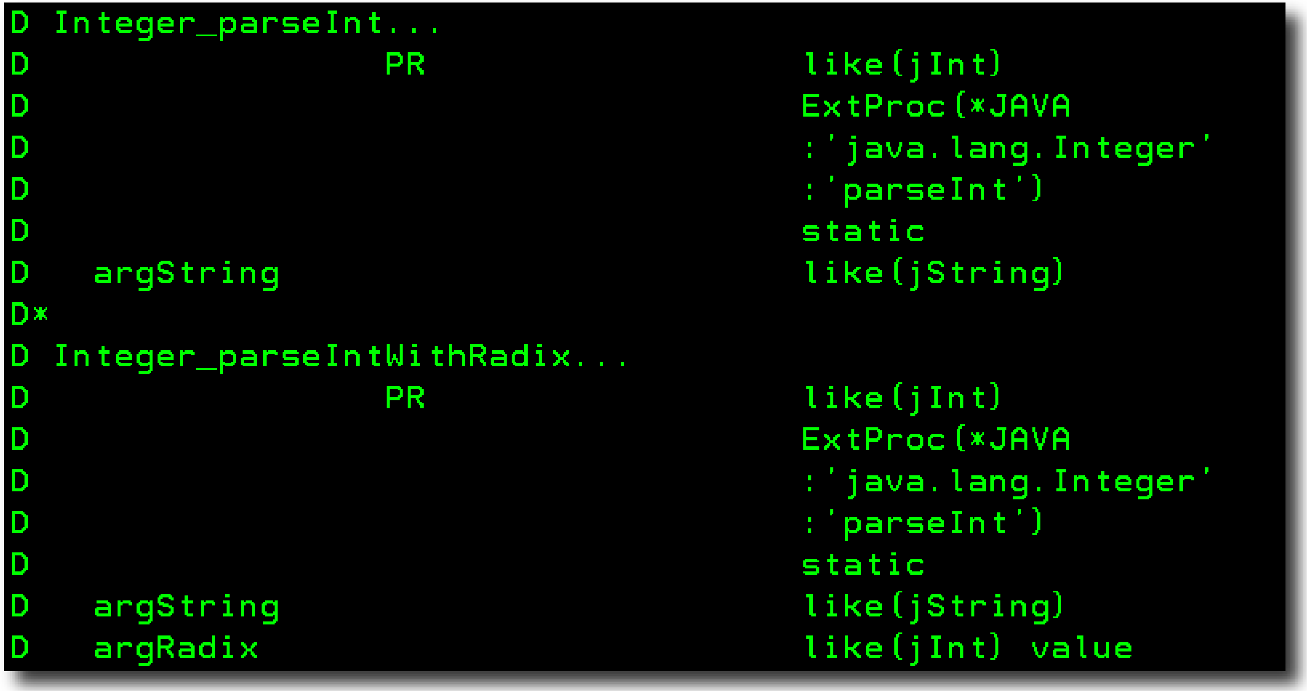
Color	Hexadecimal Code	RPG Constant
🟩	2E8B57	COLOR_SEA_GREEN
🟦	6495ED	COLOR_CORNFLOWER_BLUE

Integer parseInt Method

Static Method with Radix



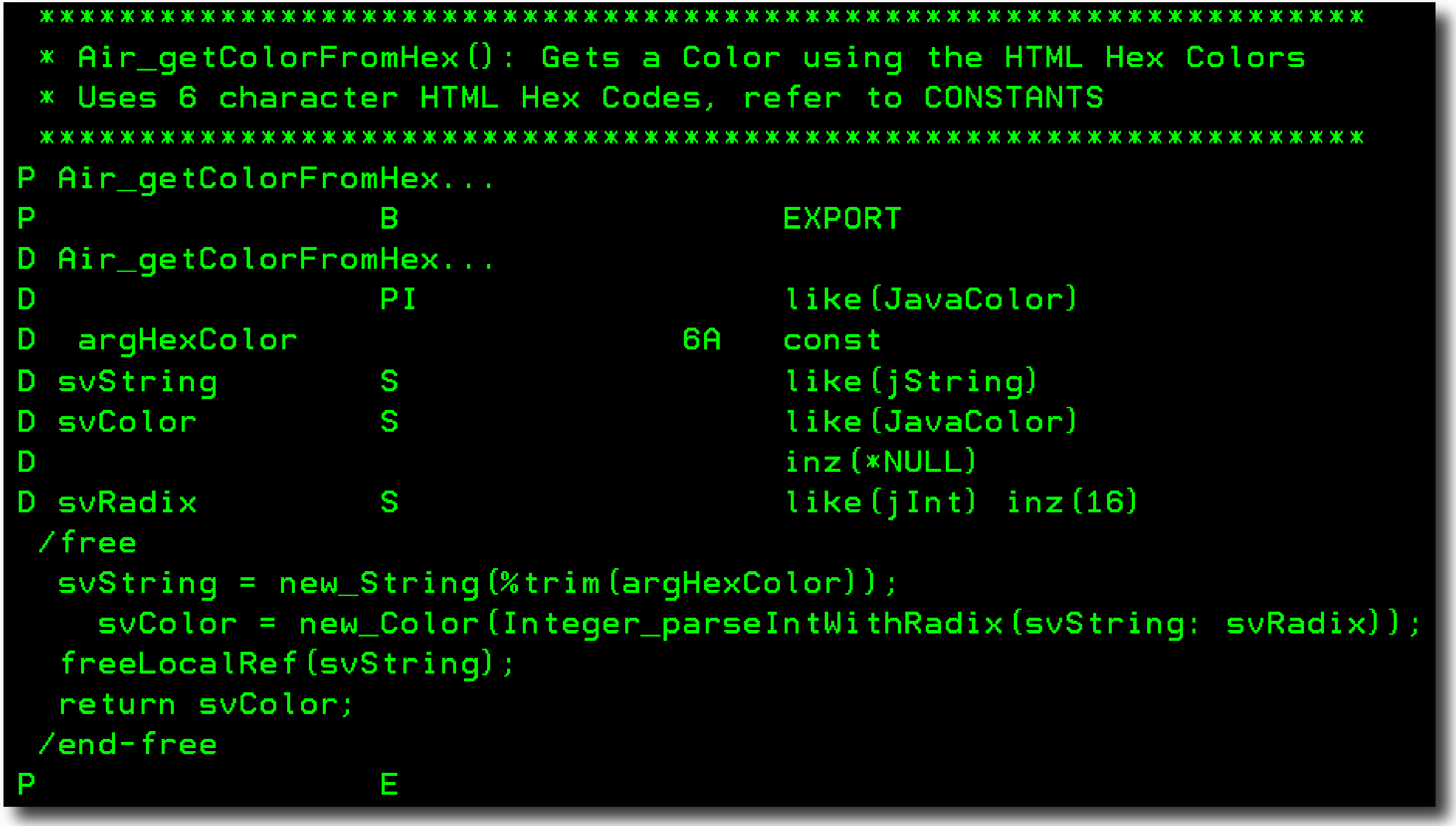
static int	parseInt(String s) Parses the string argument as a signed decimal integer.
static int	parseInt(String s, int radix) Parses the string argument as a signed integer in the radix specified by the second argument.



```
D Integer_parseInt...
D                 PR                  like(jInt)
D                                     ExtProc(*JAVA
D                                     :'java.lang.Integer'
D                                     :'parseInt')
D                                     static
D   argString                         like(jString)
D*
D Integer_parseIntWithRadix...
D                 PR                  like(jInt)
D                                     ExtProc(*JAVA
D                                     :'java.lang.Integer'
D                                     :'parseInt')
D                                     static
D   argString                         like(jString)
D   argRadix                          like(jInt) value
```

Air_getColorFromHex Procedure

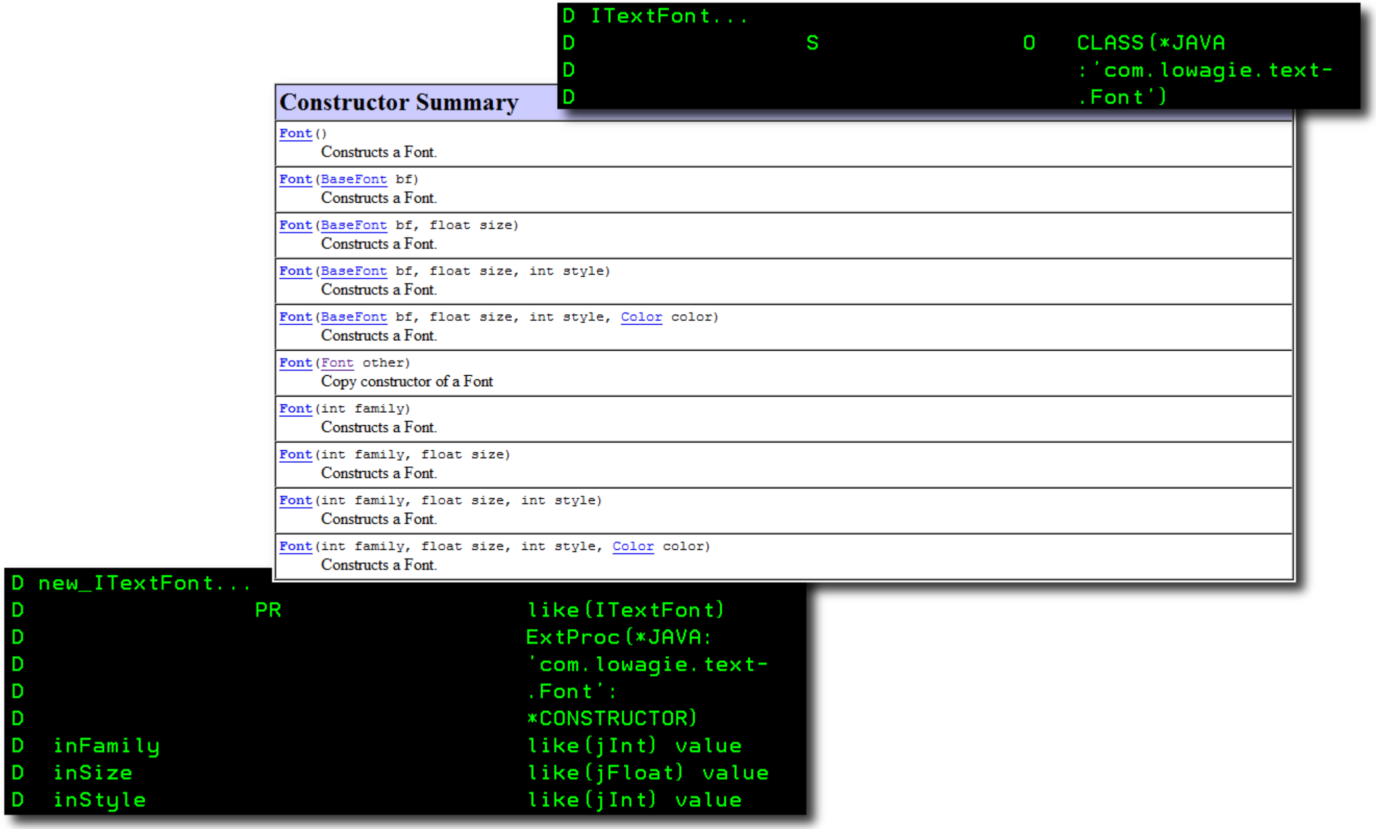
Converting Hexadecimal String to Integer



```
 ******************************************************************
 * Air_getColorFromHex(): Gets a Color using the HTML Hex Colors
 * Uses 6 character HTML Hex Codes, refer to CONSTANTS
 ******************************************************************
P Air_getColorFromHex...
P                 B                   EXPORT
D Air_getColorFromHex...
D                 PI                  like(JavaColor)
D  argHexColor                   6A   const
D svString        S                   like(jString)
D svColor         S                   like(JavaColor)
D                                     inz(*NULL)
D svRadix         S                   like(jInt) inz(16)
 /free
  svString = new_String(%trim(argHexColor));
    svColor = new_Color(Integer_parseIntWithRadix(svString: svRadix));
  freeLocalRef(svString);
  return svColor;
 /end-free
P                 E
```

iText Font

Reference Variable and Constructor



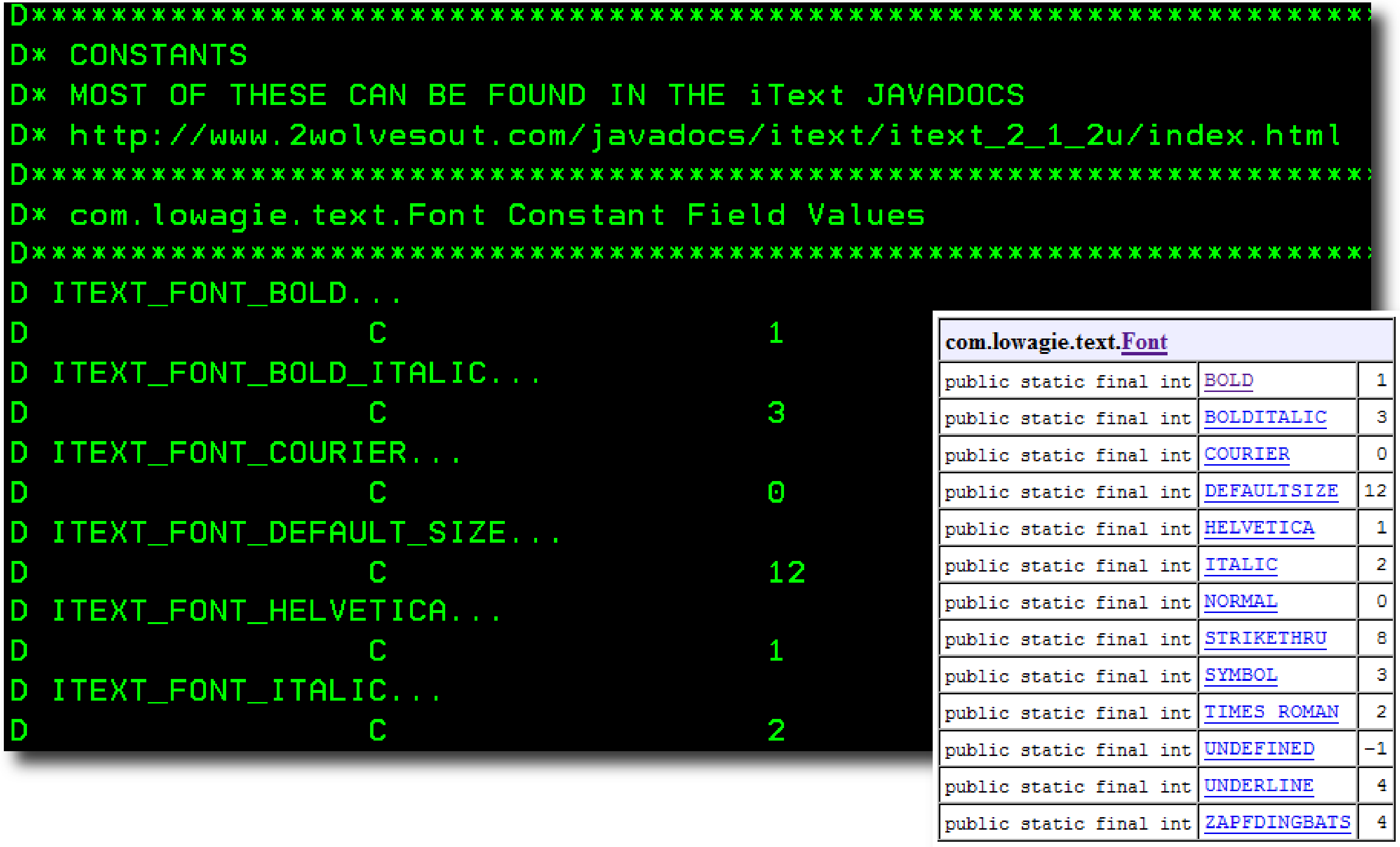
```
D ITextFont...
D                  S               O   CLASS(*JAVA
D                                      :'com.lowagie.text-
D                                      .Font')
```

Constructor Summary
Font() Constructs a Font.
Font(BaseFont bf) Constructs a Font.
Font(BaseFont bf, float size) Constructs a Font.
Font(BaseFont bf, float size, int style) Constructs a Font.
Font(BaseFont bf, float size, int style, Color color) Constructs a Font.
Font(Font other) Copy constructor of a Font
Font(int family) Constructs a Font.
Font(int family, float size) Constructs a Font.
Font(int family, float size, int style) Constructs a Font.
Font(int family, float size, int style, Color color) Constructs a Font.

```
D new_ITextFont...
D                 PR                    like(ITextFont)
D                                       ExtProc(*JAVA:
D                                       'com.lowagie.text-
D                                       .Font':
D                                       *CONSTRUCTOR)
D  inFamily                             like(jInt) value
D  inSize                               like(jFloat) value
D  inStyle                              like(jInt) value
```

Font Constants

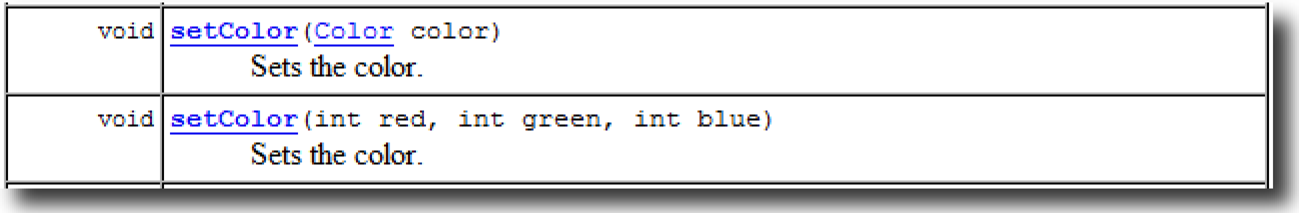
RPG Constants and JavaDoc



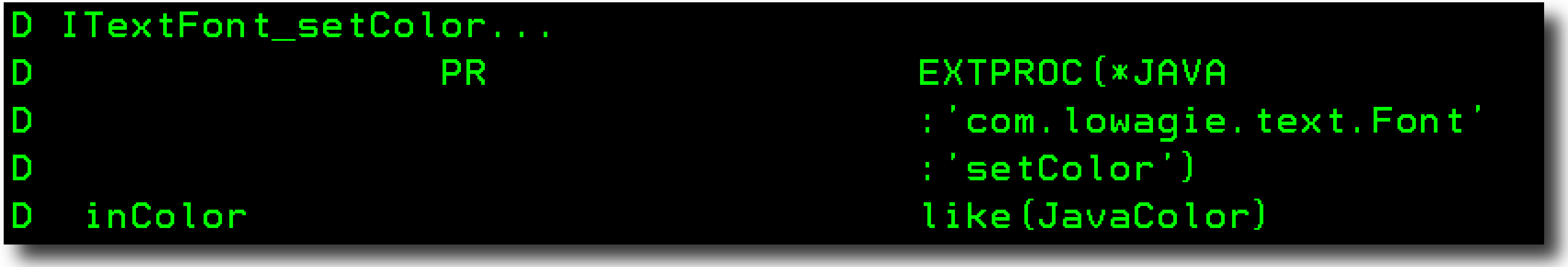
```
D*******************************************************************
D* CONSTANTS
D* MOST OF THESE CAN BE FOUND IN THE iText JAVADOCS
D* http://www.2wolvesout.com/javadocs/itext/itext_2_1_2u/index.html
D*******************************************************************
D* com.lowagie.text.Font Constant Field Values
D*******************************************************************
D ITEXT_FONT_BOLD...
D                 C                   1
D ITEXT_FONT_BOLD_ITALIC...
D                 C                   3
D ITEXT_FONT_COURIER...
D                 C                   0
D ITEXT_FONT_DEFAULT_SIZE...
D                 C                   12
D ITEXT_FONT_HELVETICA...
D                 C                   1
D ITEXT_FONT_ITALIC...
D                 C                   2
```

com.lowagie.text.Font		
public static final int	BOLD	1
public static final int	BOLDITALIC	3
public static final int	COURIER	0
public static final int	DEFAULTSIZE	12
public static final int	HELVETICA	1
public static final int	ITALIC	2
public static final int	NORMAL	0
public static final int	STRIKETHRU	8
public static final int	SYMBOL	3
public static final int	TIMES_ROMAN	2
public static final int	UNDEFINED	-1
public static final int	UNDERLINE	4
public static final int	ZAPFDINGBATS	4

iText Font setColor Method



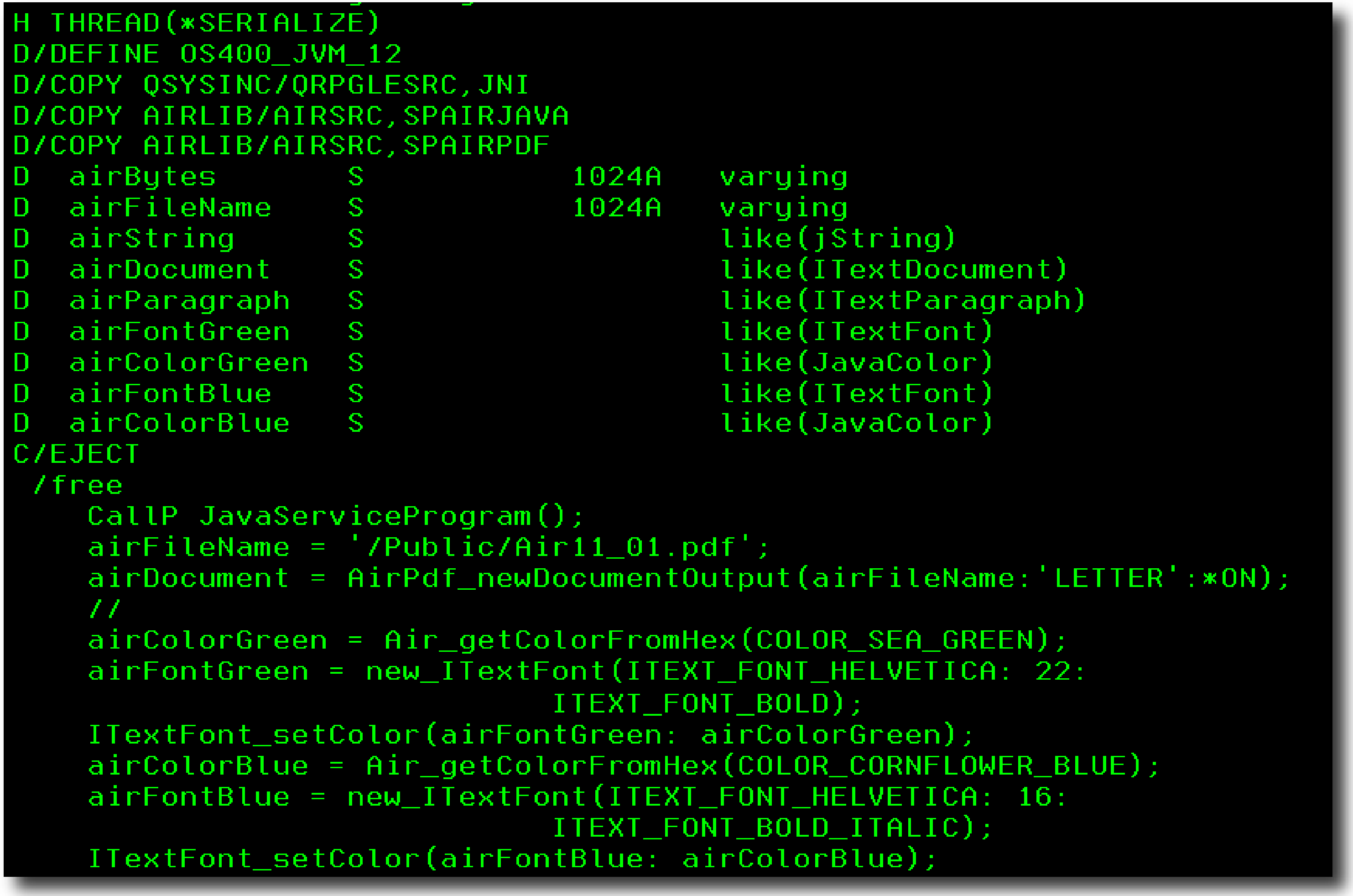
void	setColor(Color color) Sets the color.
void	setColor(int red, int green, int blue) Sets the color.



```
D ITextFont_setColor...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.Font'
D                                     :'setColor')
D  inColor                            like(JavaColor)
```

PDF Fonts and Colors

Creating the Fonts in RPG

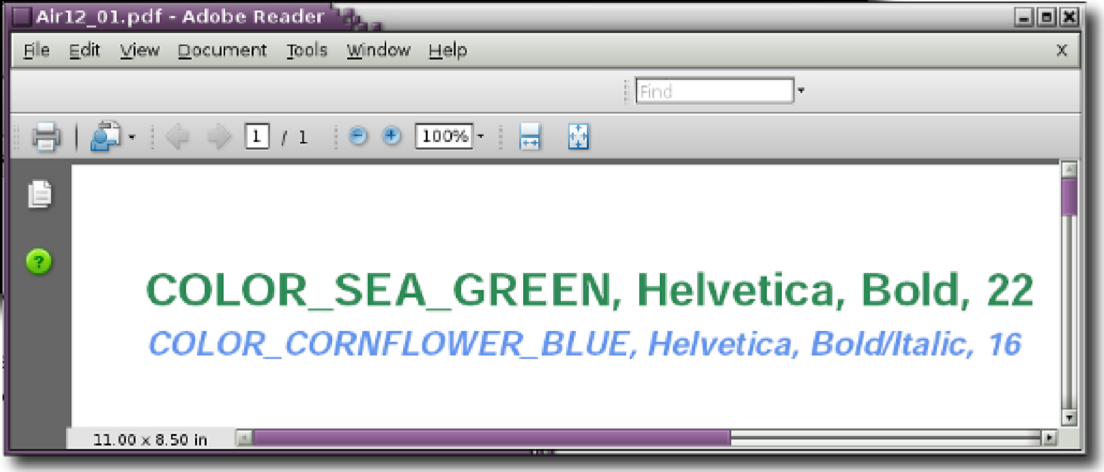


```
H THREAD(*SERIALIZE)
D/DEFINE OS400_JVM_12
D/COPY QSYSINC/QRPGLESRC,JNI
D/COPY AIRLIB/AIRSRC,SPAIRJAVA
D/COPY AIRLIB/AIRSRC,SPAIRPDF
D  airBytes       S           1024A   varying
D  airFileName    S           1024A   varying
D  airString      S                   like(jString)
D  airDocument    S                   like(ITextDocument)
D  airParagraph   S                   like(ITextParagraph)
D  airFontGreen   S                   like(ITextFont)
D  airColorGreen  S                   like(JavaColor)
D  airFontBlue    S                   like(ITextFont)
D  airColorBlue   S                   like(JavaColor)
C/EJECT
 /free
    CallP JavaServiceProgram();
    airFileName = '/Public/Air11_01.pdf';
    airDocument = AirPdf_newDocumentOutput(airFileName:'LETTER':*ON);
    //
    airColorGreen = Air_getColorFromHex(COLOR_SEA_GREEN);
    airFontGreen = new_ITextFont(ITEXT_FONT_HELVETICA: 22:
                             ITEXT_FONT_BOLD);
    ITextFont_setColor(airFontGreen: airColorGreen);
    airColorBlue = Air_getColorFromHex(COLOR_CORNFLOWER_BLUE);
    airFontBlue = new_ITextFont(ITEXT_FONT_HELVETICA: 16:
                             ITEXT_FONT_BOLD_ITALIC);
    ITextFont_setColor(airFontBlue: airColorBlue);
```

PDF Fonts and Colors

Assigning the Fonts to the Paragraphs

```
   airParagraph = AirPdf_newParagraph(
                  'COLOR_SEA_GREEN, Helvetica, Bold, 22':
                  airFontGreen);
   ITextDocument_add(airDocument: airParagraph);
   //
   airParagraph = AirPdf_newParagraph(
                  'COLOR_CORNFLOWER_BLUE, Helvetica, Bold/Italic, 16':
                  airFontBlue);
   ITextDocument_add(airDocument: airParagraph);
   //
   ITextDocument_close(airDocument);
   // Clean Up
   freeLocalRef(airParagraph);
   freeLocalRef(airDocument);
   freeLocalRef(airFontGreen);
   freeLocalRef(airFontBlue);
   freeLocalRef(airColorGreen);
   freeLocalRef(airColorBlue);
   *inlr = *ON;
/end-free
```

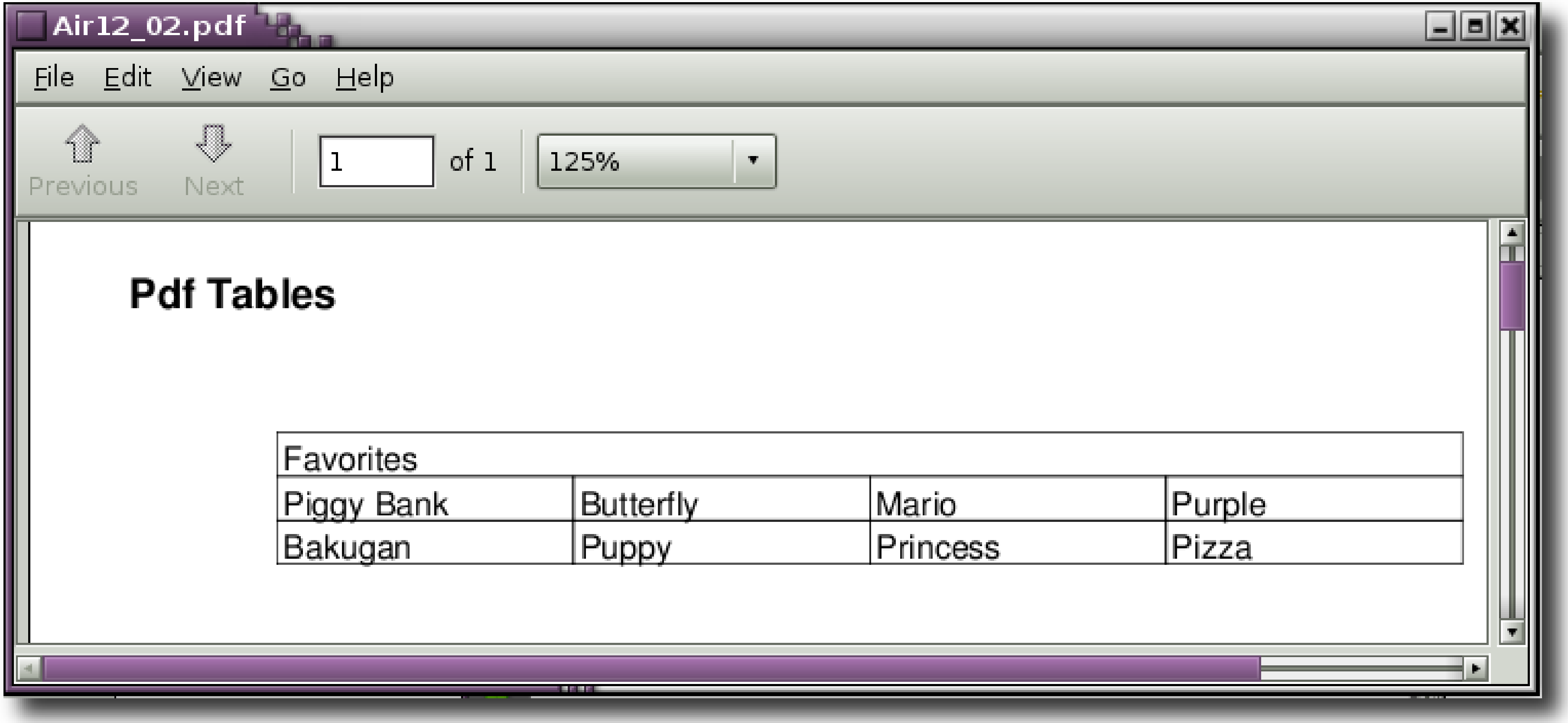

Air12_01.pdf - Adobe Reader
File Edit View Document Tools Window Help
Find
1 / 1
100%
11.00 x 8.50 in

COLOR_SEA_GREEN, Helvetica, Bold, 22

COLOR_CORNFLOWER_BLUE, Helvetica, Bold/Italic, 16

iText Table

Creating a PDF Table with RPG

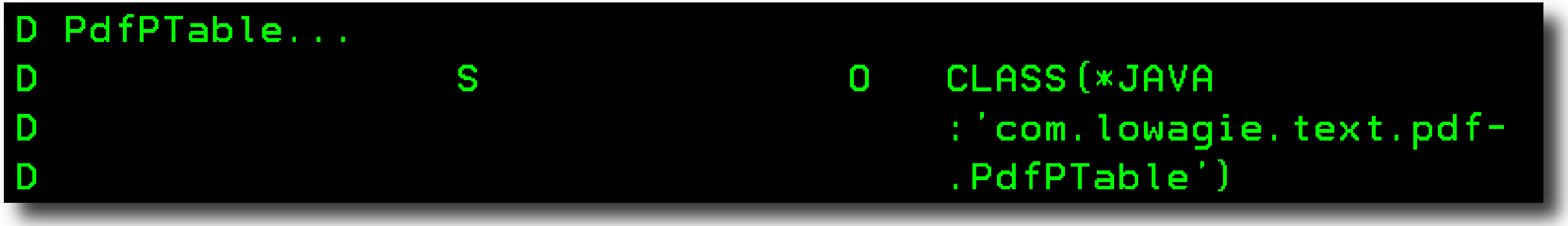


Pdf Tables

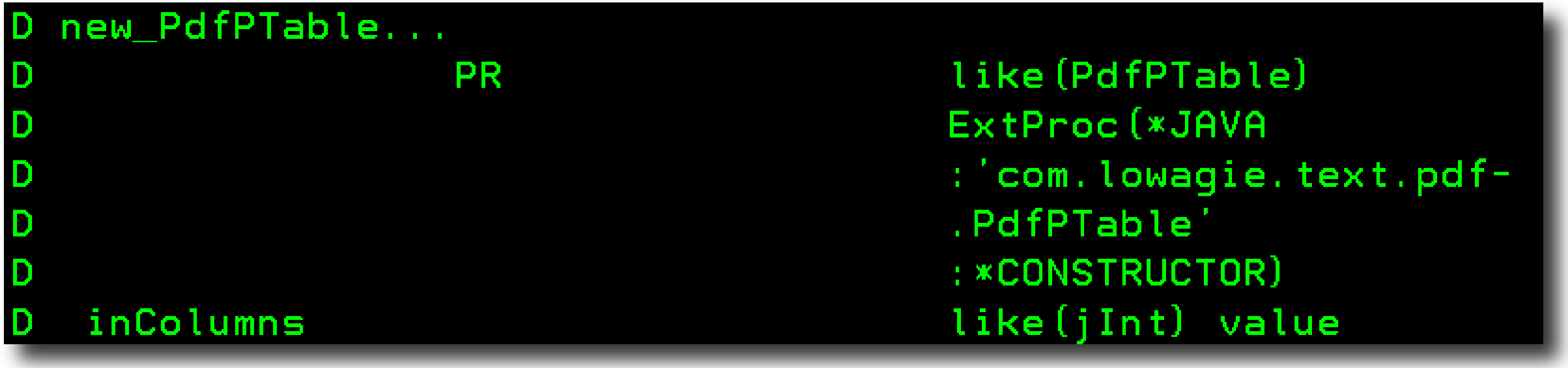
Favorites			
Piggy Bank	Butterfly	Mario	Purple
Bakugan	Puppy	Princess	Pizza

PdfPTable Class

Reference Variable and Constructor



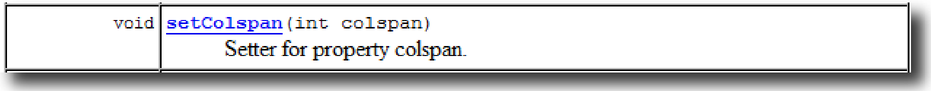
```
D PdfPTable...
D                 S               O   CLASS(*JAVA
D                                     :'com.lowagie.text.pdf-
D                                     .PdfPTable')
```



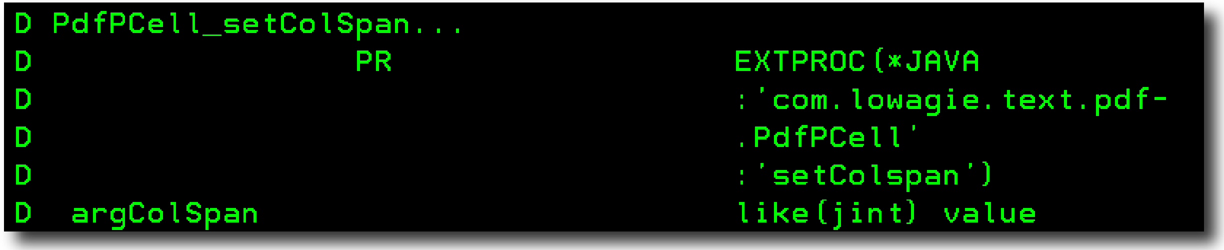
```
D new_PdfPTable...
D                 PR                  like(PdfPTable)
D                                     ExtProc(*JAVA
D                                     :'com.lowagie.text.pdf-
D                                     .PdfPTable'
D                                     :*CONSTRUCTOR)
D  inColumns                          like(jInt) value
```

PdfPCell setColspan Method

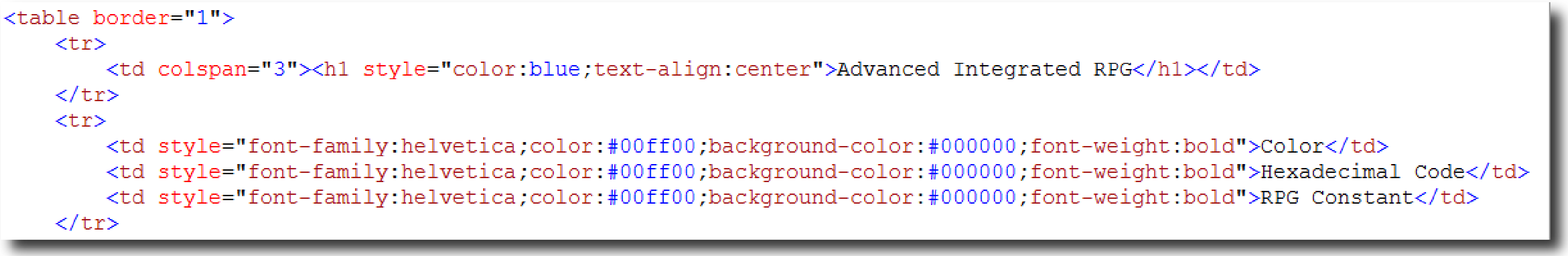
One Cell Spanning Multiple Table Columns



void	setColspan(int colspan) Setter for property colspan.



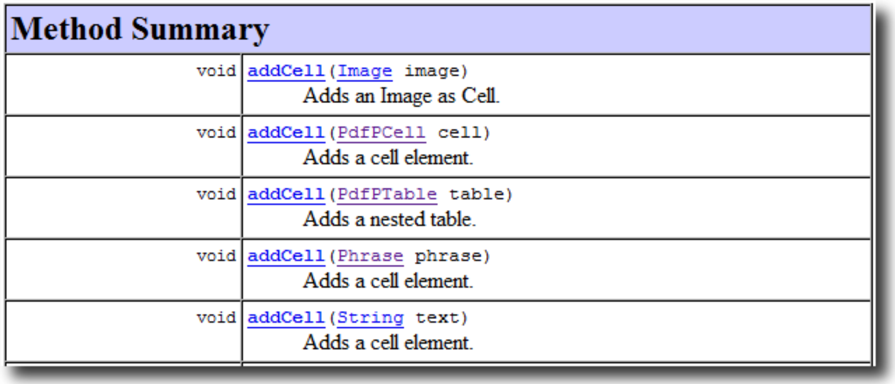
```
D PdfPCell_setColSpan...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.pdf-
D                                     .PdfPCell'
D                                     :'setColspan')
D  argColSpan                         like(jint) value
```



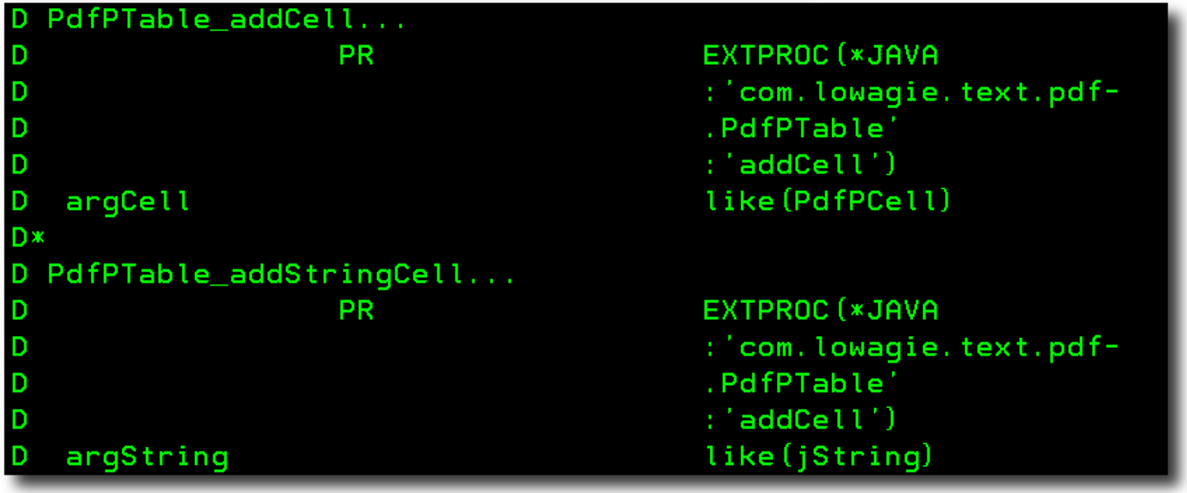
```
<table border="1">
    <tr>
        <td colspan="3"><h1 style="color:blue;text-align:center">Advanced Integrated RPG</h1></td>
    </tr>
    <tr>
        <td style="font-family:helvetica;color:#00ff00;background-color:#000000;font-weight:bold">Color</td>
        <td style="font-family:helvetica;color:#00ff00;background-color:#000000;font-weight:bold">Hexadecimal Code</td>
        <td style="font-family:helvetica;color:#00ff00;background-color:#000000;font-weight:bold">RPG Constant</td>
    </tr>
```

PdfPTable addCell Method

Adding Cells to a Table



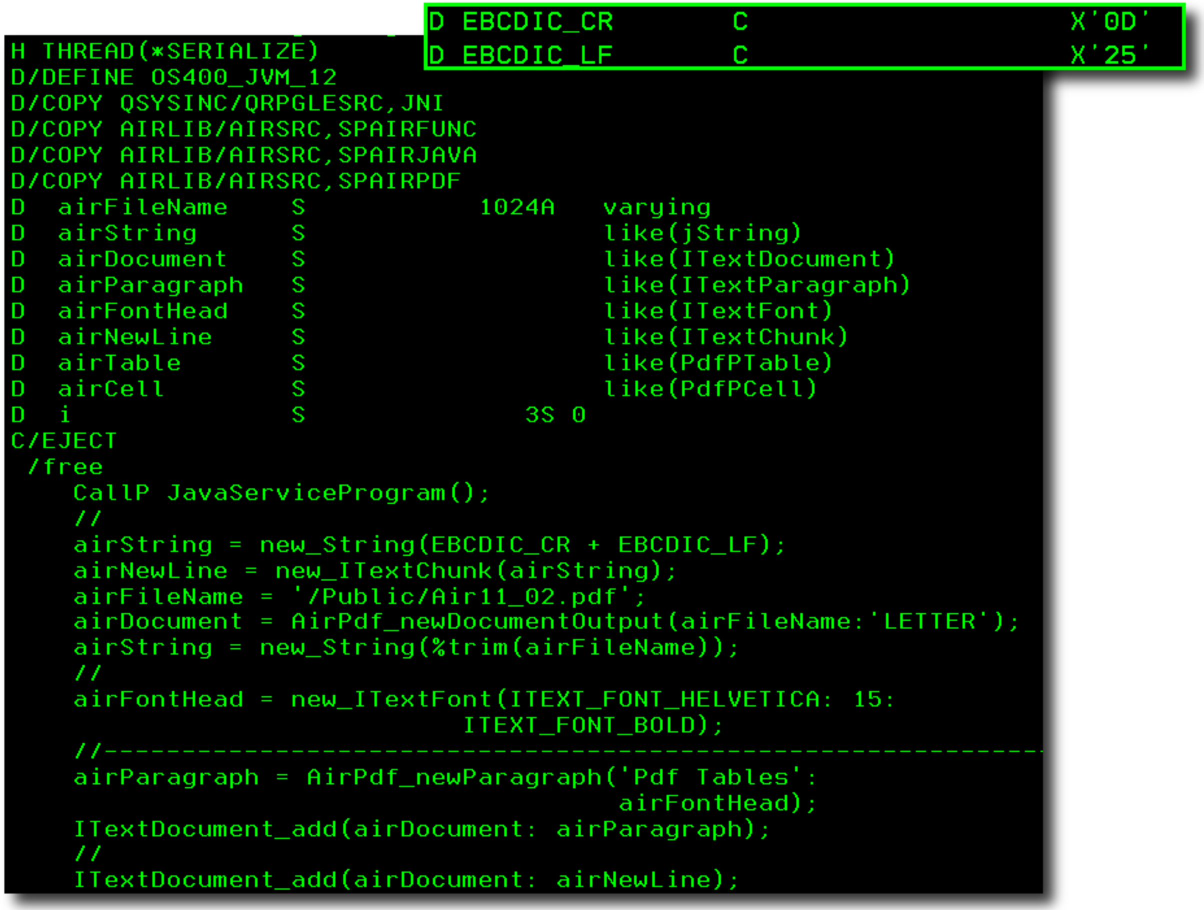
Method Summary	
void	addCell(Image image) Adds an Image as Cell.
void	addCell(PdfPCell cell) Adds a cell element.
void	addCell(PdfPTable table) Adds a nested table.
void	addCell(Phrase phrase) Adds a cell element.
void	addCell(String text) Adds a cell element.



```
D PdfPTable_addCell...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.pdf-
D                                     .PdfPTable'
D                                     :'addCell')
D  argCell                            like(PdfPCell)
D*
D PdfPTable_addStringCell...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.pdf-
D                                     .PdfPTable'
D                                     :'addCell')
D  argString                          like(jString)
```

Creating a PDF Table

Variables, Chunks and Text

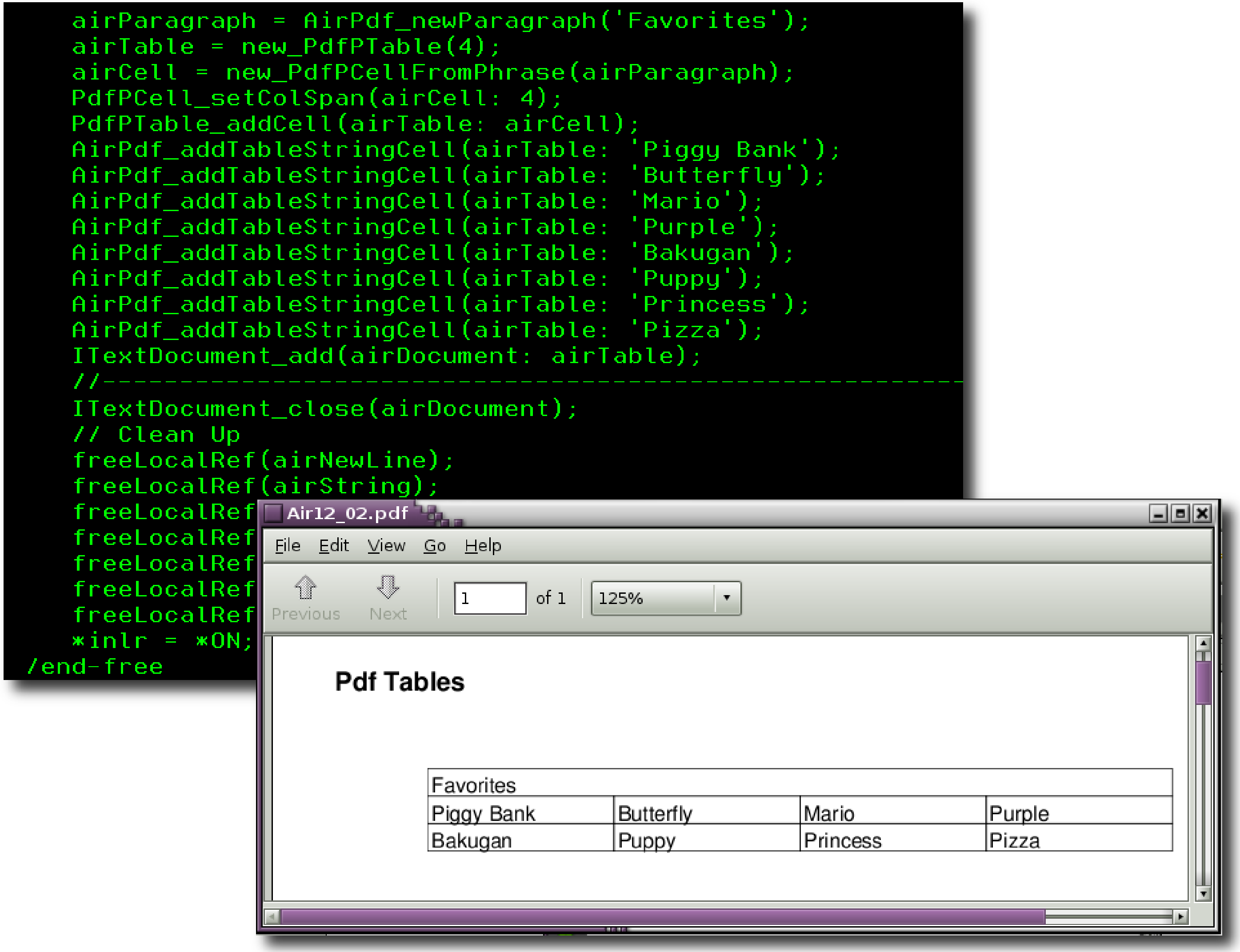


```
D EBCDIC_CR          C                    X'0D'
D EBCDIC_LF          C                    X'25'
```

```
H THREAD(*SERIALIZE)
D/DEFINE OS400_JVM_12
D/COPY QSYSINC/QRPGLESRC,JNI
D/COPY AIRLIB/AIRSRC,SPAIRFUNC
D/COPY AIRLIB/AIRSRC,SPAIRJAVA
D/COPY AIRLIB/AIRSRC,SPAIRPDF
D  airFileName    S           1024A   varying
D  airString      S                   like(jString)
D  airDocument    S                   like(ITextDocument)
D  airParagraph   S                   like(ITextParagraph)
D  airFontHead    S                   like(ITextFont)
D  airNewLine     S                   like(ITextChunk)
D  airTable       S                   like(PdfPTable)
D  airCell        S                   like(PdfPCell)
D  i              S              3S 0
C/EJECT
 /free
    CallP JavaServiceProgram();
    //
    airString = new_String(EBCDIC_CR + EBCDIC_LF);
    airNewLine = new_ITextChunk(airString);
    airFileName = '/Public/Air11_02.pdf';
    airDocument = AirPdf_newDocumentOutput(airFileName:'LETTER');
    airString = new_String(%trim(airFileName));
    //
    airFontHead = new_ITextFont(ITEXT_FONT_HELVETICA: 15:
                             ITEXT_FONT_BOLD);
    //------------------------------------------------------------
    airParagraph = AirPdf_newParagraph('Pdf Tables':
                                       airFontHead);
    ITextDocument_add(airDocument: airParagraph);
    //
    ITextDocument_add(airDocument: airNewLine);
```

Creating a PDF Table

Create Table and Add Cells



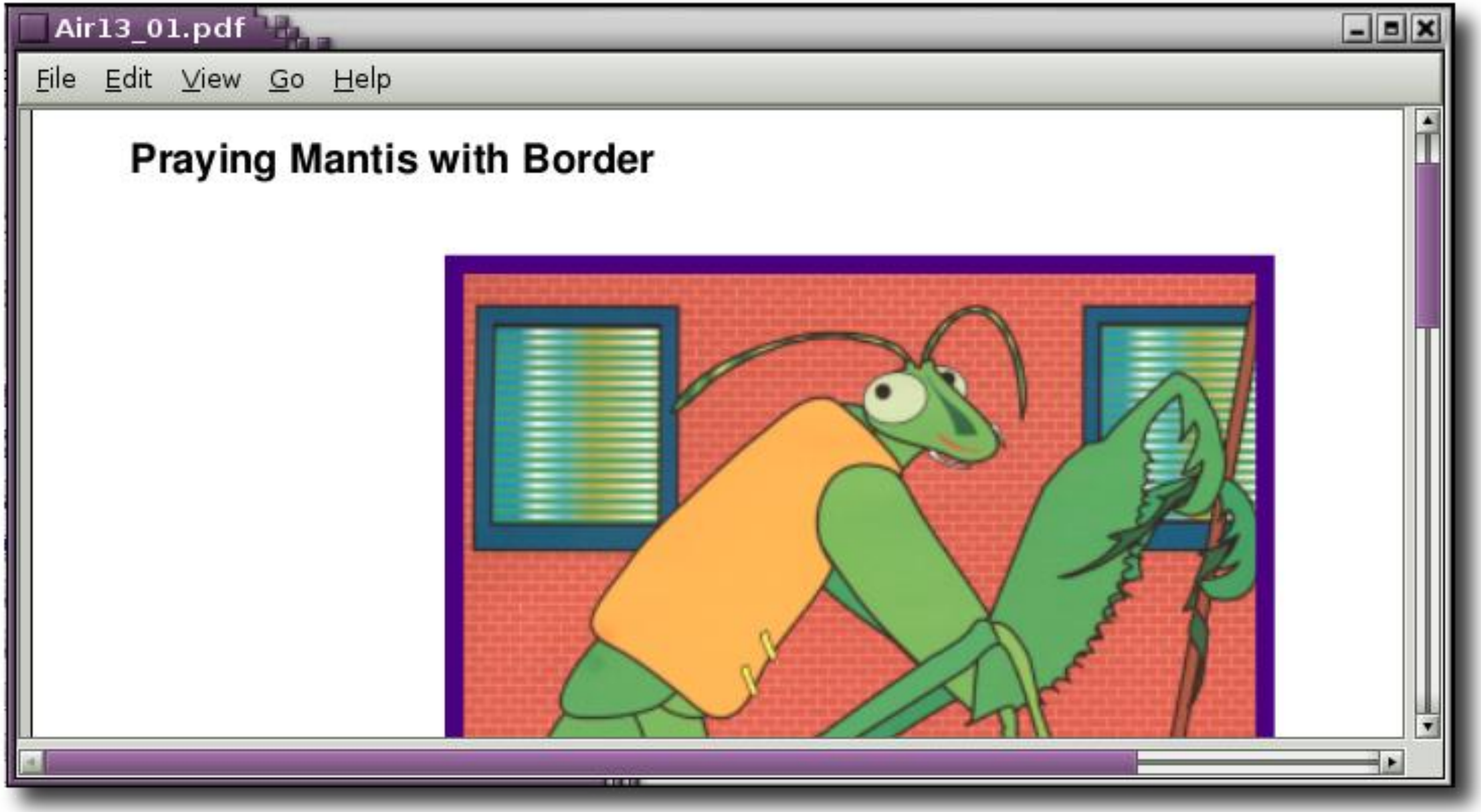
```
    airParagraph = AirPdf_newParagraph('Favorites');
    airTable = new_PdfPTable(4);
    airCell = new_PdfPCellFromPhrase(airParagraph);
    PdfPCell_setColSpan(airCell: 4);
    PdfPTable_addCell(airTable: airCell);
    AirPdf_addTableStringCell(airTable: 'Piggy Bank');
    AirPdf_addTableStringCell(airTable: 'Butterfly');
    AirPdf_addTableStringCell(airTable: 'Mario');
    AirPdf_addTableStringCell(airTable: 'Purple');
    AirPdf_addTableStringCell(airTable: 'Bakugan');
    AirPdf_addTableStringCell(airTable: 'Puppy');
    AirPdf_addTableStringCell(airTable: 'Princess');
    AirPdf_addTableStringCell(airTable: 'Pizza');
    ITextDocument_add(airDocument: airTable);
    //----------------------------------------------------------
    ITextDocument_close(airDocument);
    // Clean Up
    freeLocalRef(airNewLine);
    freeLocalRef(airString);
    freeLocalRef
    freeLocalRef
    freeLocalRef
    freeLocalRef
    freeLocalRef
    *inlr = *ON;
 /end-free
```

Pdf Tables

Favorites			
Piggy Bank	Butterfly	Mario	Purple
Bakugan	Puppy	Princess	Pizza

iText Images

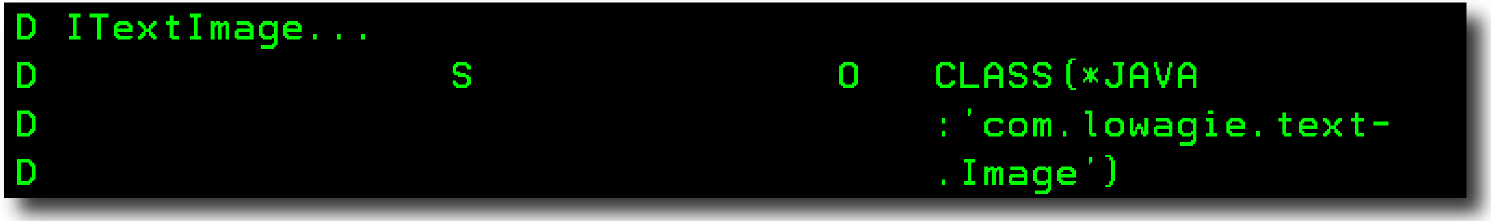
Adding Images to PDFs



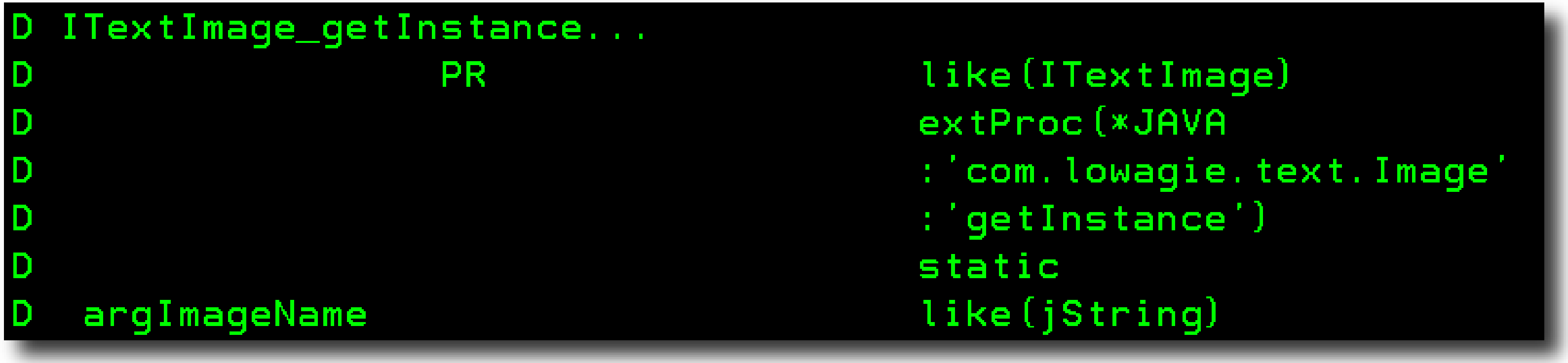
Praying Mantis with Border

iText Image Class

Reference Variable and Constructor



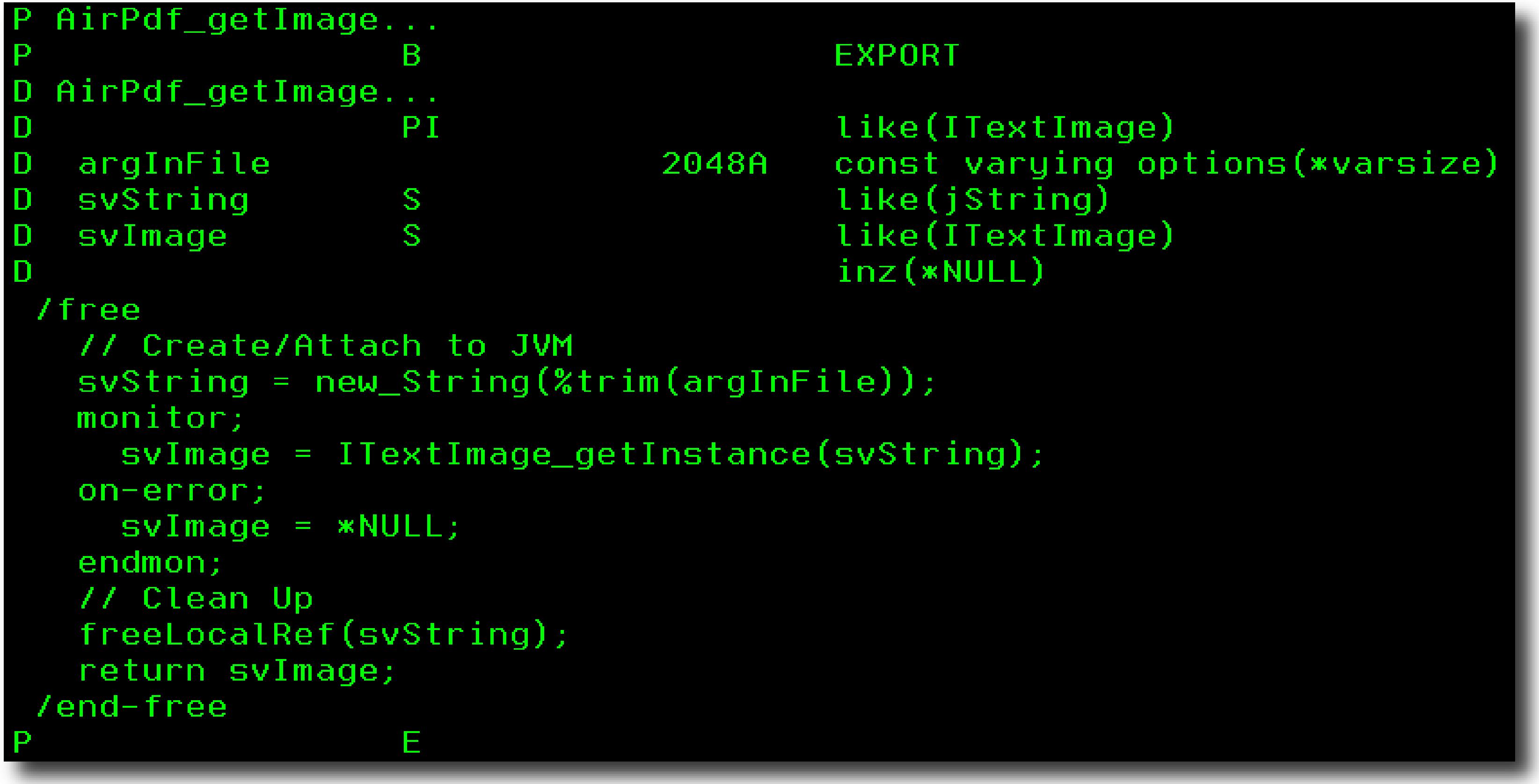
```
D ITextImage...
D                 S                O  CLASS(*JAVA
D                                     :'com.lowagie.text-
D                                     .Image')
```



```
D ITextImage_getInstance...
D                 PR                  like(ITextImage)
D                                     extProc(*JAVA
D                                     :'com.lowagie.text.Image'
D                                     :'getInstance')
D                                     static
D  argImageName                       like(jString)
```

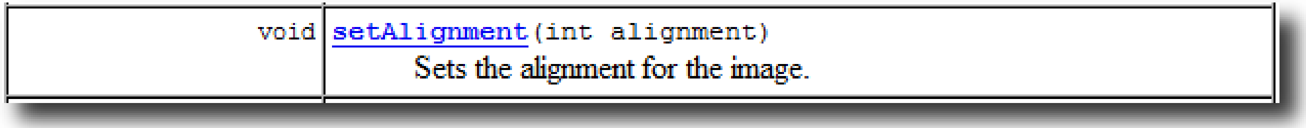
AirPdf_getImage Procedure

String Conversion and getInstance

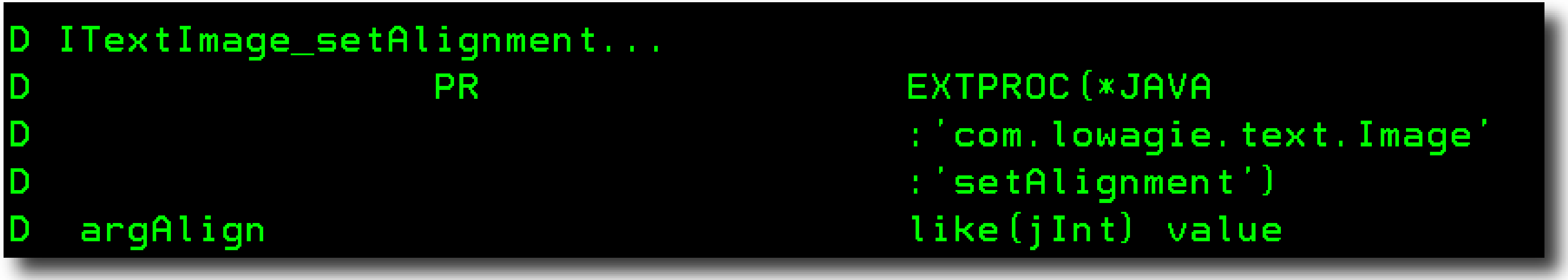


```
P AirPdf_getImage...
P                 B                   EXPORT
D AirPdf_getImage...
D                 PI                  like(ITextImage)
D  argInFile                  2048A   const varying options(*varsize)
D  svString       S                   like(jString)
D  svImage        S                   like(ITextImage)
D                                     inz(*NULL)
 /free
   // Create/Attach to JVM
   svString = new_String(%trim(argInFile));
   monitor;
     svImage = ITextImage_getInstance(svString);
   on-error;
     svImage = *NULL;
   endmon;
   // Clean Up
   freeLocalRef(svString);
   return svImage;
 /end-free
P                 E
```

iText Image setAlignment Method



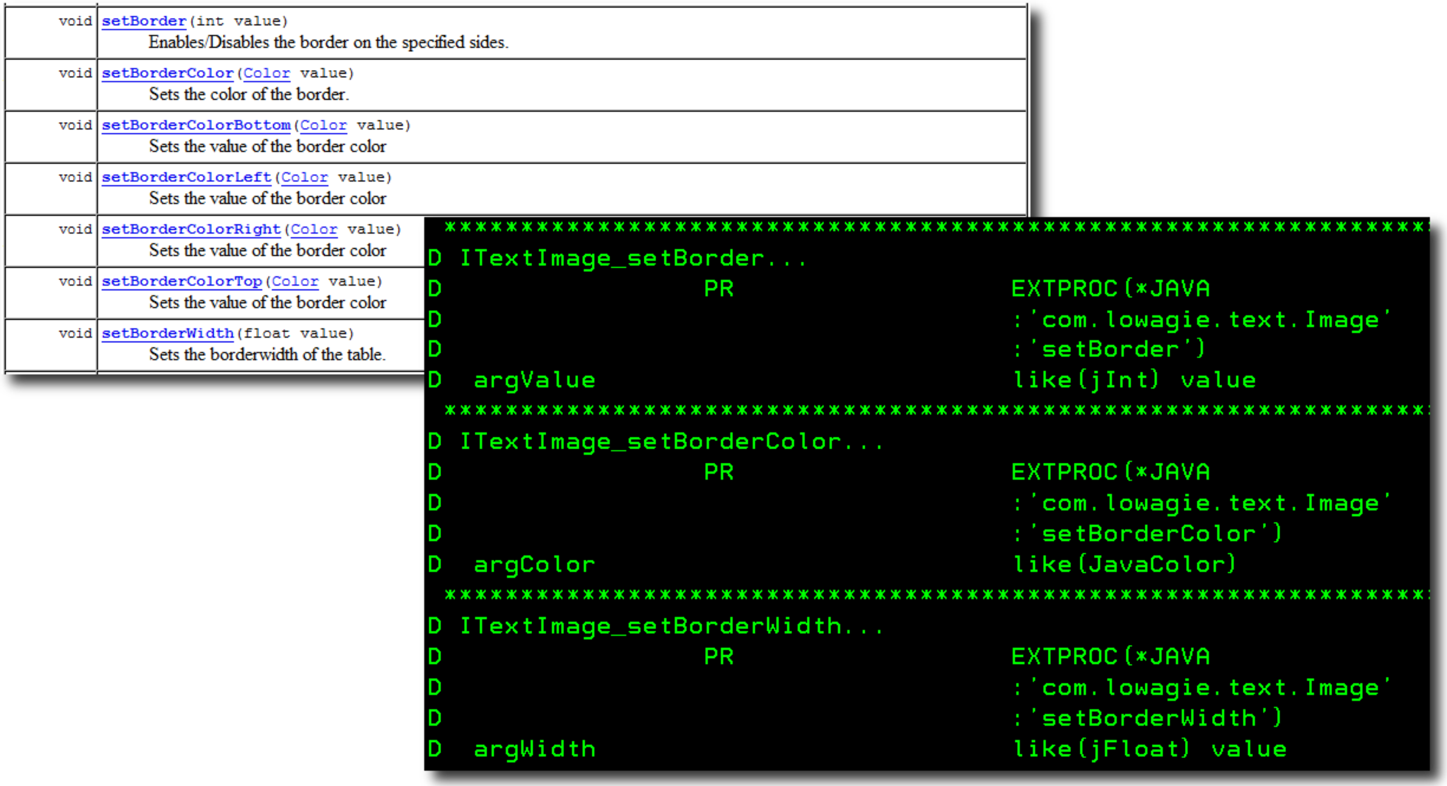
void	setAlignment(int alignment) Sets the alignment for the image.



```
D ITextImage_setAlignment...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.Image'
D                                     :'setAlignment')
D  argAlign                           like(jInt) value
```

iText Image setBorder Methods

Set Border Color and Width

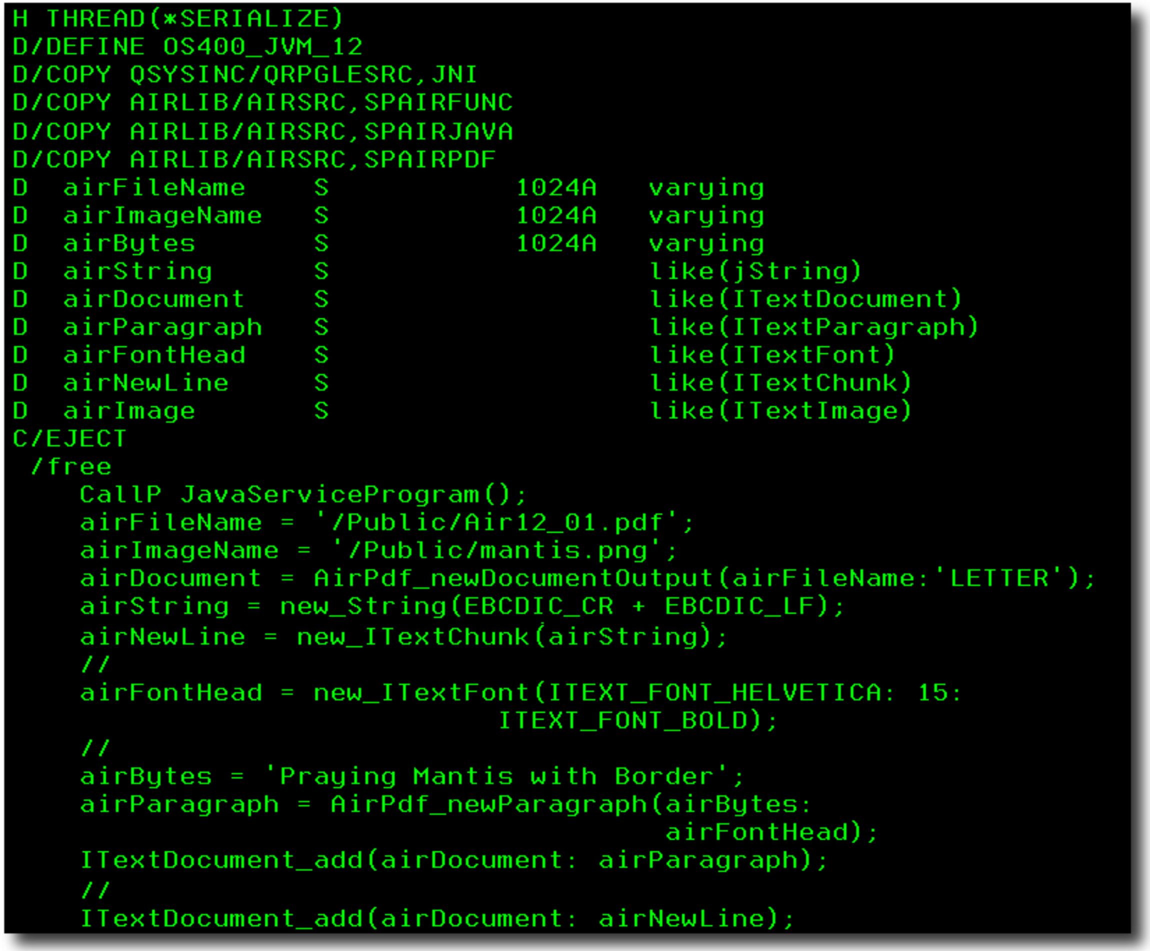


void	setBorder(int value) Enables/Disables the border on the specified sides.
void	setBorderColor(Color value) Sets the color of the border.
void	setBorderColorBottom(Color value) Sets the value of the border color
void	setBorderColorLeft(Color value) Sets the value of the border color
void	setBorderColorRight(Color value) Sets the value of the border color
void	setBorderColorTop(Color value) Sets the value of the border color
void	setBorderWidth(float value) Sets the borderwidth of the table.

```
 ******************************************************************
D ITextImage_setBorder...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.Image'
D                                     :'setBorder')
D  argValue                           like(jInt) value
 ******************************************************************
D ITextImage_setBorderColor...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.Image'
D                                     :'setBorderColor')
D  argColor                           like(JavaColor)
 ******************************************************************
D ITextImage_setBorderWidth...
D                 PR                  EXTPROC(*JAVA
D                                     :'com.lowagie.text.Image'
D                                     :'setBorderWidth')
D  argWidth                           like(jFloat) value
```

Creating a PDF with an Image

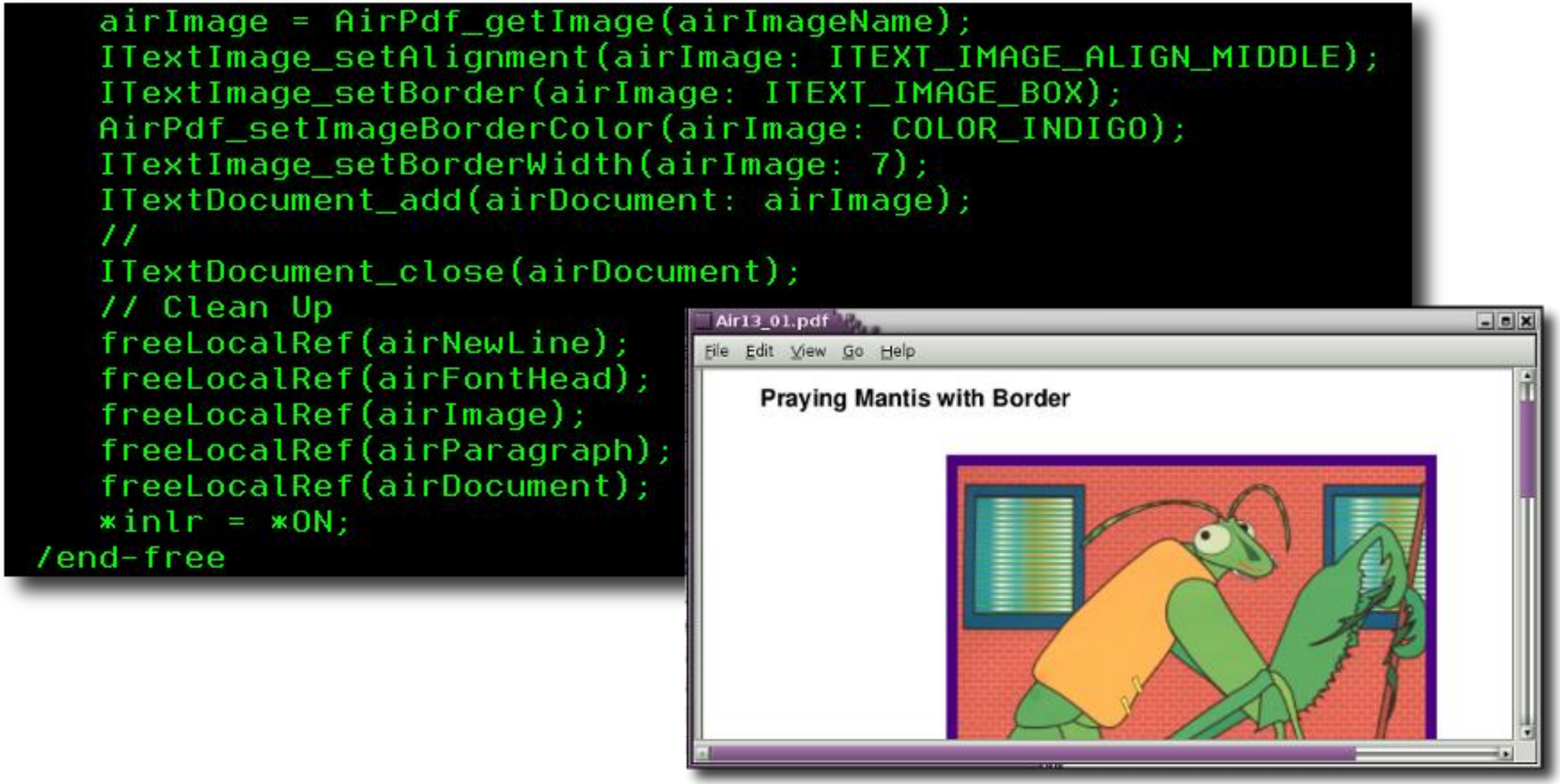
Variables and Initialization



```
H THREAD(*SERIALIZE)
D/DEFINE OS400_JVM_12
D/COPY QSYSINC/QRPGLESRC,JNI
D/COPY AIRLIB/AIRSRC,SPAIRFUNC
D/COPY AIRLIB/AIRSRC,SPAIRJAVA
D/COPY AIRLIB/AIRSRC,SPAIRPDF
D  airFileName    S           1024A   varying
D  airImageName   S           1024A   varying
D  airBytes       S           1024A   varying
D  airString      S                   like(jString)
D  airDocument    S                   like(ITextDocument)
D  airParagraph   S                   like(ITextParagraph)
D  airFontHead    S                   like(ITextFont)
D  airNewLine     S                   like(ITextChunk)
D  airImage       S                   like(ITextImage)
C/EJECT
 /free
    CallP JavaServiceProgram();
    airFileName = '/Public/Air12_01.pdf';
    airImageName = '/Public/mantis.png';
    airDocument = AirPdf_newDocumentOutput(airFileName:'LETTER');
    airString = new_String(EBCDIC_CR + EBCDIC_LF);
    airNewLine = new_ITextChunk(airString);
    //
    airFontHead = new_ITextFont(ITEXT_FONT_HELVETICA: 15:
                             ITEXT_FONT_BOLD);
    //
    airBytes = 'Praying Mantis with Border';
    airParagraph = AirPdf_newParagraph(airBytes:
                                       airFontHead);
    ITextDocument_add(airDocument: airParagraph);
    //
    ITextDocument_add(airDocument: airNewLine);
```

Creating a PDF with an Image

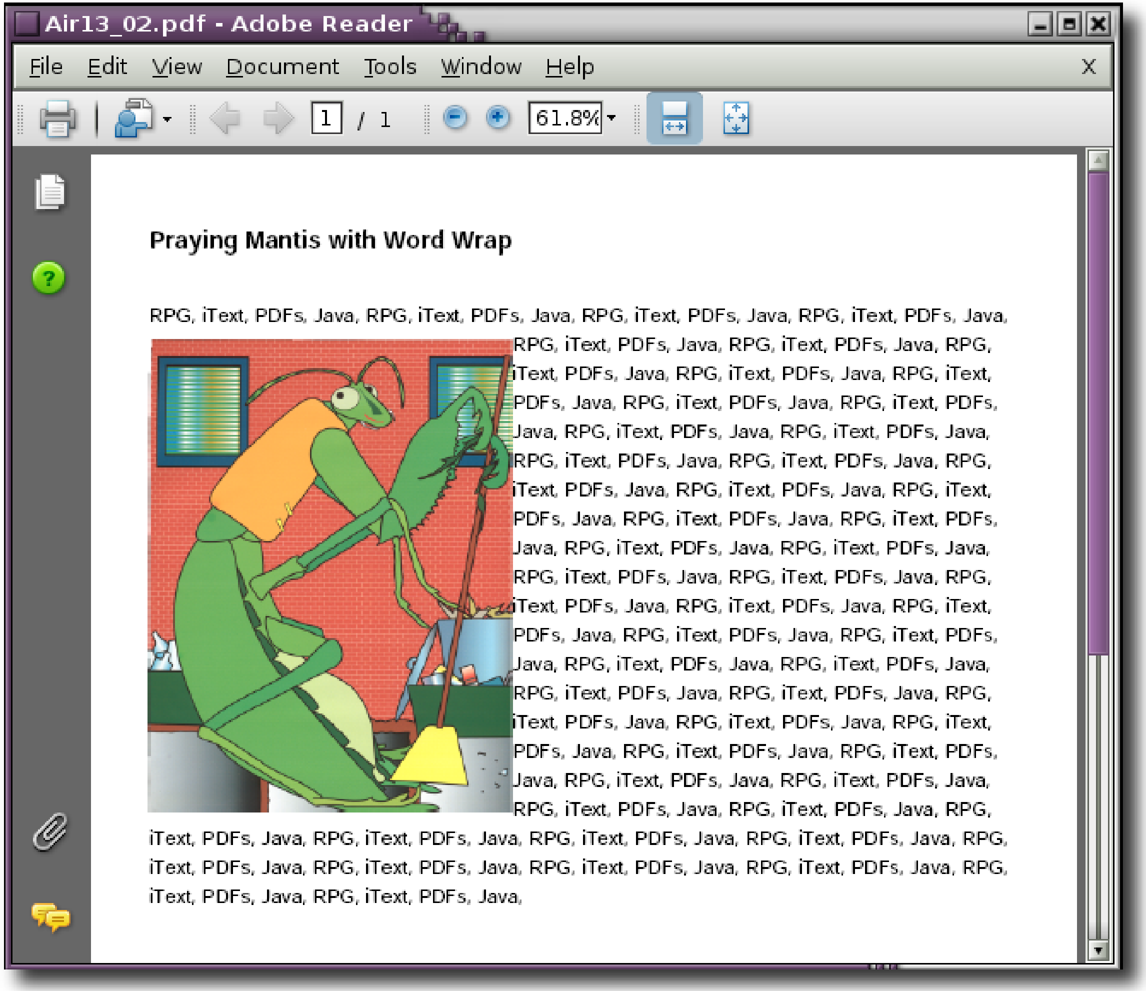
Set Image Alignment and Border



```
    airImage = AirPdf_getImage(airImageName);
    ITextImage_setAlignment(airImage: ITEXT_IMAGE_ALIGN_MIDDLE);
    ITextImage_setBorder(airImage: ITEXT_IMAGE_BOX);
    AirPdf_setImageBorderColor(airImage: COLOR_INDIGO);
    ITextImage_setBorderWidth(airImage: 7);
    ITextDocument_add(airDocument: airImage);
    //
    ITextDocument_close(airDocument);
    // Clean Up
    freeLocalRef(airNewLine);
    freeLocalRef(airFontHead);
    freeLocalRef(airImage);
    freeLocalRef(airParagraph);
    freeLocalRef(airDocument);
    *inlr = *ON;
 /end-free
```

Praying Mantis with Border

Wrapping Text Around an Image

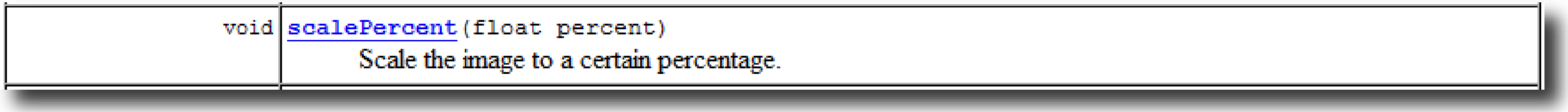


Praying Mantis with Word Wrap

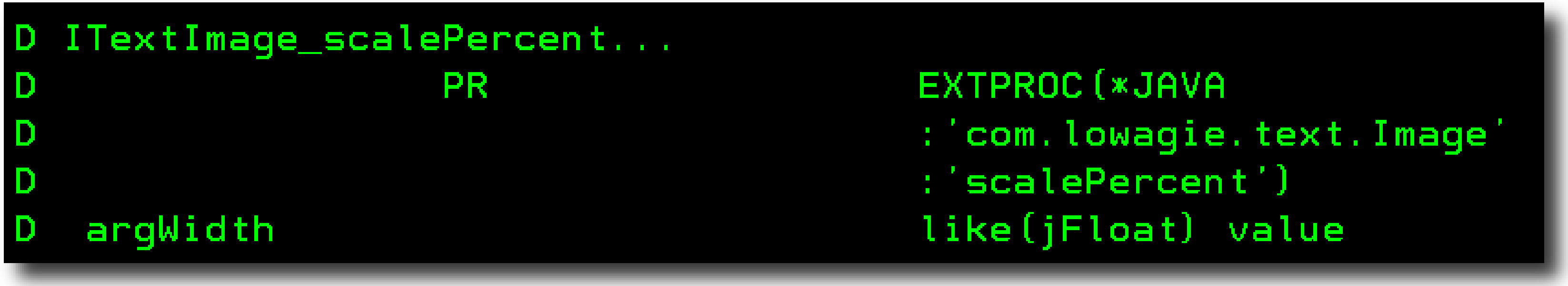
RPG, iText, PDFs, Java, RPG, iText, PDFs, Java,

iText Image scalePercent Method

Resizing the Image



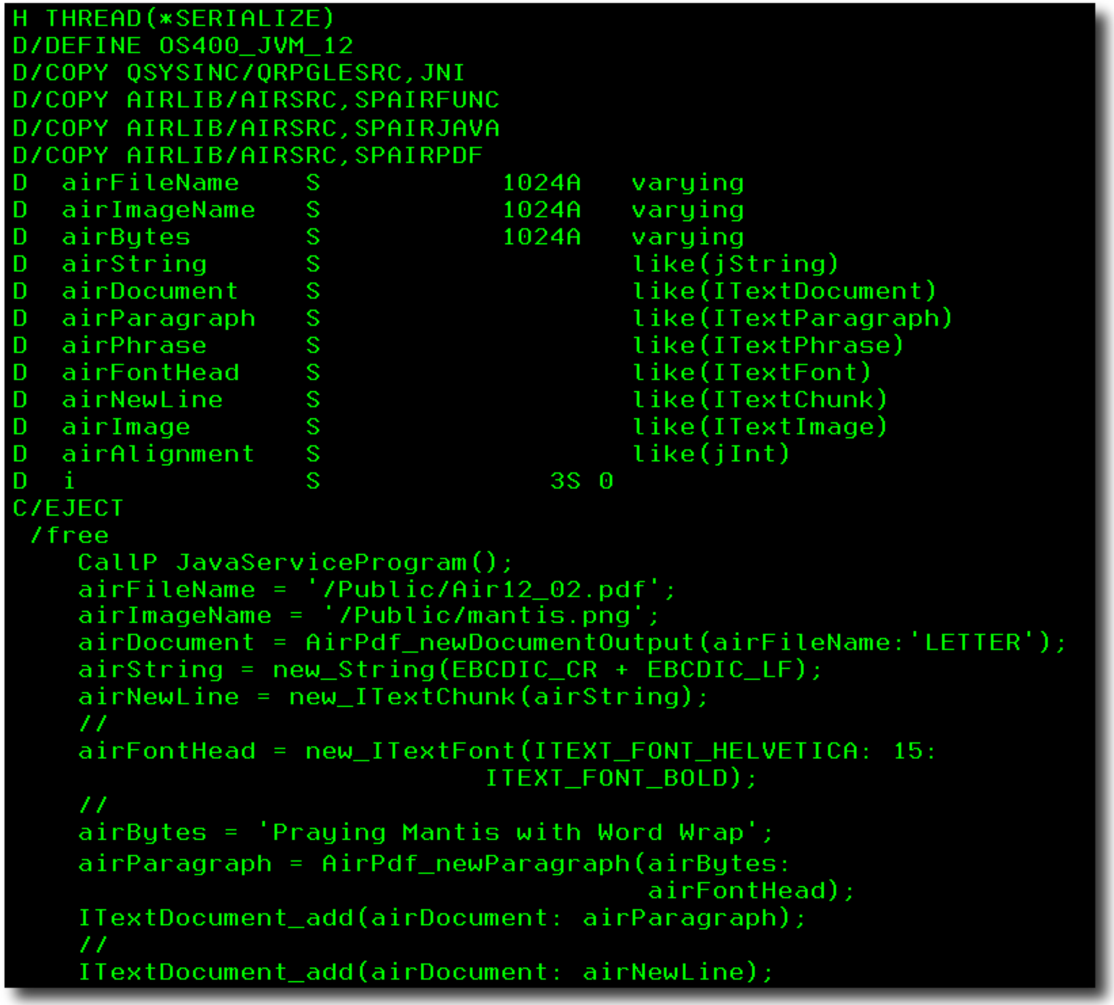
void	scalePercent(float percent) Scale the image to a certain percentage.



```
D ITextImage_scalePercent...
D                 PR                   EXTPROC(*JAVA
D                                      :'com.lowagie.text.Image'
D                                      :'scalePercent')
D  argWidth                            like(jFloat) value
```

Wrapping Text Around an Image

Variables and Initialization

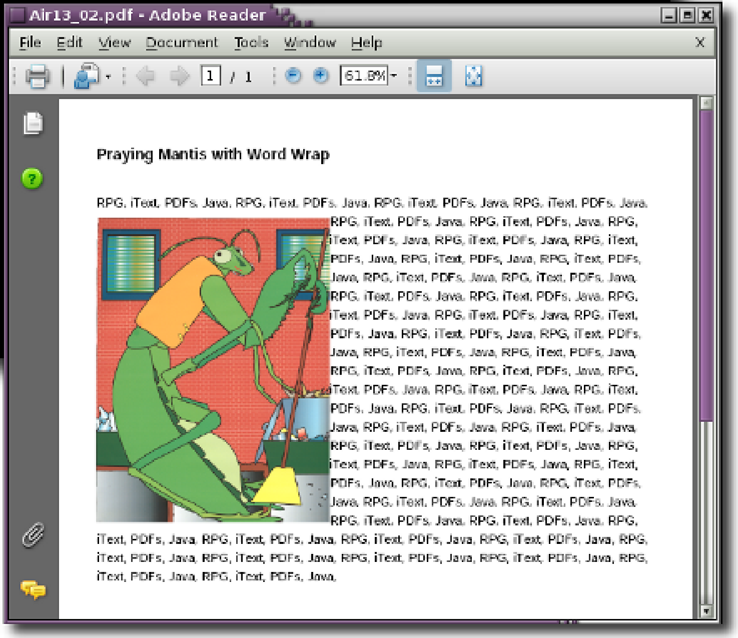


```
H THREAD(*SERIALIZE)
D/DEFINE OS400_JVM_12
D/COPY QSYSINC/QRPGLESRC,JNI
D/COPY AIRLIB/AIRSRC,SPAIRFUNC
D/COPY AIRLIB/AIRSRC,SPAIRJAVA
D/COPY AIRLIB/AIRSRC,SPAIRPDF
D  airFileName    S           1024A   varying
D  airImageName   S           1024A   varying
D  airBytes       S           1024A   varying
D  airString      S                   like(jString)
D  airDocument    S                   like(ITextDocument)
D  airParagraph   S                   like(ITextParagraph)
D  airPhrase      S                   like(ITextPhrase)
D  airFontHead    S                   like(ITextFont)
D  airNewLine     S                   like(ITextChunk)
D  airImage       S                   like(ITextImage)
D  airAlignment   S                   like(jInt)
D  i              S              3S 0
C/EJECT
 /free
    CallP JavaServiceProgram();
    airFileName = '/Public/Air12_02.pdf';
    airImageName = '/Public/mantis.png';
    airDocument = AirPdf_newDocumentOutput(airFileName:'LETTER');
    airString = new_String(EBCDIC_CR + EBCDIC_LF);
    airNewLine = new_ITextChunk(airString);
    //
    airFontHead = new_ITextFont(ITEXT_FONT_HELVETICA: 15:
                             ITEXT_FONT_BOLD);
    //
    airBytes = 'Praying Mantis with Word Wrap';
    airParagraph = AirPdf_newParagraph(airBytes:
                                       airFontHead);
    ITextDocument_add(airDocument: airParagraph);
    //
    ITextDocument_add(airDocument: airNewLine);
```

Wrapping Text Around an Image

Scale and Text Wrap

```
   airBytes = 'RPG, iText, PDFs, Java, ';
   airPhrase = AirPdf_newPhrase(airBytes);
   airImage = AirPdf_getImage(airImageName);
   airAlignment = %bitor(ITEXT_IMAGE_ALIGN_LEFT: ITEXT_IMAGE_TEXTWRAP)
   ITextImage_setAlignment(airImage: airAlignment);
   ITextImage_scalePercent(airImage: 75);
   ITextDocument_add(airDocument: airImage);
   // Do is not allowed in free-format; use For instead.
   for i=0 to 51;
     ITextDocument_add(airDocument: airPhrase);
   endfor;
   //
   ITextDocument_close(airDocument);
   // Clean Up
   freeLocalRef(airNewLine);
   freeLocalRef(airFontHead);
   freeLocalRef(airImage);
   freeLocalRef(airParagraph);
   freeLocalRef(airDocument);
   *inlr = *ON;
/end-free
```


Air13_02.pdf - Adobe Reader
File Edit View Document Tools Window Help
1 / 1
61.8%

Praying Mantis with Word Wrap

RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java,
RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG,
iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText,
PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs,
Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java,
RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG,
iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText,
PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs,
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RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG,
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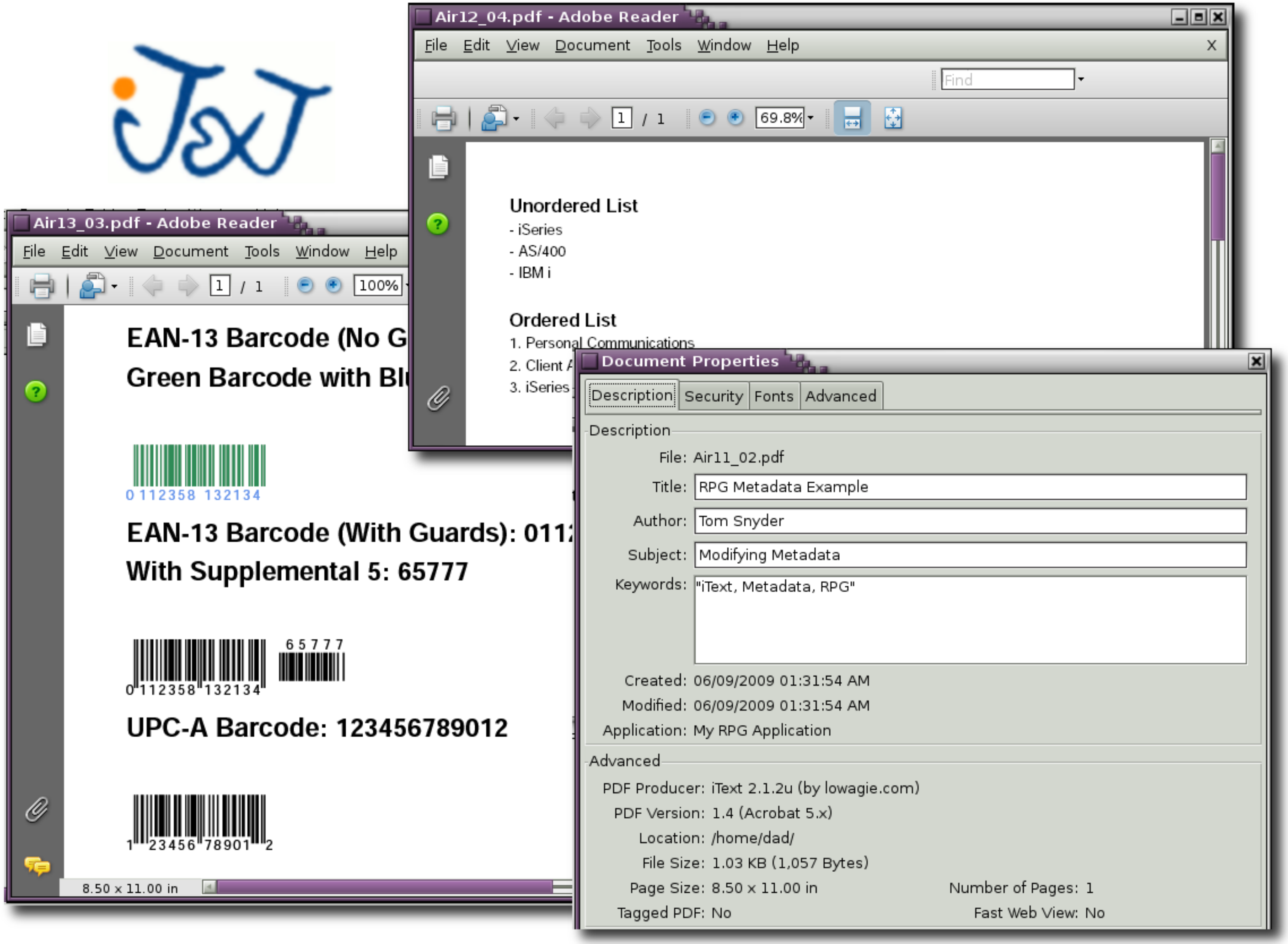
PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs,
Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java,
RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG,
iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText,
PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs,
Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java,
RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG,
iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG,
iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG, iText, PDFs, Java, RPG,
iText, PDFs, Java, RPG, iText, PDFs, Java,

iText

Barcodes, Lists, Hyperlinks and Metadata


Air12_04.pdf - Adobe Reader
File Edit View Document Tools Window Help
Find
1 / 1
69.8%
Air13_03.pdf - Adobe Reader
File Edit View Document Tools Window Help
1 / 1
100%
8.50 x 11.00 in
Document Properties
Description Security Fonts Advanced

Unordered List
- iSeries
- AS/400
- IBM i

Ordered List
1. Personal Communications
2. Client A
3. iSeries

EAN-13 Barcode (No G

Green Barcode with Bl

0 112358 132134

EAN-13 Barcode (With Guards): 011

With Supplemental 5: 65777

0 112358 132134 65777

UPC-A Barcode: 123456789012

1 23456 78901 2

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Author: Tom Snyder

Subject: Modifying Metadata

Keywords: "iText, Metadata, RPG"

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