GPL4

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General Description

This White Paper shows how to create an RPG program which, through ***GPL4i***, can generate a PDF document containing an image and a barcode. The PDF will be generated on the IBM I.

Requirements

These are the requirements that need to be met in order to complete the activities proposed in this document

- ***GPL4i*** is already installed and configured on the IBM i system.
  `http://www.jetlab.com/downloads/gpl4i/GPL4i-V2R0M0-WP001_Installation-ENG.pdf`
- The ***GPL4i*** User Tool library is already installed on the IBM i system.
  `http://www.jetlab.com/downloads/gpl4i/GPL4i-V2R0M0-WP002_Examples-ENG.pdf`

This document is oriented towards IBM i programmers with knowledge of RPG language and the ILE environment.

Execution

These are the steps to activate the RPG program that generates the PDF and verify the results.

__ **Step 1**

Connect as user R4SP020000 and activate the runtime and the default device.

```
STRSBS JTJT040000
STRR4DEV JTJT040000
```

__ **Step 2**

Add the GPL4IUT library in the library list

```
ADDLIBLE GPL4IUT
```

__ **Step 3**

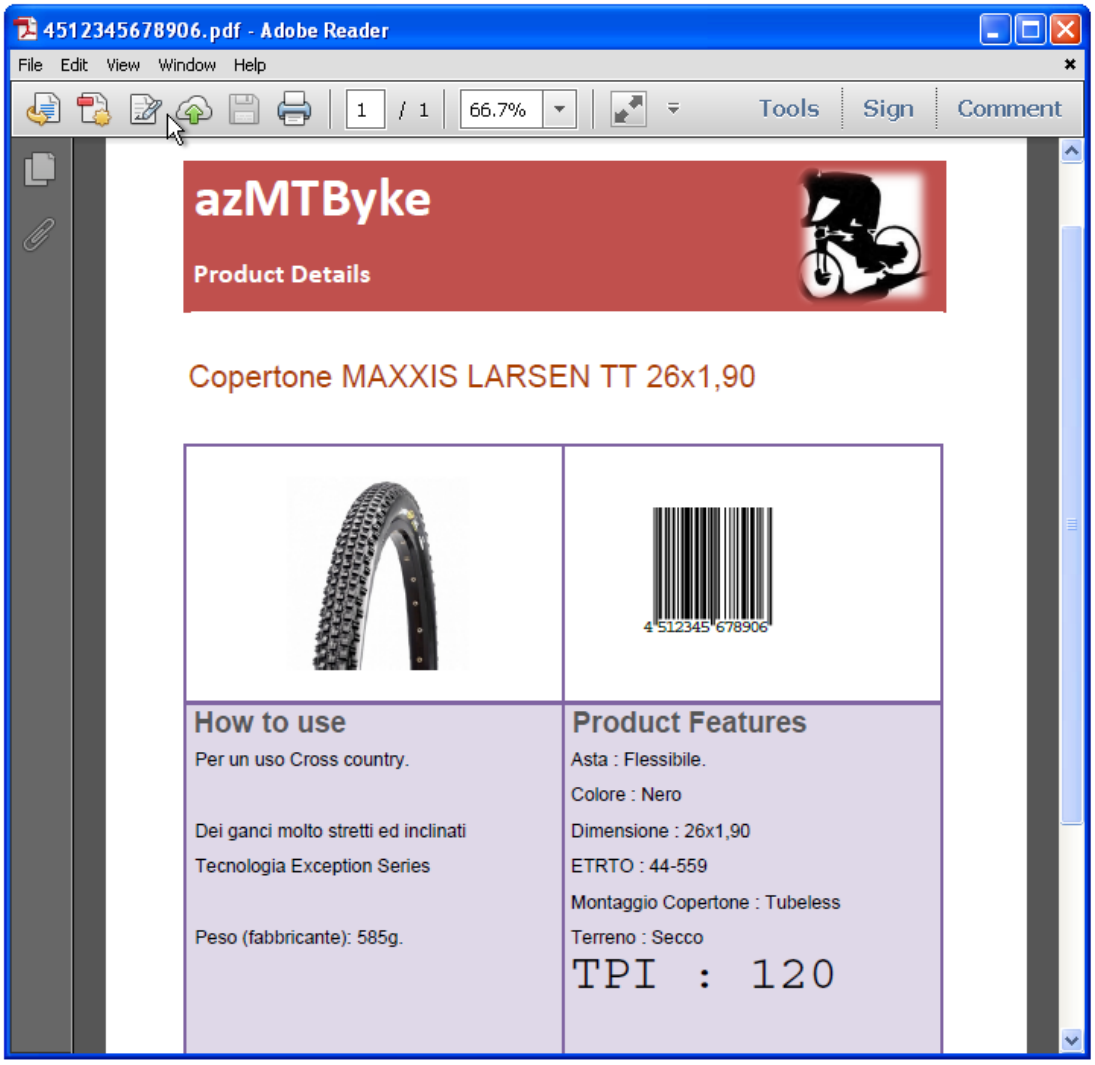
Run the PRDDTL program

```
CALL PGM(PRDDTL) PARM('JTJT040000')
```

__ **Step 4**

Verify that the document
`/gpl4iut/temp/4512345678906.pdf`
was generated. Open the document with a PDF Reader.

This is the result



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Components Analysis

To obtain the PDF document use the following resources.

PDF Model

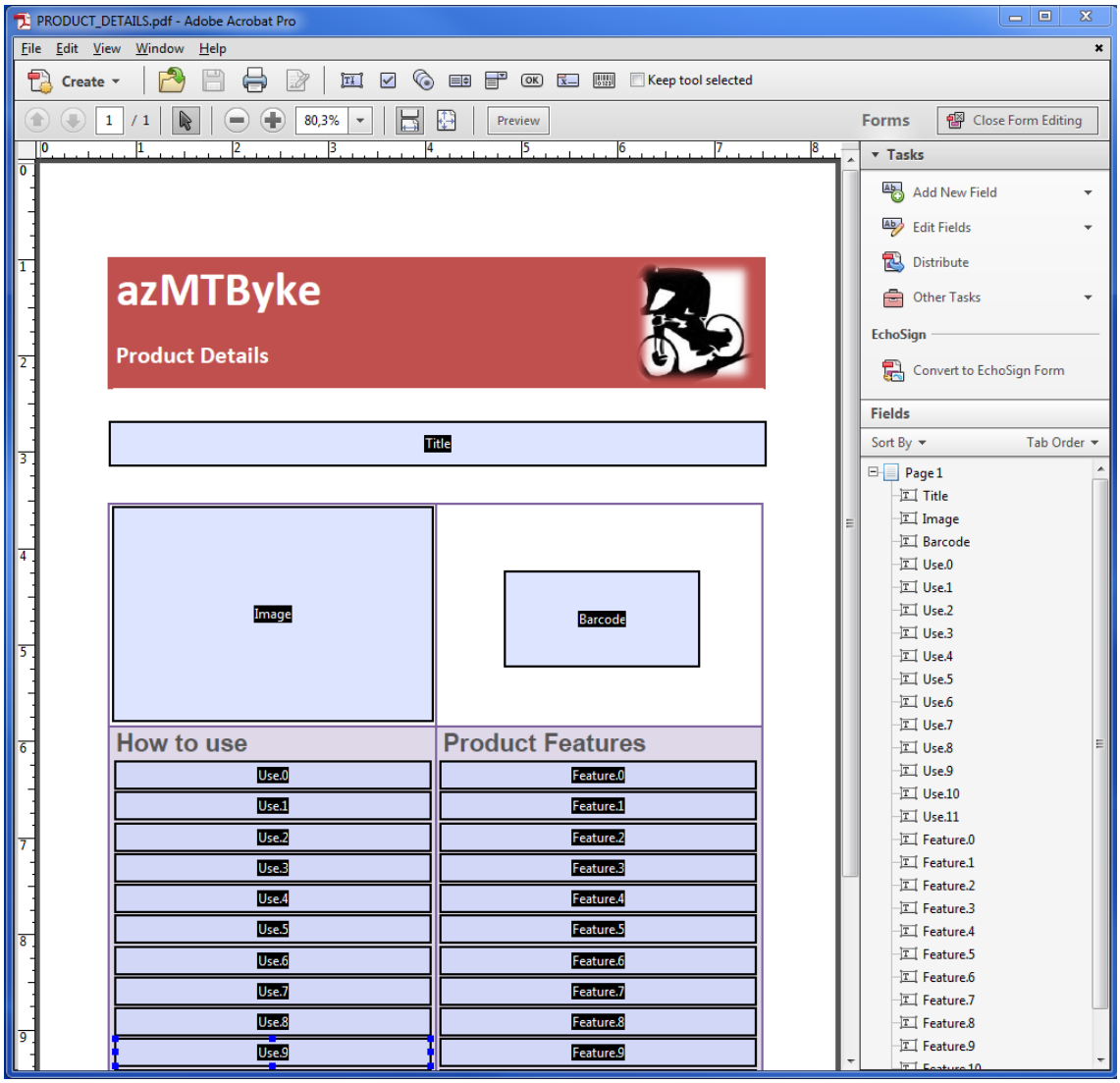
The form utilized is contained in the file

`/gpl4iut/PRODUCT_DETAILS.zip`

and is called

`PRODUCT_DETAILS.pdf`

As shown in the following image, it is a PDF which contains the following text fields:



The RPG source

`GPL4IUT/QRPGLESRC(PRDDTL)`

will be the reference for these names in order to compile the form with the program data.

Sources

The RPG source

`GPL4IUT/QRPGLESRC(PRDDTL)`

carries out the following operations to generate the document:

- Includes definitions of GPL4i API

```
D/copy *LIBL/QRPGLECPY,GPL4I
```

- Decides which model to generate

```
c                   callp     GPLSetDataModel(
c                              'PRODUCT_DETAILS'+x'00'
c                             :'/gpl4iut/PRODUCT_DETAILS.zip'+x'00'
c                             )
```

- Opens a new document

```
c                   callp     GPLOpenDoc
```

- Assigns user data to the document (Product_code = 4512345678906)

```
c                   eval      val = code
c                   callp     GPLAddDMInfo(
c                              'Product_code'+x'00'
c                             :%addr(val)
c                             :%len(%trim(val))
c                             :handle
c                             )


c                   callp     GPLSetFolder('Products'+x'00')
```

- Assigns a name to the .pdf file to be generated and activates the attribute replace=true to overwrite the document if it already exists.

```
c                   eval      val = 'true'
c                   callp     GPLAddSrvInfo(
c                              'save'+x'00'
c                             :'replace'+x'00'
c                             :%addr(val)
c                             :%len(%trim(val))
c                             )
c                   callp     GPLSetPdfName(
c                              '/GPL4IUT/temp/'
c                             +%trim(code)+'.pdf'+x'00'
c                             )
```

- Decides which form it should compile from the available forms in the model

```
c                   callp     GPLNewForm(
c                              'PRODUCT_DETAILS.pdf'+x'00'
c                             )
```

- Initializes the fields of the form (eg. the Title field)

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```
c           eval      val='Copertone MAXXIS LARSEN TT 26x1,90'
c           callp     GPLSetTextFld(
c                     'Title'+x'00'
c                     :%addr(Val)
c                     :%len(%trim(Val))
c                     )
```

- Initializes the EAN type Barcode field

```
c                   eval      val = code
c                   callp     GPLSetBarcode(
c                              'Barcode'+x'00'
c                              :'EAN'+x'00'
c                              :%addr(val)
c                              :%len(%trim(val))
c                              )
```

- Initializes the image field

The real dimensions of the image are also reduced by 60%

```
c                   eval      val = 'percente'+x'00'
c                   callp     GPLSetFldAttr(
c                              'scale'+x'00'
c                              :%addr(val)
c                              )
c                   eval      scale100 = 60.0
c                   callp     GPLSetFldAttr(
c                              'scale100'+x'00'
c                              :%addr(scale100)
c                              )
c                   eval      val
c                             ='http://www.jetlab.com'
c                             +'/gpl4i/gpl4iut/copertone.png'
c                   callp     GPLSetImage(
c                              'Image'+x'00'
c                              :%addr(Val)
c                              :%len(%trim(Val))
c                              )
```

- Ends form compilation

```
c                   callp     GPLSetBreak
```

- Closes the document

```
c                   callp     GPLCloseDoc
```

- Activates PDF creation by giving it over to the Device JTJT040000

In case of errors the glpErr variable will contain information on the error encountered.

```
D gplErr          ds                  likeds(GPLErr_T) based(gplErr_ptr)
D gplErr_ptr      s               *
```

```
...
c                   if        GPLRun(device) = 0
c                   eval      gplErr_ptr = GPLGetCurErr
c     gplErr.MSG    DSPLY
c                   endif
```

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Compiling

The PRDDTL source is compiled in Bid with the following Service Programs

R4SP020000/GPL4I

```
ADDLIBLE JTJT040000
ADDLIBLE R4SP020000
ADDLIBLE GPL4IUT
CRTRPGMOD MODULE(GPL4IUT/PRDDTL) DBGVIEW(*ALL)
CRTPGM PGM(GPL4IUT/PRDDTL) BNDSRVPGM((GPL4I))
```