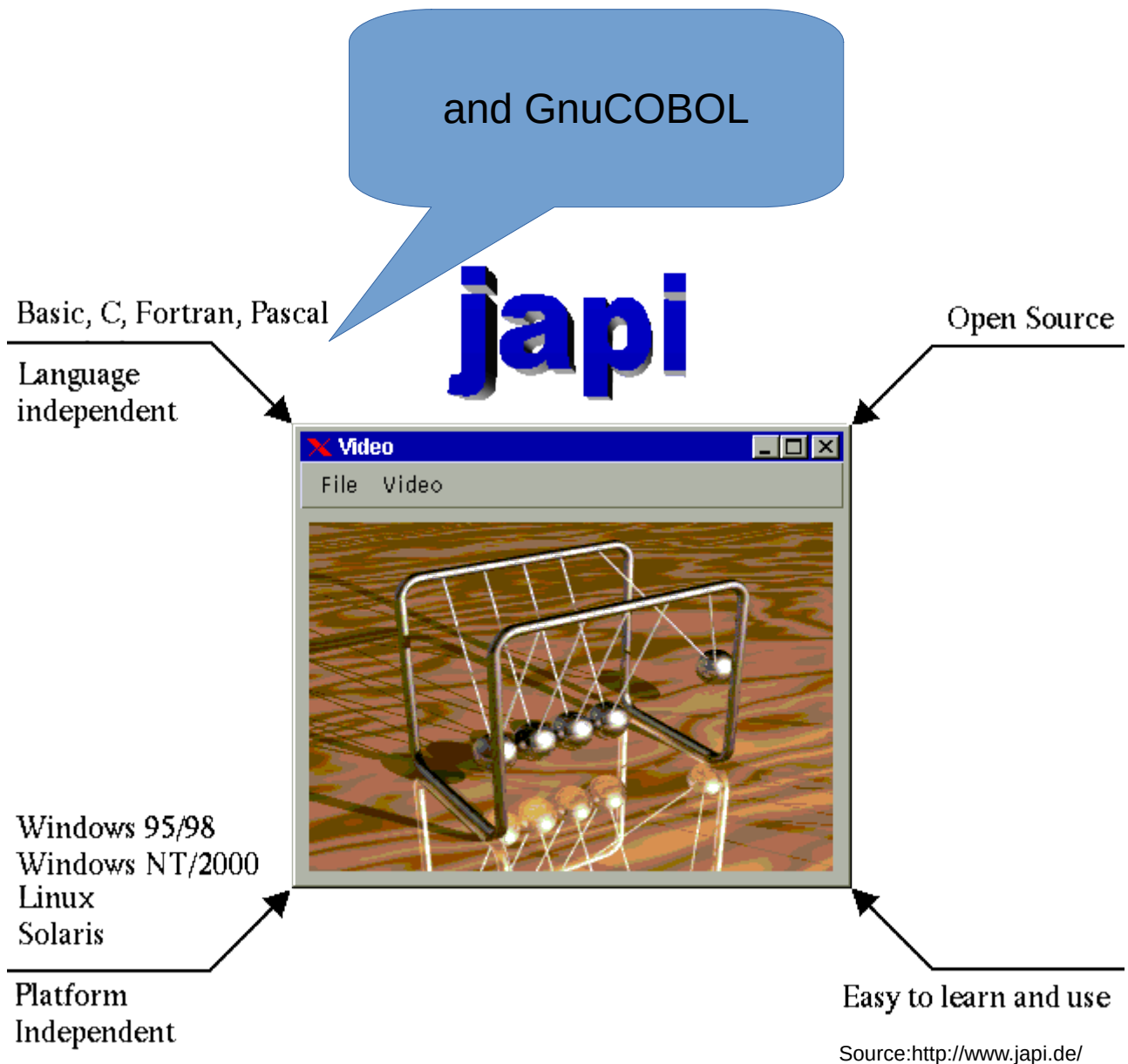


GnuCobol with Japi

How it works and how to install Japi2



Japi is an open source free software GUI toolkit, which makes it easy to develop platform independent applications. Written in JAVA and C, provides the JAVA AWT and SWING Toolkit to non object oriented Languages like C, Fortran, Pascal and even Basic and **GnuCobol**

The GnuCobol Version of Japi is maintained and further developed by the GnuCobol developers

GnuCobol with Japi

How it works and how to install Japi2

easy to use

is easier to learn and use than all common APIs. Since its not object-oriented, its possible to learn even with little experience in programming.

platform independent

currently supports all Win32 platforms, Linux and Solaris. Porting your application between platforms is as easy as recompiling.

And GnuCOBOL!

language independent

provides an interface to common C, Fortran and Pascal Compilers. For Basic Programmers there is a Basic Interpreter running on Unix and WIN32.

Source:<http://www.japi.de/>

Kundennummer	---	171
Kundenname	(35)	Topsy GMBH
Kontaktperson	(25)	Frau Meyer
Strasse	(30)	Grundweg 17
Postleitzahl	(5)	80002
Ort	(27)	Muenchen_2
COMM	(30)	
Telefon	(20)	
REST	(20)	

Before

F3:Ende F4:hoops

The GnuCobol Version of Japi is maintained and further developed by the GnuCobol developers

GnuCobol with Japi

How it works and how to install Japi2

COBOL GnuCOBOL with GUI using Japi ***meets Japi***

File

Update Customers

Kundennummer:	000171
Kundenname:	Topsy GMBH
Adresse Teil 1:	Frau Meyer
Adresse Teil 2:	Grundweg 17
Postleitzahl:	80002
Ort:	Muenchen 2

Schreibe Satz zurueck ohne Aenderung

New look

With Japi

My first COBOL. JApi2 Program

Update Customers

Kundennummer:	000171
Kundenname:	Topsy GMBH
Adresse Teil 1:	Frau Meyer
Adresse Teil 2:	Grundweg 17
Postleitzahl:	80002
Ort:	München 2

Schreibe Satz zurueck ohne Aenderung

Or traditional

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

You use **COBOL** commands, no curled brackets etc.

```
MOVE J-FRAME("***COBOL**      GnuCOBOL with GUI using Japi      ***meets Japi**") TO WS-FRAME
MOVE J-SETCOLORBG(WS-FRAME,z155, z155, z155) TO WS-RET  *> grey
MOVE J-SETFONT(WS-FRAME, J-HELVETIA, J-PLAIN, z24) TO WS-RET
```

1. make a frame
2. give it a color
3. give the font a certain size

```
MOVE J-SETPOS(WS-FRAME, z500, z200) TO WS-RET
MOVE J-SETSIZE(WS-FRAME, z1400, z800) TO WS-RET
```

4. Put the frame on a certain position on the screen
5. and give it a certain size

```
MOVE J-TEXTFIELD(WS-FRAME, z35) TO WS-VNAME
MOVE J-SETCOLOR(WS-VNAME, z0, z153, z0) TO WS-RET
```

6. You want to put an I-O-field
7. In the RGB color of your choice

```
MOVE J-LABEL(WS-FRAME, "Kundenname:") TO WS-LABEL-KDNAM
```

8. and add a label to your field
9. till n... is COBOL code

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

Installation

On LINUX Debian 11


Go to the GnuCOBOL page
<https://sourceforge.net/projects/gnucobol/>

neßen: Fü... GnuCOBOL / Contribut... Element Secure Messe...

SOURCEFORGE

Open Source Software Business Software Resources

Home / Browse / Development / Software Development / GnuCOBOL

 **GnuCOBOL**
A free COBOL compiler
Brought to you by: [bgiroud](#), [btiffin](#), [knishida](#), [sf-mensch](#), [simrw](#)

★★★★★ 52 Reviews Downloads: 587 This Week Last Update: 23 hours ago

[Download](#) [Get Updates](#) [Share This](#)

Mac Linux BSD Windows

Summary Files Reviews Support Discussion **SVN** Tickets Manuals and Guides FAQ and How-To News Wiki

GnuCOBOL (formerly OpenCOBOL) is a free, modern COBOL compiler. GnuCOBOL implements a substantial part of the COBOL 85, COBOL 2002 and COBOL 2014 standards and X/Open COBOL, as well as many extensions included in other COBOL compilers (IBM COBOL, MicroFocus COBOL, ACUCOBOL-GT and others).

GnuCOBOL translates COBOL into C and compiles the translated code using a native C compiler.

Build COBOL programs on various platforms, including GNU/Linux, Unix, Mac OS X, and Microsoft Windows. GnuCOBOL has also been built on HP/UX, z/OS, SPARC, RS6000, AS/400, along with other combinations of machines and operating systems.

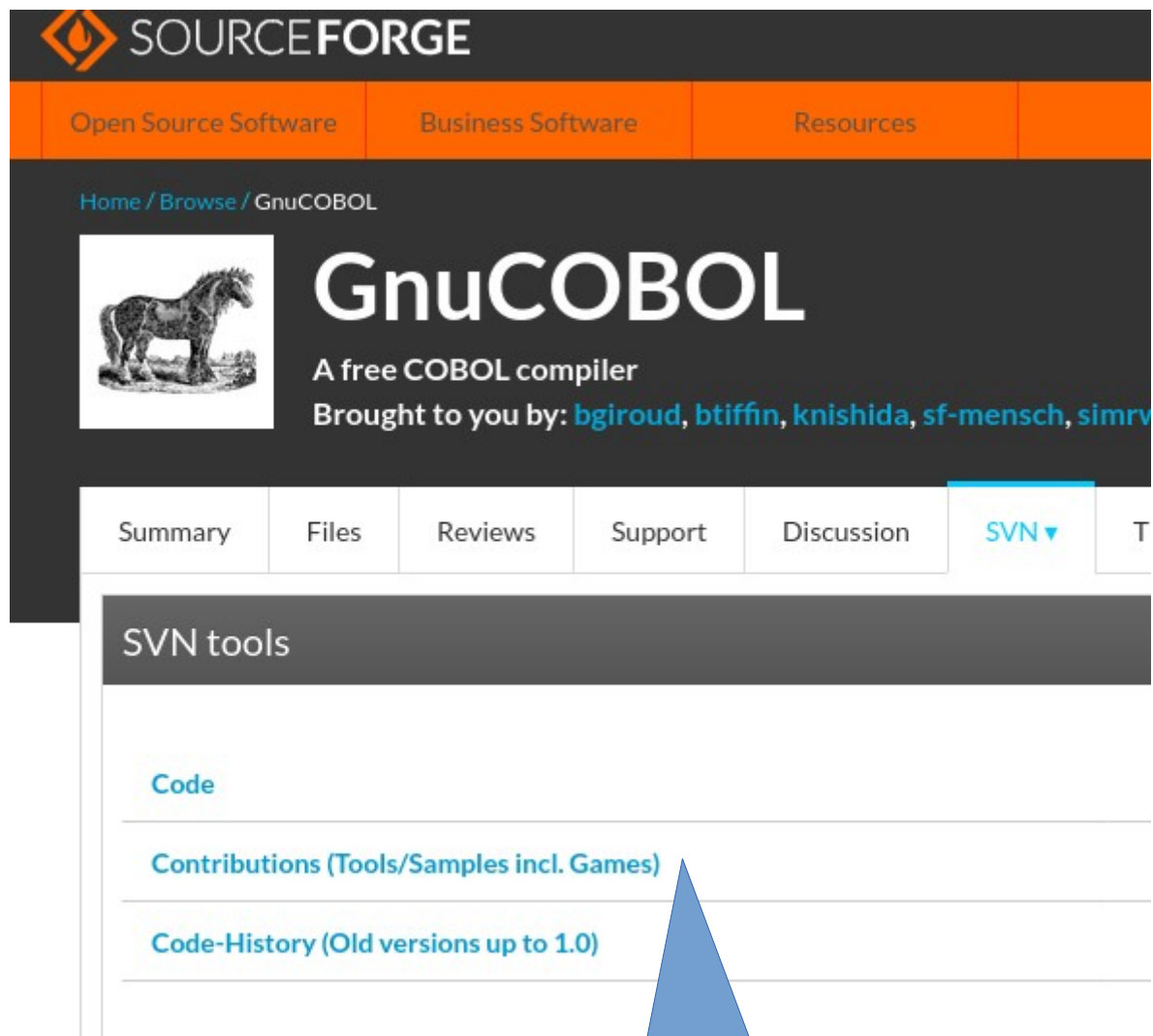
Copyright 2001-2020 Free Software Foundation, Inc.

Select SVN

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

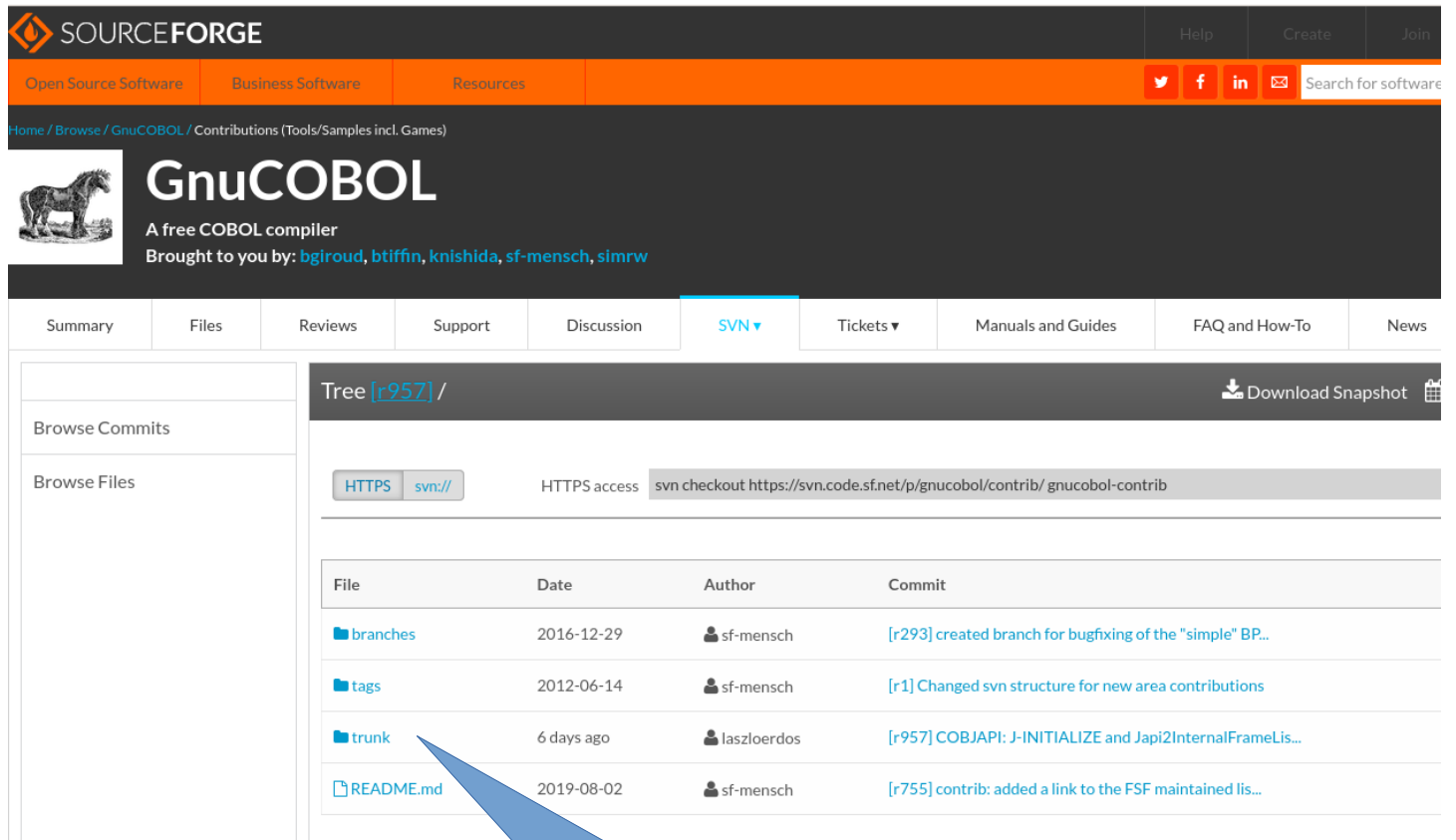
How it works and how to install Japi2



The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2



The screenshot shows the SourceForge project page for GnuCOBOL. The page includes a navigation bar with links for Open Source Software, Business Software, and Resources. The main content area displays the GnuCOBOL logo and a list of contributors. Below this, there are tabs for Summary, Files, Reviews, Support, Discussion, SVN, Tickets, Manuals and Guides, FAQ and How-To, and News. The SVN tab is selected, showing a tree view of the repository structure. A blue arrow points to the 'trunk' directory in the tree view.

SourceForge

Open Source Software Business Software Resources

Home / Browse / GnuCOBOL / Contributions (Tools/Samples incl. Games)

GnuCOBOL
A free COBOL compiler
Brought to you by: [bgiroud](#), [btiffin](#), [knishida](#), [sf-mensch](#), [simrw](#)

Summary Files Reviews Support Discussion **SVN** Tickets Manuals and Guides FAQ and How-To News

Tree [\[r957\]](#) / [Download Snapshot](#)

HTTPS [svn://](#) HTTPS access [svn checkout https://svn.code.sf.net/p/gnucobol/contrib/ gnucobol-contrib](#)

File	Date	Author	Commit
branches	2016-12-29	sf-mensch	[r293] created branch for bugfixing of the "simple" BP...
tags	2012-06-14	sf-mensch	[r1] Changed svn structure for new area contributions
trunk	6 days ago	laszloerdos	[r957] COBJAPI: J-INITIALIZE and Japi2InternalFrameLis...
README.md	2019-08-02	sf-mensch	[r755] contrib: added a link to the FSF maintained lis...

Select trunk

The GnuCobol Version of Japi is maintained and further developed by the GnuCobol developers

GnuCobol with Japi

How it works and how to install Japi2

SOURCEFORGE Help Create Join Login

Open Source Software Business Software Resources Search for software or solutions

Home / Browse / GnuCOBOL / Contributions (Tools/Samples incl. Games)

GnuCOBOL
A free COBOL compiler
Brought to you by: [bgrroud](#), [btiffin](#), [knishida](#), [sf-mensch](#), [simrw](#)

Summary Files Reviews Support Discussion **SVN** Tickets Manuals and Guides FAQ and How-To News Wiki

Tree [\[r957\]](#) / [trunk](#) / Download Snapshot History

HTTPS svn:// HTTPS access svn checkout https://svn.code.sf.net/p/gnucobol/contrib/gnucobol-contrib

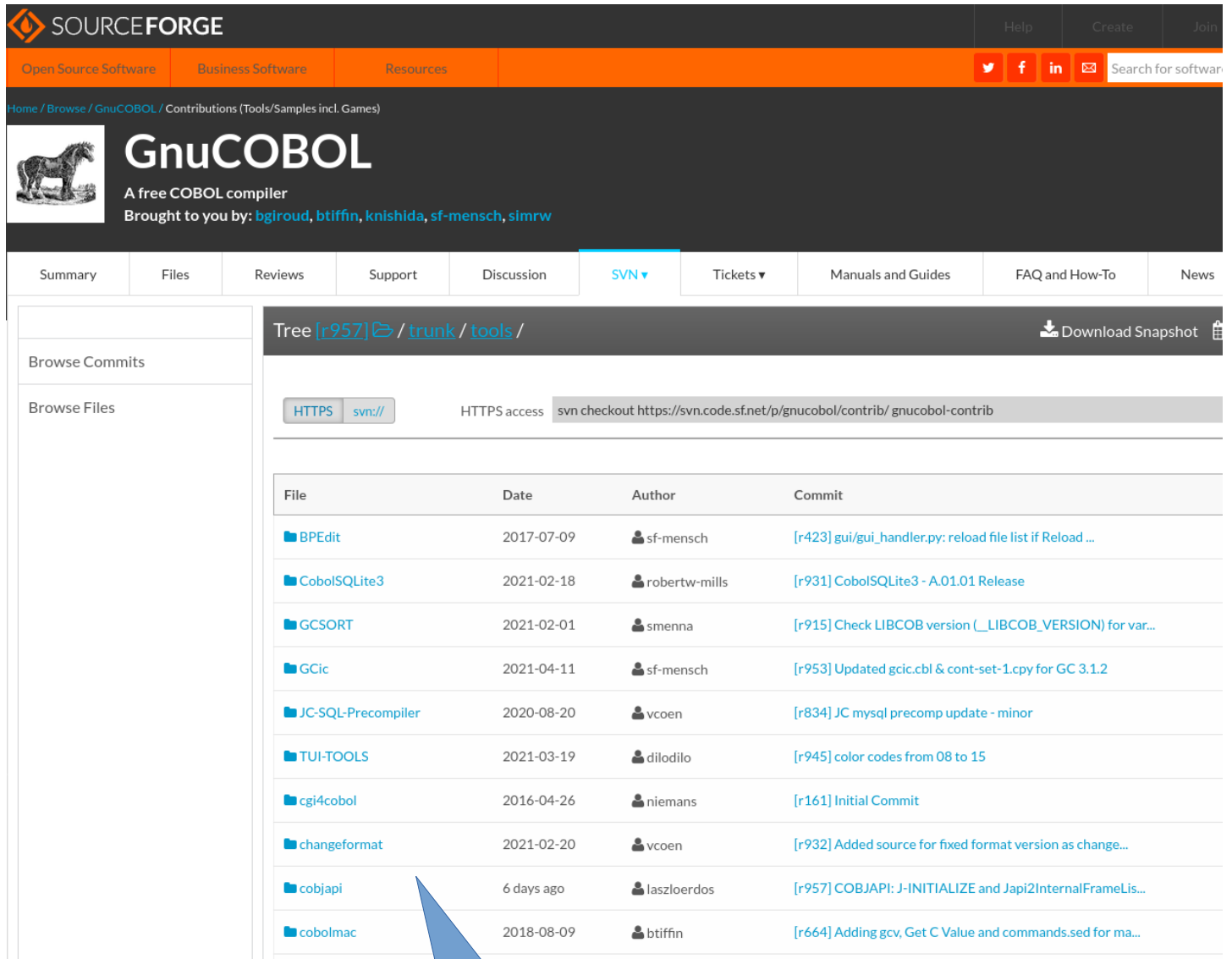
File	Date	Author	Commit
at_test_win	2017-11-12	sf-mensch	[r549] wintest:
copyfiles	2013-04-02	sf-mensch	[r4] new contrib folder structure as suggested by co...
esql	2021-04-14	ska00	[r954] Fix. WITH HOLD of cursor declaration was ignored
ipc	2019-08-20	sf-mensch	[r765] CBL_GC_SOCKET updated build script
samples	2020-09-08	laszloerdos	[r839] DBsample\PostgreSQL: compile and run script win...
tools	6 days ago	laszloerdos	[r957] COBJAPI: J-INITIALIZE and Japi2InternalFrameLis...
README	2014-08-13	sf-mensch	[r43] Changed README for contributions:

Select tools

The GnuCobol Version of Japi is maintained and further developed by the GnuCobol developers

GnuCobol with Japi

How it works and how to install Japi2



The screenshot shows the SourceForge page for GnuCOBOL. The navigation bar includes 'Open Source Software', 'Business Software', and 'Resources'. The main header features the GnuCOBOL logo and the text 'A free COBOL compiler Brought to you by: bgiroud, btiffin, knlshida, sf-mensch, simrw'. The left sidebar has links for 'Browse Commits' and 'Browse Files'. The main content area displays the SVN repository structure with a tree view showing 'trunk/tools/'. Below this, a table lists commits, with a blue arrow pointing to the 'cobjapi' entry.

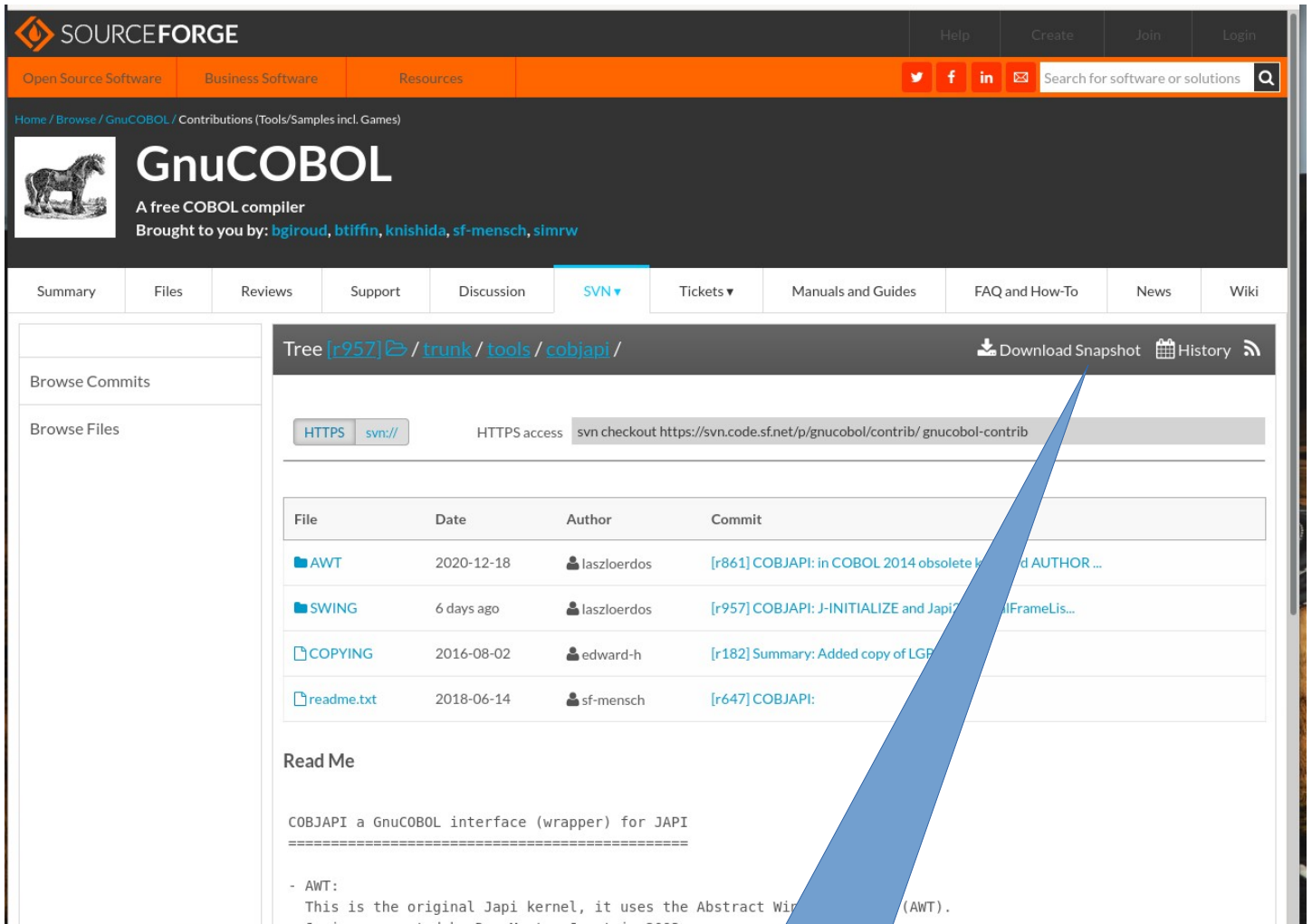
File	Date	Author	Commit
BPEdit	2017-07-09	sf-mensch	[r423] gui/gui_handler.py: reload file list if Reload ...
CobolSQLite3	2021-02-18	robertw-mills	[r931] CobolSQLite3 - A.01.01 Release
GCSORT	2021-02-01	smenna	[r915] Check LIBCOB version (_LIBCOB_VERSION) for var...
GCic	2021-04-11	sf-mensch	[r953] Updated gcic.cbl & cont-set-1.cpy for GC 3.1.2
JC-SQL-Precompiler	2020-08-20	vcoen	[r834] JC mysql precomp update - minor
TUI-TOOLS	2021-03-19	dilodilo	[r945] color codes from 08 to 15
cgi4cobol	2016-04-26	niemans	[r161] Initial Commit
changeformat	2021-02-20	vcoen	[r932] Added source for fixed format version as change...
cobjapi	6 days ago	laszloerdos	[r957] COBJAPI: J-INITIALIZE and Japi2InternalFrameLis...
cobolmac	2018-08-09	btiffin	[r664] Adding gcv, Get C Value and commands.sed for ma...

Select cobjapi

The GnuCobol Version of Japi is maintained and further developed by the GnuCobol developers

GnuCobol with Japi

How it works and how to install Japi2



The screenshot shows the SourceForge project page for GnuCOBOL. The project is described as "A free COBOL compiler" and is brought to you by bglroud, btiffn, knishida, sf-mensch, and simrw. The page has tabs for Summary, Files, Reviews, Support, Discussion, SVN, Tickets, Manuals and Guides, FAQ and How-To, News, and Wiki. The SVN tab is selected, showing the repository path `trunk / tools / cobjapi /`. A table lists the files in the repository:

File	Date	Author	Commit
AWT	2020-12-18	laszloerdos	[r861] COBJAPI: in COBOL 2014 obsolete k... and AUTHOR ...
SWING	6 days ago	laszloerdos	[r957] COBJAPI: J-INITIALIZE and Japi2... IFrameLis...
COPYING	2016-08-02	edward-h	[r182] Summary: Added copy of LGPL
readme.txt	2018-06-14	sf-mensch	[r647] COBJAPI:

Below the table, there is a "Read Me" section with the following text:

```
COBJAPI a GnuCOBOL interface (wrapper) for JAPI
=====

- AWT:
  This is the original Japi kernel, it uses the Abstract Win... (AWT).
```

A blue arrow points from the "Download Snapshot" link in the top right of the SVN view to a callout bubble.

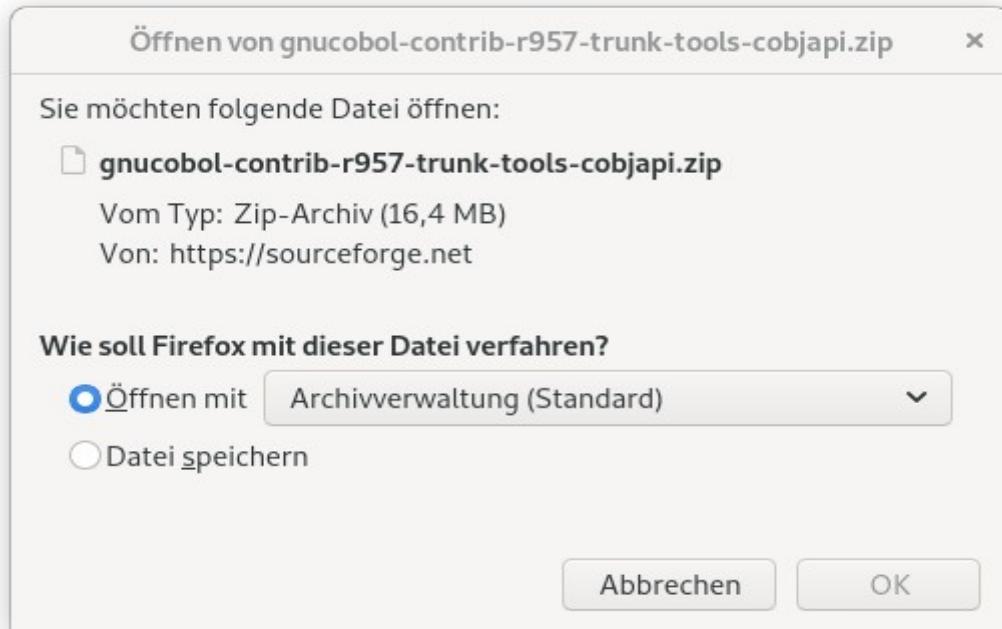
And select „Download Snapshot“

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

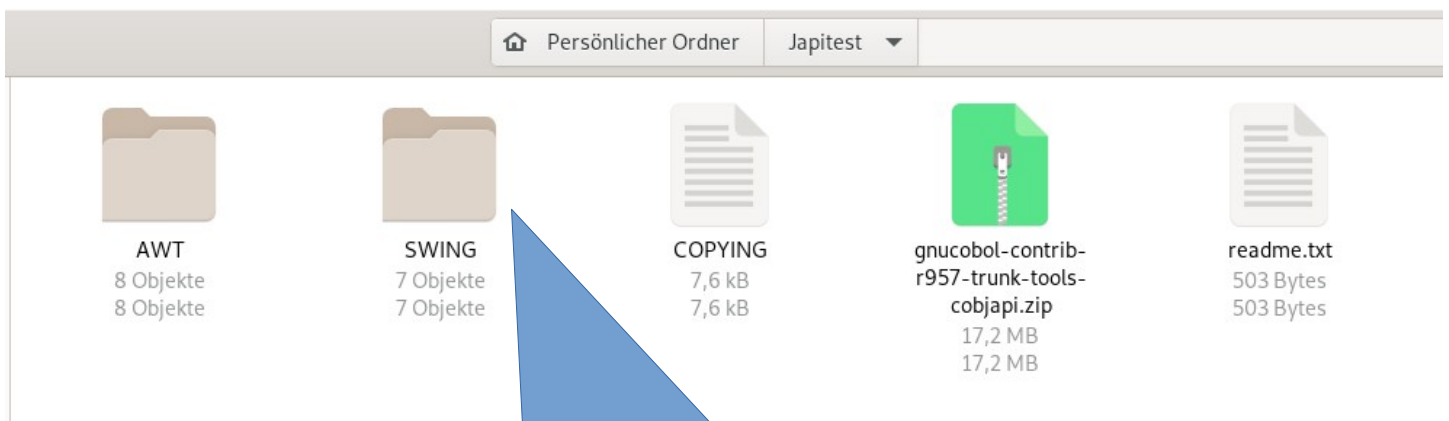
GnuCobol with Japi

How it works and how to install Japi2

you begin shortly, or use this [direct link](#).



Unpack and move the 5 Objects into to a directory of your choice (in this example we use /home/erich/Japitest)



Open SWING in a Terminal
(AWT you do not need)

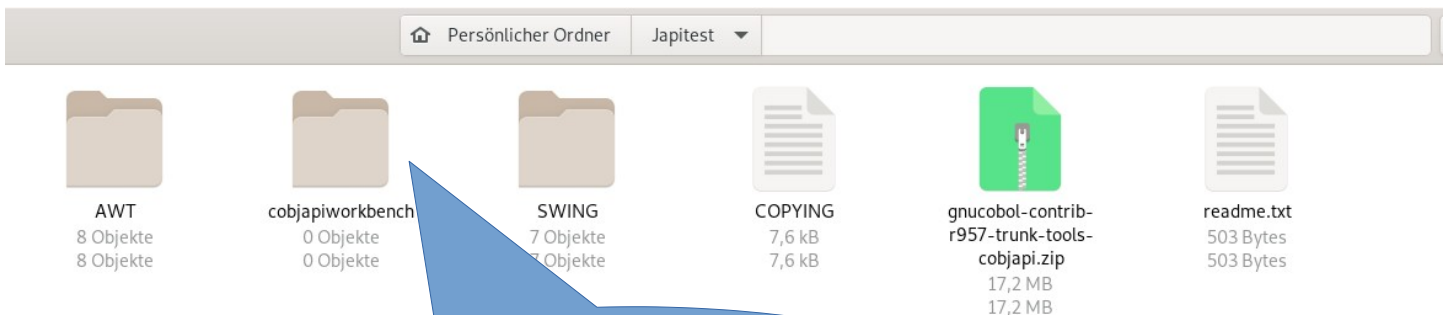
The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

In the terminal say <make> to compile
cobjapi.cob (which is the connection from your GnuCOBOL
programs to the japi server), japilib.c, imageio.c, fileselect.c
and all the examples

```
erich@santiago:~/Japitest/SWING$ make
make -C src_c
make[1]: Verzeichnis „/home/erich/Japitest/SWING/src_c“ wird betreten
cobc -O2 -c japilib.c
cobc -O2 -c imageio.c
cobc -O2 -c fileselect.c
cobc -O2 -b -o libjapi.a japilib.o imageio.o fileselect.o
make[1]: Verzeichnis „/home/erich/Japitest/SWING/src_c“ wird verlassen
make -C src_cobol
make[1]: Verzeichnis „/home/erich/Japitest/SWING/src_cobol“ wird betreten
cobc -O2 -free -c cobjapi.cob
cobjapi.cob:184: Warnung: handling of parameters passed BY VALUE is unfinished;
```



To run some some tests a
working directory would be useful

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

Japi needs a java runtime environment so you need java on your System preferably OpenJDK more than Oracles Version.

Check if it is already installed – if not there is plenty of help in the net.

```
erich@santiago: ~/Japitest/cobjapiworkbench
erich@santiago:~/Japitest/cobjapiworkbench$ java -version
openjdk version "11.0.11-ea" 2021-04-20
OpenJDK Runtime Environment (build 11.0.11-ea+4-post-Debian-1)
OpenJDK 64-Bit Server VM (build 11.0.11-ea+4-post-Debian-1, mixed mode, sharing)
erich@santiago:~/Japitest/cobjapiworkbench$ which java
/usr/bin/java
erich@santiago:~/Japitest/cobjapiworkbench$
```







Japi needs some settings there are several ways to do that In this case we use the hidden file **.bashrc** in the home directory and add 4 lines of code.

```
114
115 # GNUcobol and japi2
116
117
118
119 export JAVA_HOME=/usr/lib/jvm/java-11-openjdk-amd64
120 export COBJAPI_JAPIJAR_HOME=/home/erich/cobol/japi/SWING/src_java
121 export PATH=$JAVA_HOME:$PATH
122 export PATH=$PATH:/sbin
123
```

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

Persönlicher Ordner		Japitest	cobjapiworkbench ▾
Größe	Name		
675,7 kB	 cobjapi.o		
8,6 kB	 CobjapiConstants.cpy		
10,2 kB	 CobjapiFunctions.cpy		
9,1 kB	 fileselect.o		
9,9 kB	 imageio.o		
67,3 kB	 japilib.o		

Put the tools you need on your workbench,
You find them in:

.... SWING/src_c and
.....SWING/src_cobol

Setting your PATHes would be another option

```
erich@santiago: ~/Japitest/cobjapiworkbench
erich@santiago:~/Japitest/cobjapiworkbench$ cobc -x -free myprogram.cob cobjapi.o japilib.o imageio.o fileselect.o
```

Compile your Program

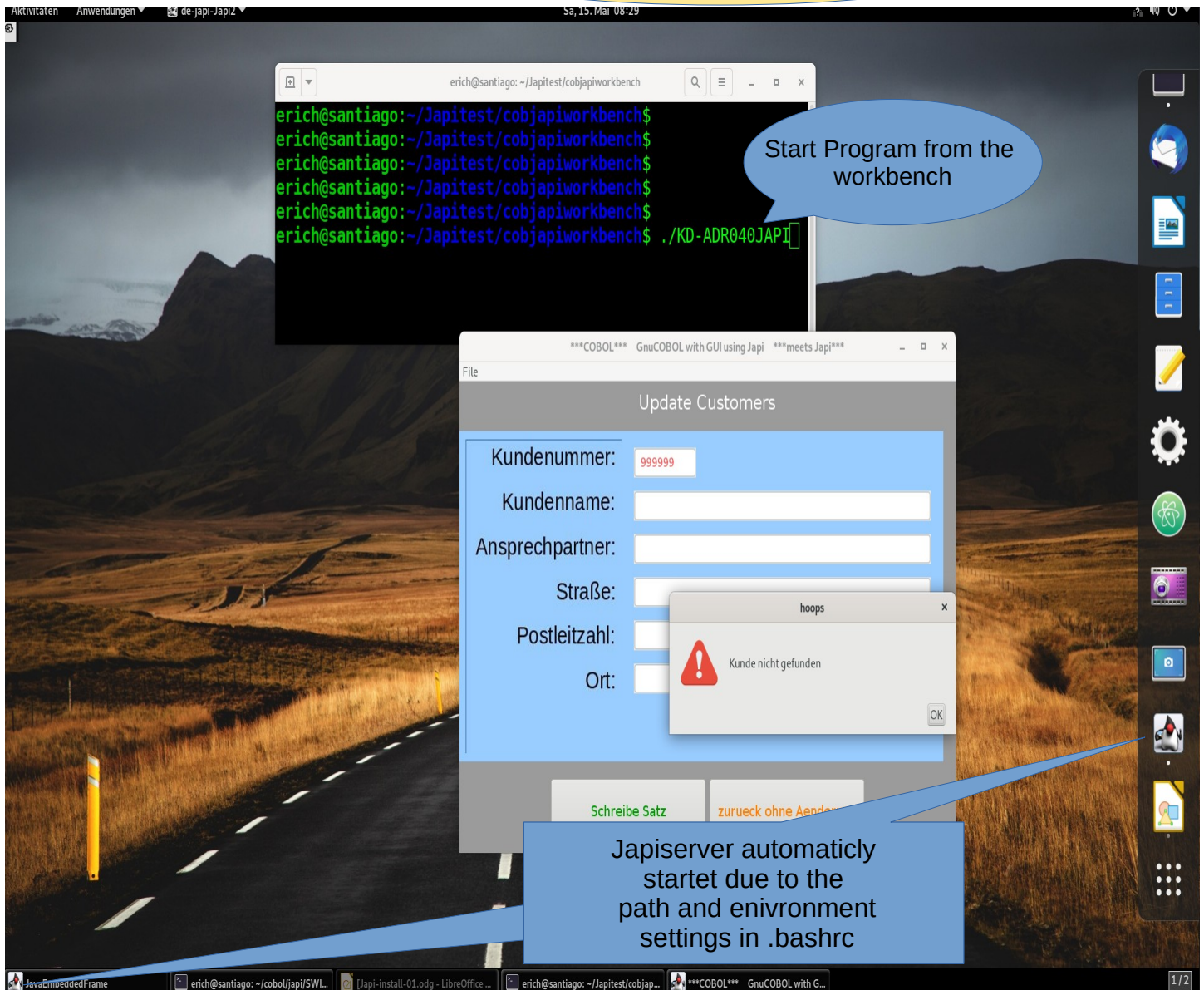
The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

After having started your program your Gnome-desktop should look similar like that

Remember! here we talk about
LINUX Debian 11



Your current Japi program

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

With newer gnome-versions you should install the gnome-extension „Tray Icons:Reloaded“ if you get a message ending a japi-program.

The screenshot shows the GNOME Extensions website interface. The top navigation bar includes 'GNOME EXTENSIONS', 'Erweiterungen', 'Eigene hinzufügen', 'Installierte Erweiterungen', 'Info', and 'Anmelden'. The main content area lists several installed extensions:

- Places Status Indicator** by [fmuellner](#): System-Erweiterung. Description: Add a menu for quickly navigating places in the system. Controls: ON/OFF toggle, settings gear.
- Removable Drive Menu** by [fmuellner](#): System-Erweiterung. Description: A status menu for accessing and unmounting removable devices. Controls: ON/OFF toggle, settings gear.
- Screenshot Window Sizer** by [fmuellner](#): System-Erweiterung. Description: Resize windows for GNOME Software screenshots. Controls: ON/OFF toggle, settings gear.
- Tray Icons: Reloaded** by [MartinPL](#): System-Erweiterung. Description: Tray Icons Reloaded is a GNOME Shell extension which bring back Tray Icons to top panel, with additional features. Controls: ON/OFF toggle, settings gear, and a red 'X' icon.
- User Themes** by [fmuellner](#): System-Erweiterung. Description: Load shell themes from user directory. Controls: ON/OFF toggle, settings gear, and a blue 'X' icon.
- Window List** by [fmuellner](#): System-Erweiterung. Description: Display a window list at the bottom of the screen. Controls: ON/OFF toggle, settings gear, and a blue 'X' icon.
- windowNavigator** by [fmuellner](#): System-Erweiterung. Controls: ON/OFF toggle, settings gear.

The 'Tray Icons: Reloaded' extension entry is highlighted with a blue oval.

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

Nerver forget the 4 modules running a compilation:

```
cobc -x -free myprog.cob  
cobjapi.o japilib.o imageio.o fileselect.o
```

Maybe you would like to
have a look at the examples
before running tests with your
facelifted (Gnu)COBOL programs



With GnuCOBOL
and JAPI

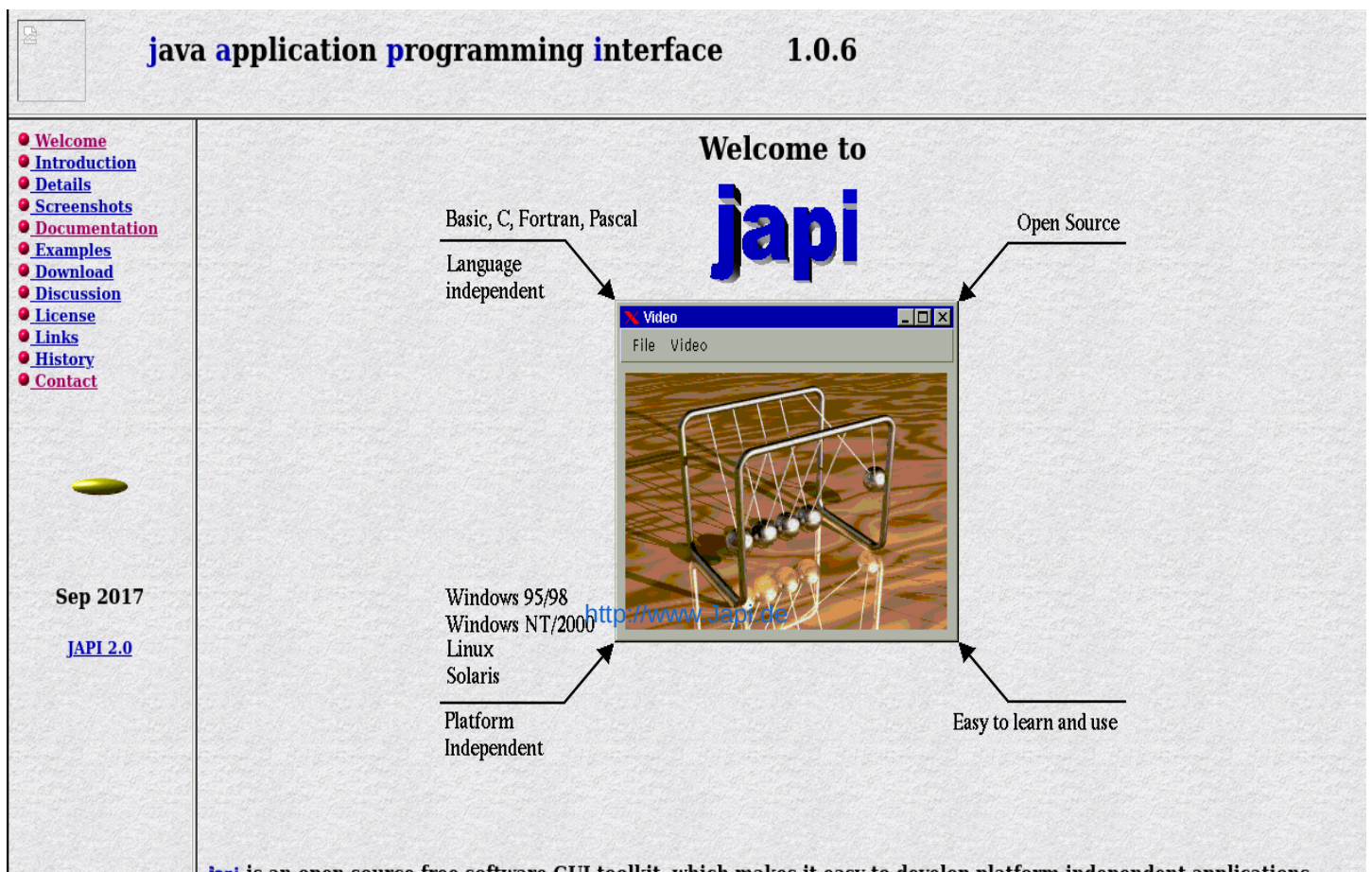
The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers

GnuCobol with Japi

How it works and how to install Japi2

Under: <http://www.Japi.de>

There is more Information
and Documentation about
Japi



Of course

Japi is not as powerful as Tcl/Tk or Qt or other big GUIs and certainly has limits, but you can use GnuCOBOL commands and it is fast to learn and easy to use.

The GnuCobol Version of
Japi is maintained and further
developed by the GnuCobol
developers