



WANDA POS

DEVELOPER'S GUIDE

VERSION 1.0, October 26, 2014



BY

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Used for this paper:

- Wanda pos administrator's guide by Fonyuy Isidore
- Wanda pos user guide by Fonyuy Isidore
- Wanda pos deployment in Netbeans by Tatitir Raoul
- Wanda pos integration with iDempiere erp by Tatitir Raoul
- Netbeans IDE
- Internet connection
- The entire ERP library set, designed and written by the Guru Redhuan D. Oon

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You might be wondering...

Why the noise about another POS software?

Why more than 100 downloads in less than a week?

Why the slogan 'Africa's gift to the world'?

Well,

We freely give out what others don't.

Welcome to Wanda pos

We are pleased to have you as one of our contributors at Wanda pos.

We are, at Wanda pos very open and enthusiastic about new contributors, like you.

At Wanda pos, we work extra because we have a dream, we hope you share our dream, because that is what keeps our community alive. However, you might have another source of motivation, but it would be morally upright of you to have that motivation oriented towards our success.

Here, at Wanda pos, we have a vision, to be the top and best POS/ERP software in the world.

We are happy that iDempiere has made most of the ERP section of our vision, and we have the freedom now to concentrate fully on the POS section.

However, there are several interfaces that have to be built for the communication between the Pos and the erp software, iDempiere.

There is much to do, and we are happy to have you as part of our team.

As a developer, the first thing you can do is to email me any comments about this guide and what you expected that I did not include.

You are welcome.

What is Wanda pos?

Wanda POS is a fork of the latest version of unicenta pos. It is different in that it comes with free Products and orders Synchronization buttons which are linked to the IDempiere ERP. This fork is meant for large businesses with multiple sales stations as it enables data asynchronously synchronization from a central source. Without a backend, it will be limited and poor in its data environment.

Some abbreviations

POS – Point Of Sale

Software system that tracks all inflow and outflow of cash, how the cash moves, by whom, where, when etc.

ERP – Enterprise Resource Planning

Planning all financial resources well ahead of time. Takes care of all financial calculations, predictions based on present data and does all the accounting.

FOSS – Free and Open Source Software

n
Software that you can obtain free of charge and also have unlimited access to its source code. Governed by the GNU public license. E.g. iDempiere, Openbravo POS, Wanda POS, VLC etc.

Wanda pos is a standalone application which is written in java. It has as backend database PostgreSQL, Oracle, Derby, MySQL. When the system install in creates a database with the following schema.

Getting started/ prerequisites

- Netbeans IDE
- Java programming language skills
- Github account
- internet access
- Sourceforge account
- Documentation skills

None of the above is compulsory, but you should know what you need, according to the point of interest in the code and your passion.

Obtaining the wandapos source code

The source code for Wanda pos can be obtained directly from our sourceforge.com page [here](https://sourceforge.net/projects/wandaposdapos/?source=directory) as shown below:

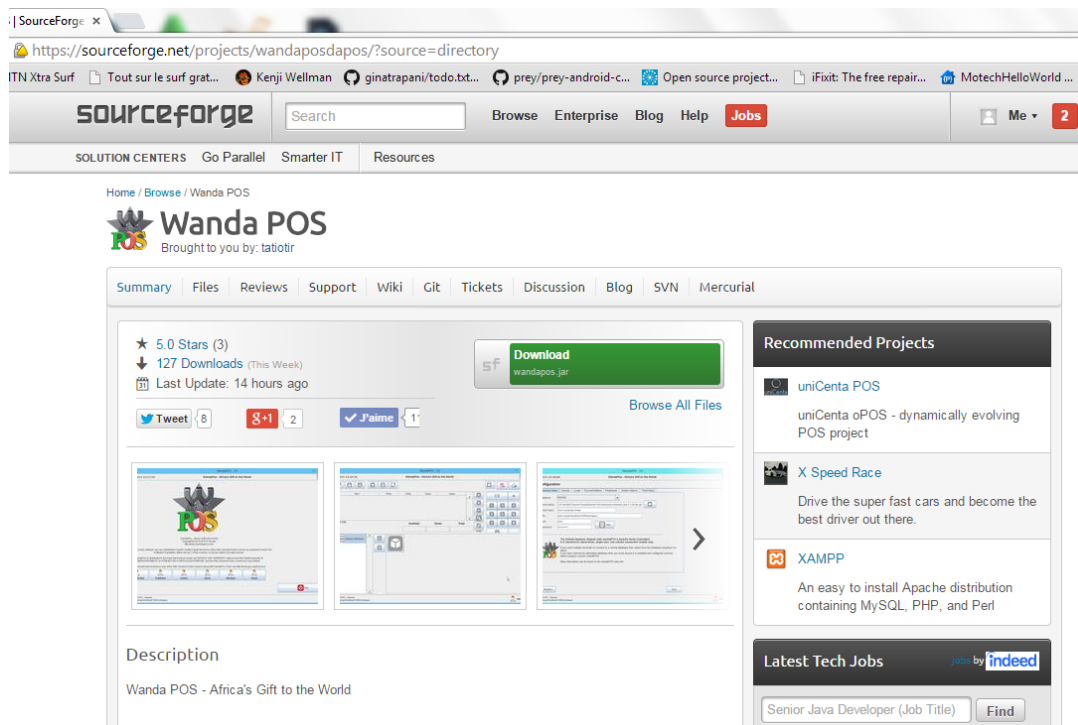


Figure 1:Wanda pos sourceforge page

Then you can navigate to our 'files' directory at:

<https://sourceforge.net/projects/wandaposdapos/files/?source=navbar>

Looking for the latest version? [Download wandapos.jar \(8.0 MB\)](#)

Home

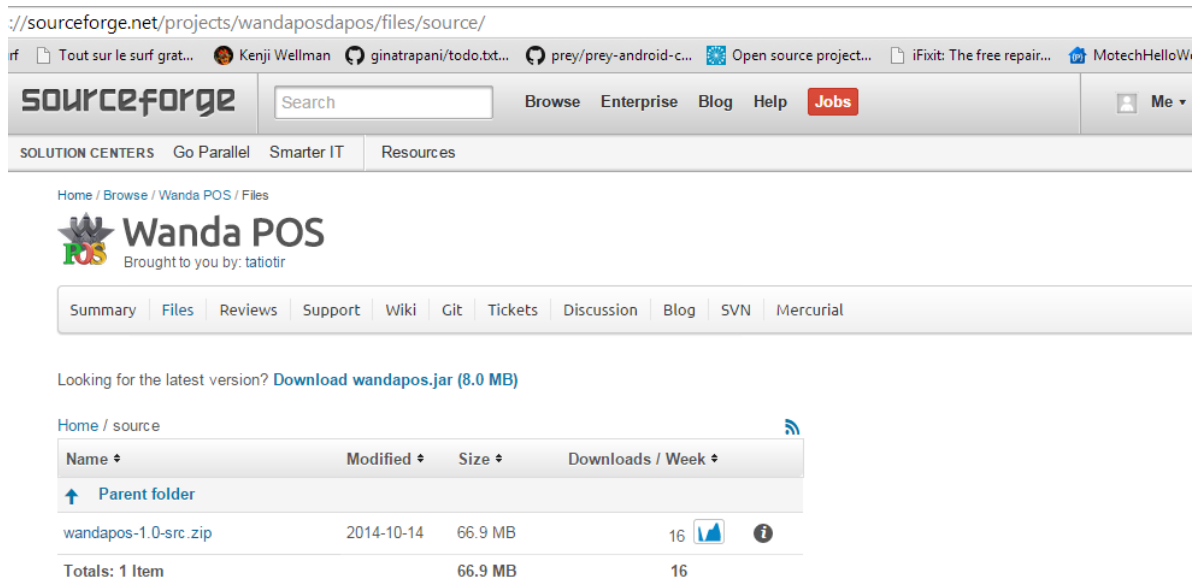
Name	Modified	Size	Downloads / Week
build	< 15 hours ago		3
docs	< 22 hours ago		36
IDempiere	2014-10-21		18
source	2014-10-14		16
app	2014-10-11		43
video	2014-10-11		0
database	2014-10-11		0

Totals: 7 Items

Figure 2: Wanda pos sourceforge library

You are a developer, so you are interested by the source code, you can download it [here](#):

Just click on it, and you have this:



The screenshot shows the SourceForge project page for Wanda POS. The page includes a navigation bar with the SourceForge logo, a search bar, and links for Browse, Enterprise, Blog, Help, and Jobs. Below the navigation bar, there are links for SOLUTION CENTERS, Go Parallel, Smarter IT, and Resources. The main content area features the Wanda POS logo and the text "Brought to you by: tatitotir". A horizontal menu contains links for Summary, Files, Reviews, Support, Wiki, Git, Tickets, Discussion, Blog, SVN, and Mercurial. A link for "Download wandapos.jar (8.0 MB)" is visible. Below this, a table lists the source code files:

Name	Modified	Size	Downloads / Week
Parent folder			
wandapos-1.0-src.zip	2014-10-14	66.9 MB	16
Totals: 1 Item		66.9 MB	16

Figure 3:Wanda pos code download page

Importing the project into Netbeans IDE

Upon download, you have a .zip file:

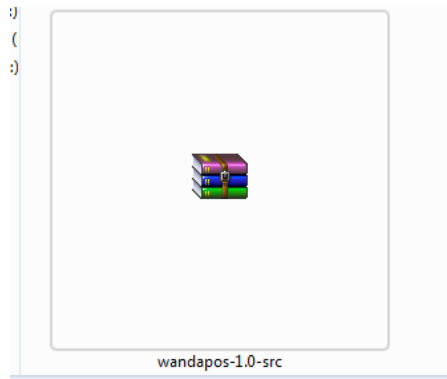


Figure 4: Wanda pos .zip source code file

Then, read the Wanda POS deployment guide in Netbeans by Tatiotir Raoul, which can be downloaded [here](#).

Build instructions

Wanda pos is written in java, so it can be built just like any other Java project.

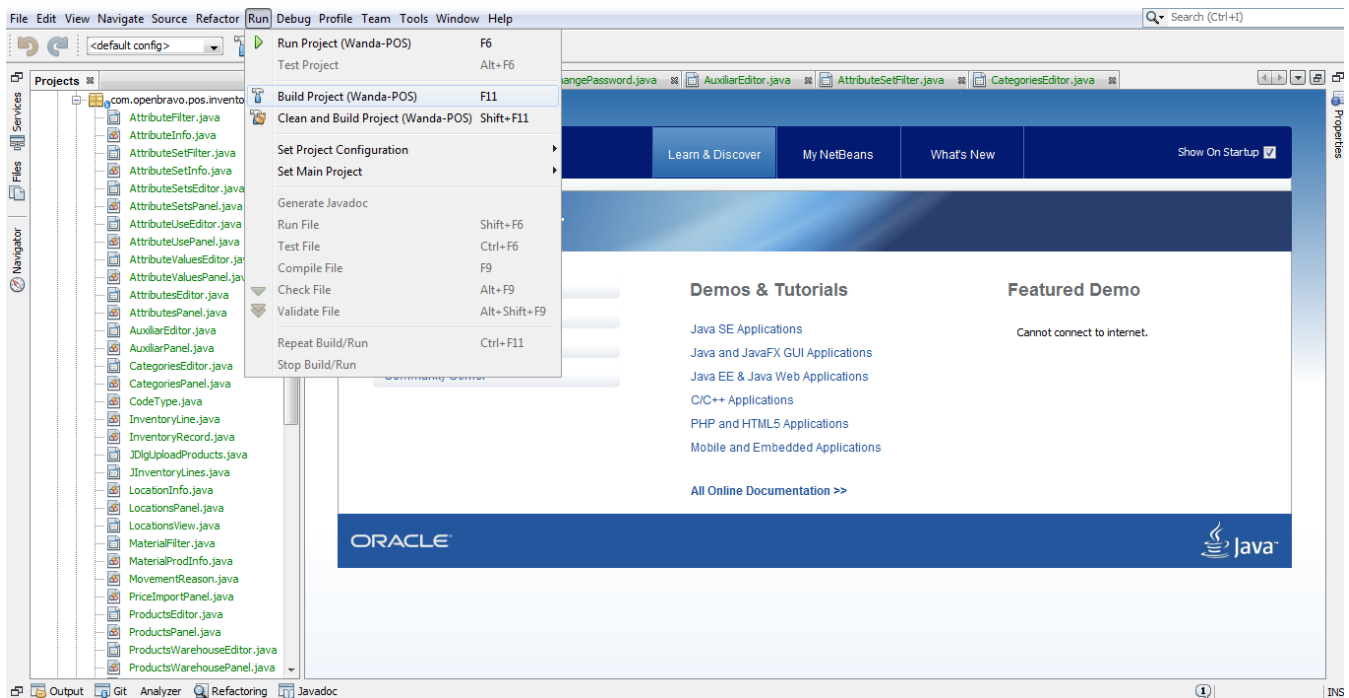


Figure 5:Wanda pos Build

You then notice this message:

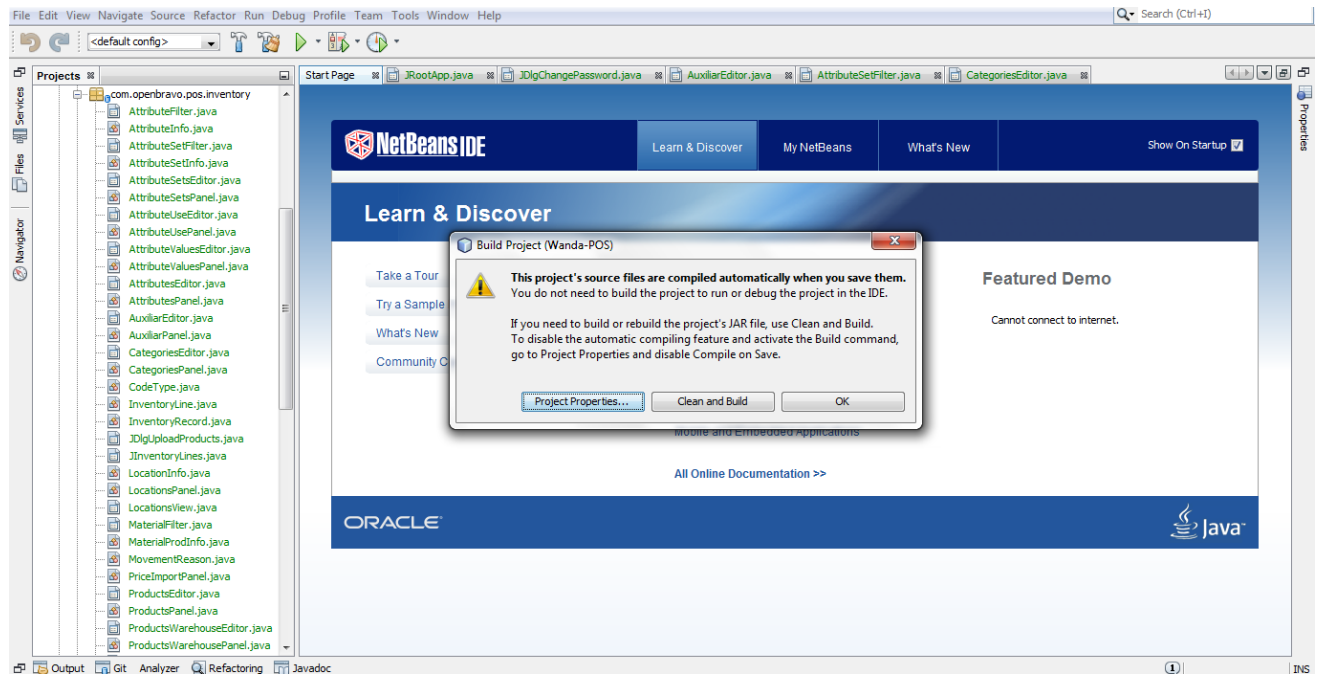


Figure 6: Wanda pos build message

Select Clean and Build to have the toolbar beneath showing this:

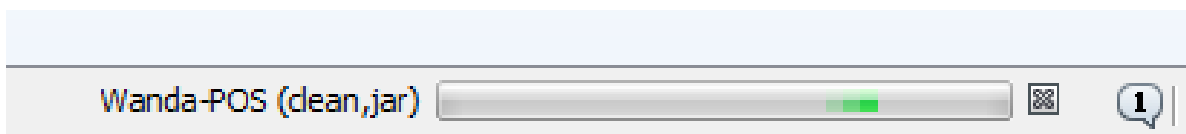


Figure 7: Wanda pos build / jar generation

Running wandapos:

Wanda pos can be run in Netbeans by pressing the F6 Button or selecting the Run button in Netbeans as

Shown below:

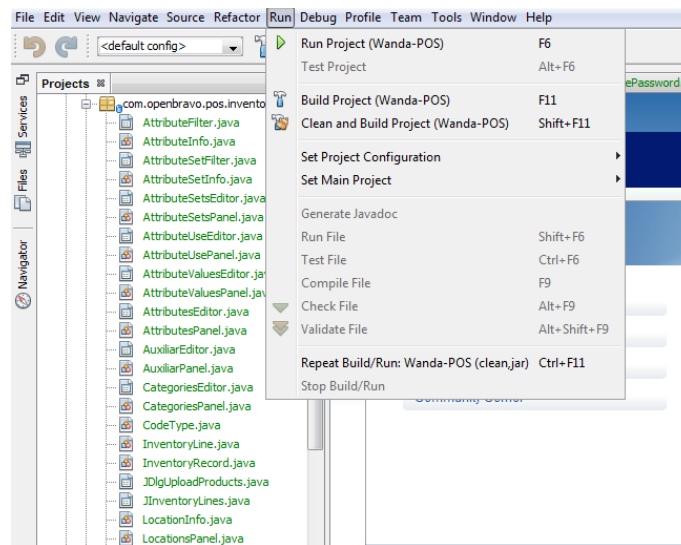


Figure 9: Wanda pos run

Or pressing the Run button in Netbeans shown below:

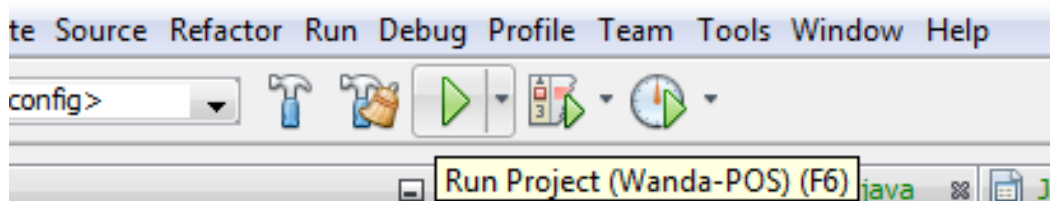


Figure 10: Netbeans Run button

Just wait and see the Wanda pos application running with no errors:



Figure 11: Wanda pos running

And observe the output window in Netbeans, You see a list of sql statements that are run.

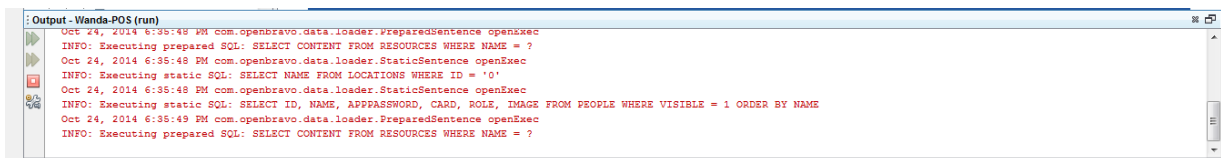


Figure 12:Wanda pos run sql statements

Debugging wandapos

Upon click of the Debug button in Netbeans,

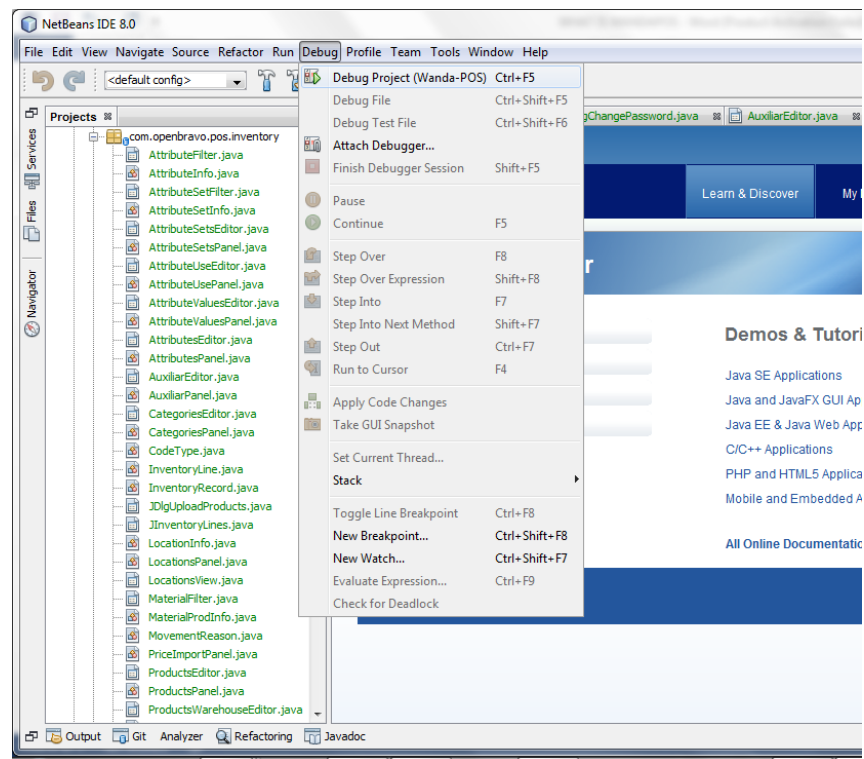


Figure 13: Netbeans Debug button

This window appears:

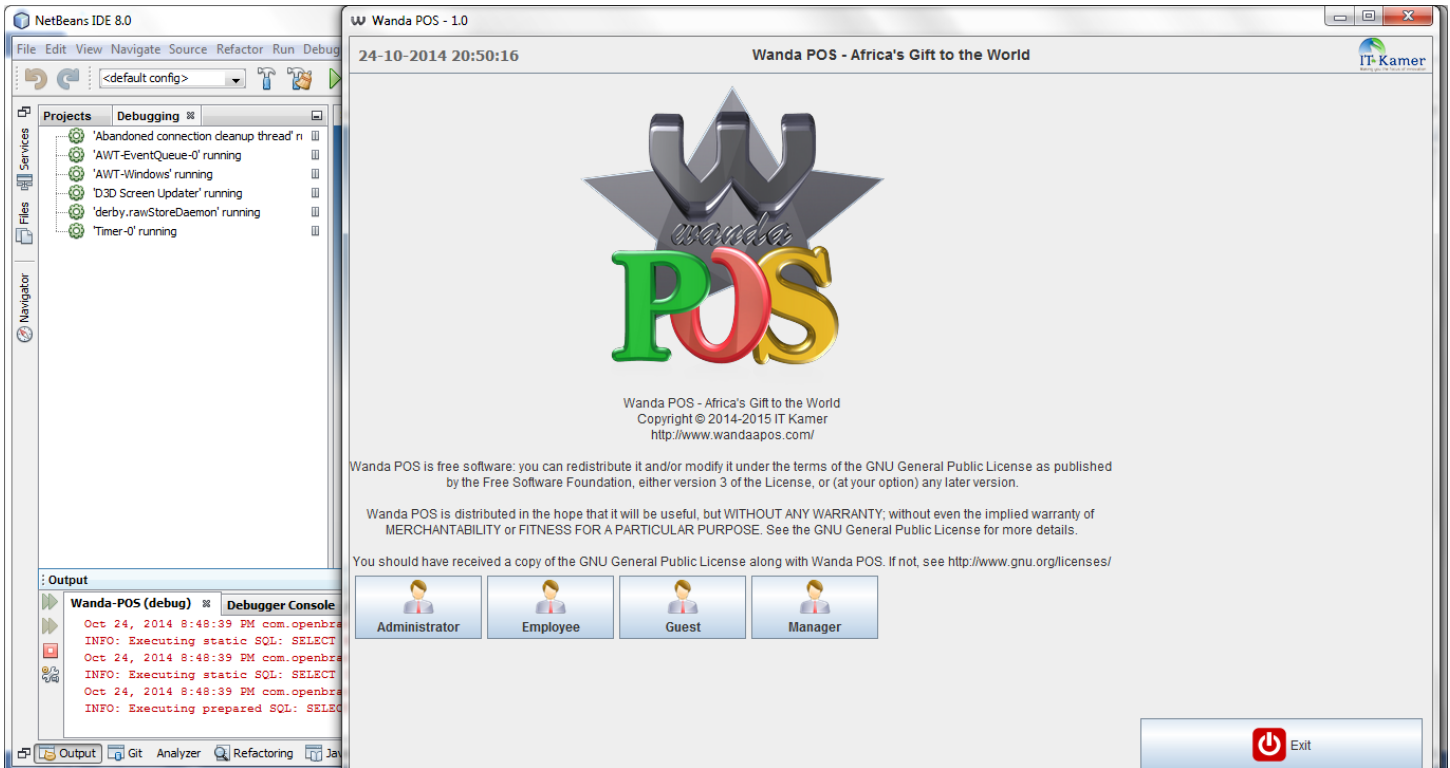


Figure 14: Netbeans debug view

Here, several options are made available to you:



Figure 15: Netbeans debug toolbar

Remember, Pausing the Debug renders the application non responsive. This is not a bug. Isn't it logical?

Exploring the javadoc:

As a Developer, you should have an idea of what the Javadoc is. It is a word composed of two others – Java and Doc, Doc for Documentation. You can generate the Javadoc for any Java project in Netbeans IDE. So, there is no need for me to give you the Javadoc for Wandapos, but I will show you how to generate it in your IDE.

You can check everything about the Javadoc [here](#).

In you Projects Window, Right-click on the Wanda pos project and select 'Generate Javadoc'.

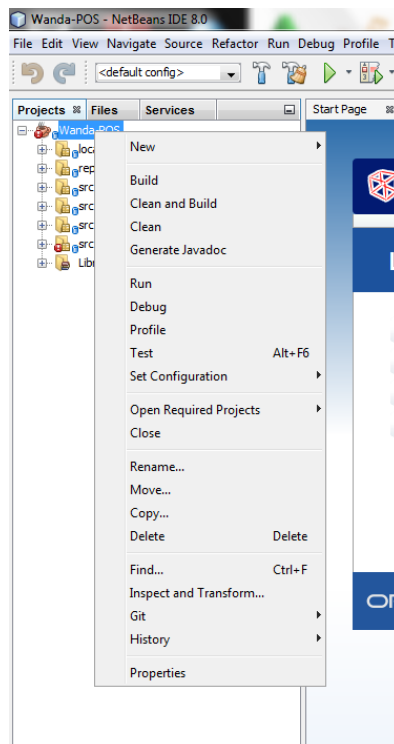


Figure 16: Wanda pos Javadoc generation

The next thing you have to do is to wait for the IDE to generate the Files. Yes the files. The Javadoc is generated in HTML format and as such, it is opened with your browser, to ease your navigation. Below is the view of the waiting screen for the generation of the Javadoc.

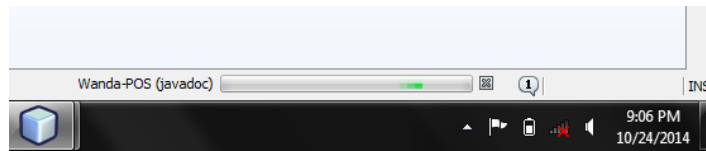


Figure 17:Javadoc generation process

Here is the Directory where the Javadoc is stored:

C:\Users\...\Documents\NetBeansProjects\Wanda POS\dist\javadoc

Once In the above directory, launch the file index.html.

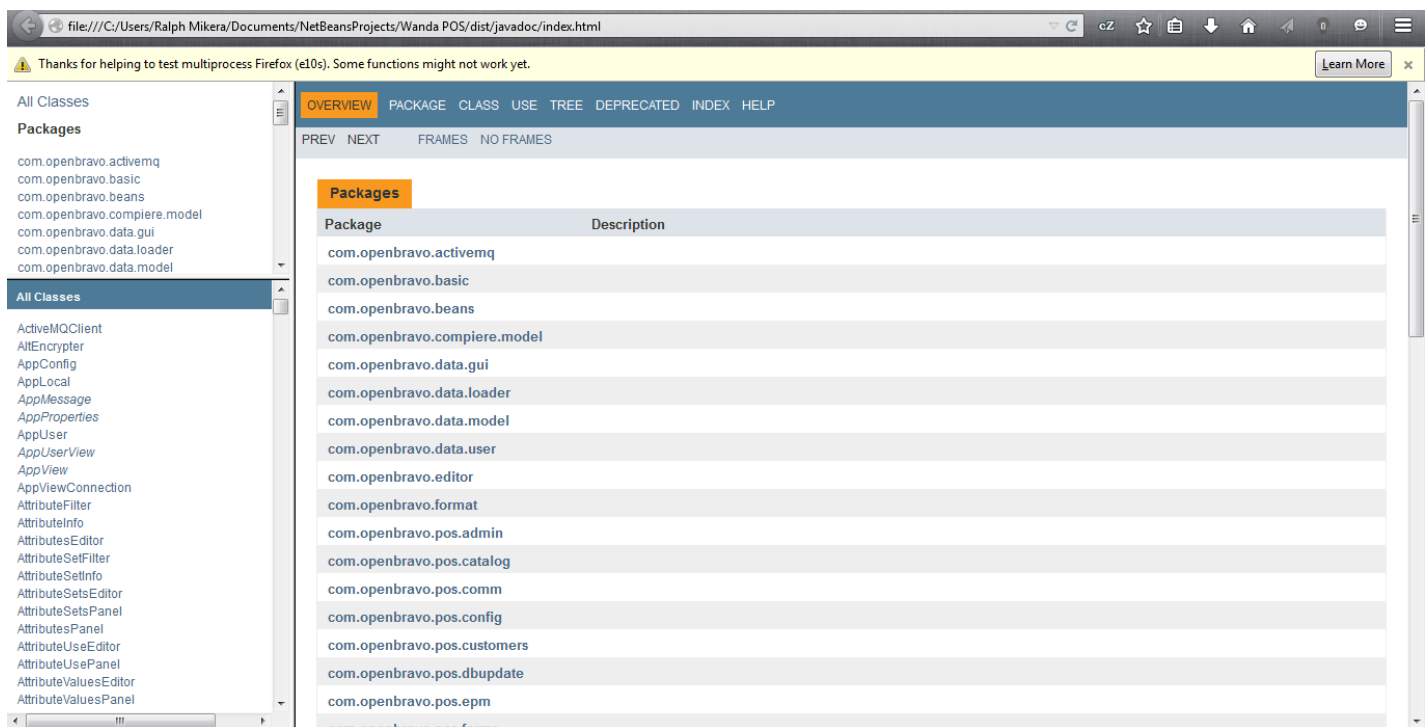


Figure 18: Wanda pos Javadoc view in browser

There, you can browse through the Packages and the Classes to see their implemented interfaces, constructor summary, method summary, constructor

detail, method detail, the packages that use that class, the methods in the entire source code That have parameters of that class type, a hierarchical view for all packages and classes, the deprecated api implementations, etc.

This will help you to get a different view of wandapos, its classes and packages.

Working with wandapos source code

Erp integration

This integration was done and documented by Tatitir M. Raoul. It was also documented by Eyog Yvon Leonce. However, the code was written by Redhuan D. Oon, the guru.

In this paper, the most of their documentations is included, to give you and in depth view of what makes us special, the ERP integration.

“

DBSourceManager

DBSourceManager is a java library that helps with database tasks related to development. Its most important feature is database independence. You will be able to focus in the development of database features and let DBSourceManager deal with the database implementations details.

DBSourceManager is based on DDLUtils and the database model used by DBSourceManager is an extension of the model used by DDLUtils. DDLUtils supports a large list of database engines but all the extensions created in DBSourceManager only work for Oracle and PostgreSQL.

The main goal of DBSourceManager is to aid the developer in the creation and maintenance of Database physical objects and data. The way this works is via an array of XML files which represent database physical objects, or table records. DBSourceManager contains utilities which allow the developer to export its objects into this XML files, and which allow modifications into these XML files to be moved into the database by updating it.

Therefore, the developer can focus on creating and changing its components (either in the database or in the XML files), and DBSourceManager can automatically move the changes in either place to the other.

Scripting Language

The scripting capabilities this release offers has the following benefits:

- Simple scripting language very similar to Java and easy to learn.

- No need to compile the POS. You only need the binary package.

- Powerful object model. When writing a script for the POS you have access to all the POS objects methods and properties, and access to all the Java API.

- Automatic deploy to all POS terminals. You only have to create the scripting functionalities in one terminal and all terminals connected to the same database will automatically use the scripting functionalities created.

- Security. The execution of scripts is role based. You can allow or deny to execute scripting functionalities based on the user's role.

POS ERD

Wanda POS

Wanda POS is a fork of unicenta pos from version 2.30. It is different in that it comes with free Products and orders Synchronization buttons which are linked to the IDempiere ERP. This fork is meant for large business with multiple sales stations as it enables data asynchronously synchronization from a central source. Without a backend, it will be limited and poor in its data environment.

Wanda pos is a standalone application which is written in java. It has as backend database PostgreSQL, Oracle, Derby, MySQL. When the system install in creates a database with the following schema.

The two tables that store the sales are:

- TICKETS (TICKETID, DATENEW, HOST, PERSON, PAYMENT, MONEY INTEGER)

- PRODUCTSOUT (TICKETID, TICKETLINE, PRODUCT, UNITS, PRICE)

One sale is one record in the table TICKETS and one or more records in the table PRODUCTSOUT.

POS Synchronization

The ERP Application or server can be entirely remote to the POS or be anywhere in the world that has broadband Internet access. As long as the POS and ERP system are connected to a web-enabled line, we have a perfect operational environment.

The ERP can also allocate each POS station as a virtual locator in its Warehouse Locators network

There is real-time synchronous web services as well as offline asynchronous messaging mechanisms. In our integration we took the asynchronous approach. Below is a class diagram that shows an overview of the synchronization:

How it works

We will be using JMS for integration to IDempiere and we will be using Apache's ActiveMQ implementation of it. The adapter class is MQClient. Now, with ActiveMQ or messaging technology even the POS can update without the ERP end to be up. As long as the ERP has deposited or updated the ActiveMQ (message queue) service which is somewhere else, again even remotely situated with its own web access. The ActiveMQ service from the Apache project is a MOM or message-oriented middleware. ACTIVEMQ has its own Derby database that can store the messages queue and when it is turned on again, its messages are still there.

That is called persistence. This allow the service to experience disruption or stopping due to electrical outage. If it has booted up again, it won't need to be updated again by either the POS or ERP end. However that persistence option is controllable as some messaging strategies may not want persistence. At the moment we have turned it on within the code. Reason been that many POS stations may take a longer time to access it.

It uses the port 61613 (which is different from the JMS port) for Stomp-based communications. In order to send and receive messages using the Stomp protocol, the Java application must use the Stomp APIs provided by ActiveMQ.

Note that

queue-host could be at the remote `jenkins.idempiere.com`.

The pos locator name is set to "HQ Warehouse".

IDempiere will produce the messages in its data model format.

IDempiere will consume the messages from Wanda in its data model format.

Wanda will consume the messages from IDempiere and convert it into its data model.

Wanda will convert its data model to IDempiere and produce the messages for IDempiere.

All the messages will be represented in an XML format.

The producer code will put a message on the queue and exit.

In order to have the integration working, we are producing/consuming the data in the following XML format:

```
<?xml version="1.0" ?>
<entityDetail>
  <type>entity name</type>
  <detail>
    .....
    entity specific detail
    .....
  </detail>
</entityDetail>
"
```

You can now read the IDempiere integration with Wanda pos written by Tatitir M. Raoul. It is present in our sourceforge libraries.

Updating the wandapos source code

Any update made to wandapos has to be done after the initialization of a git repository, in Netbeans. This is done so that all changes can be exported in the form of a patch file that our team of developers can review and appreciate, before any publishing can be done.

Here is an example of the modification of the tooltip text of a button in the sales panel (screen shown after user login):

The 'up' Button shown below has no tooltip set as shown on the left image

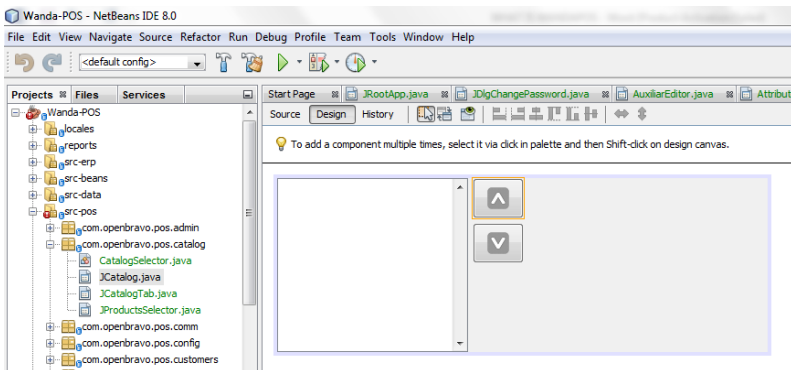


Figure 19: Tooltip edition

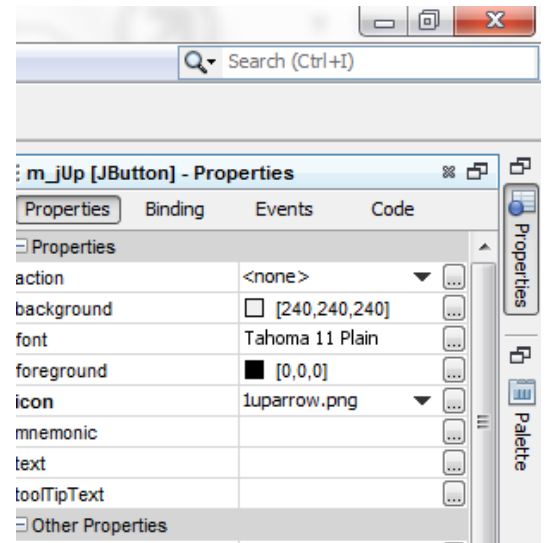


Figure 20: Tooltip edition 2

We are going to modify that tooltip text and export the changes in a patch. Here is how to modify the tooltip text:

Click on the (...) button beside the tooltip text in the properties bar. A window appears as shown below, where you can select the method through which you wish to set your tooltip text.

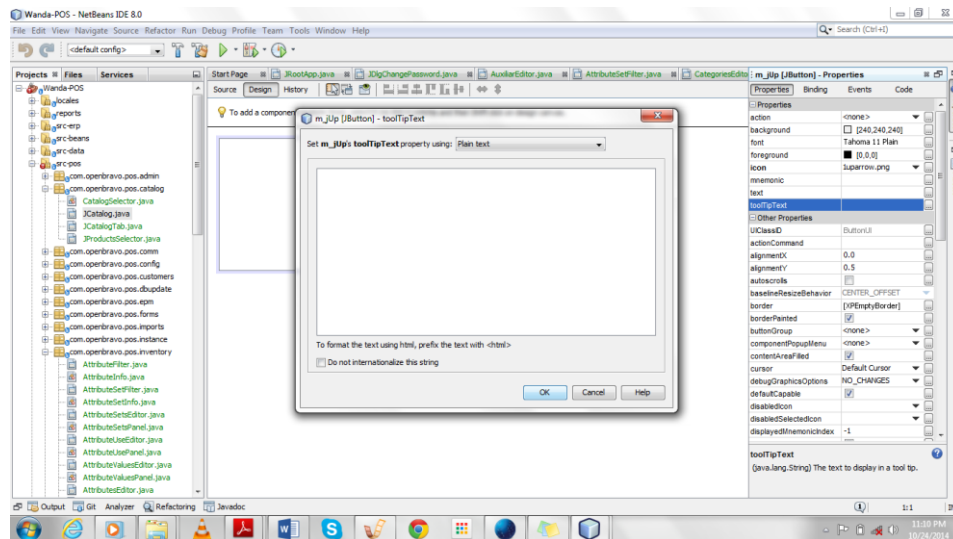


Figure 21: Tooltip edition 3

I wish to set my tooltip through the Resources bundle, so I select Resource Bundle in the Drop down menu below:

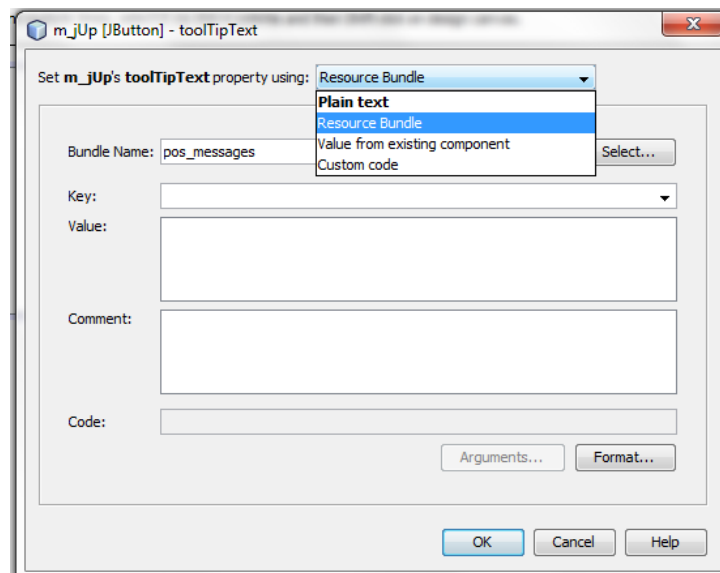


Figure 22: Tooltip edition 4

Now I can fill the rest of the information in the new window, so that I have this:

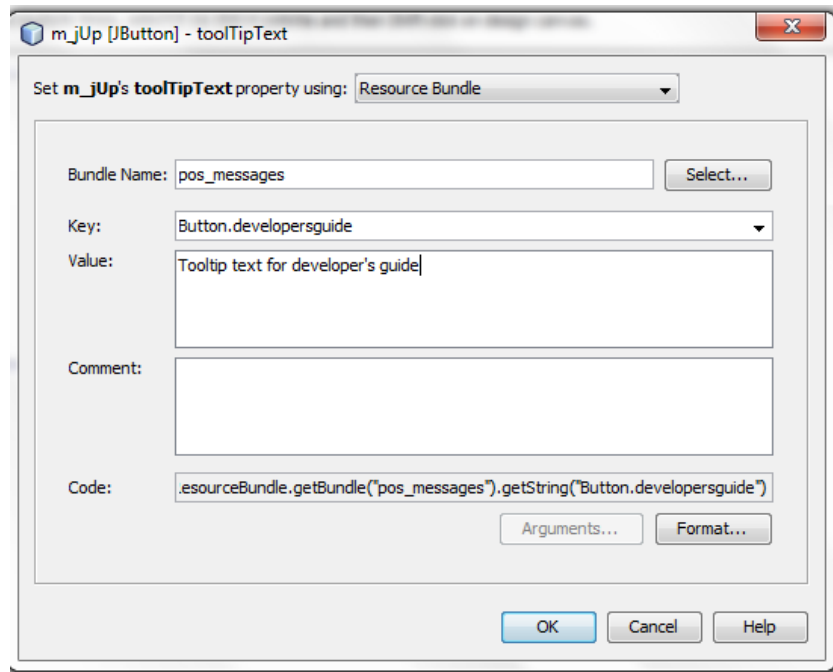


Figure 23: Tooltip edition 5

Click on OK, so now you just need to check what you edited when the application runs:

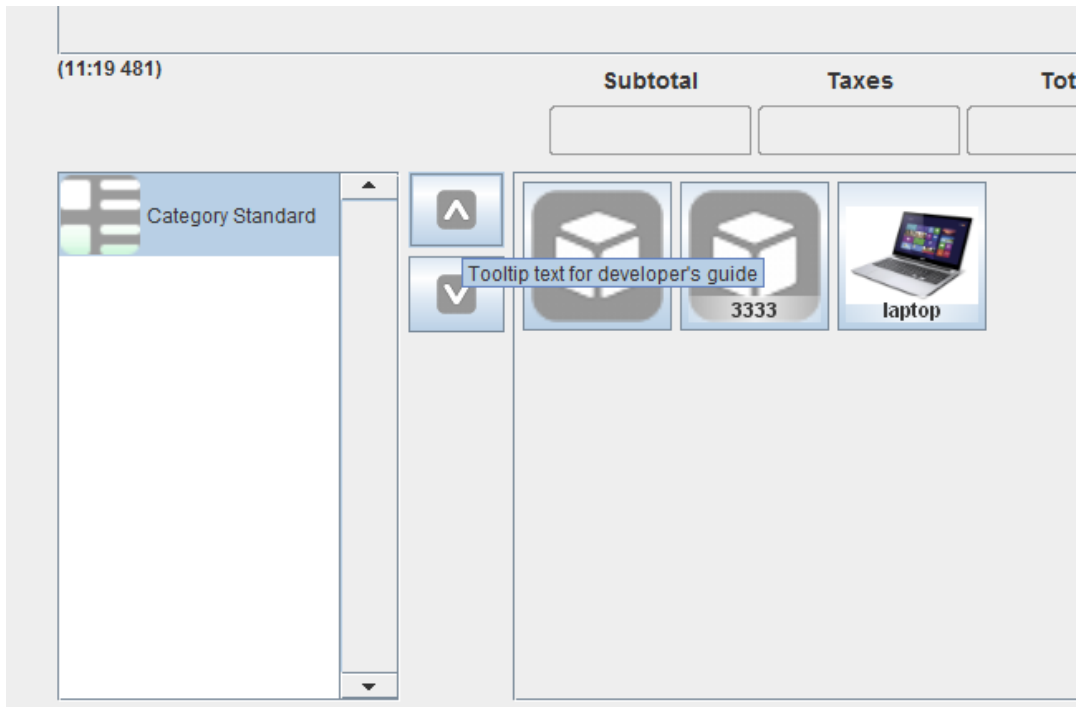


Figure 24: successful Tooltip check

Now, you can commit your changes as well as you must not do so. In this case, I will not commit my changes, but export them as a patch. Watch:

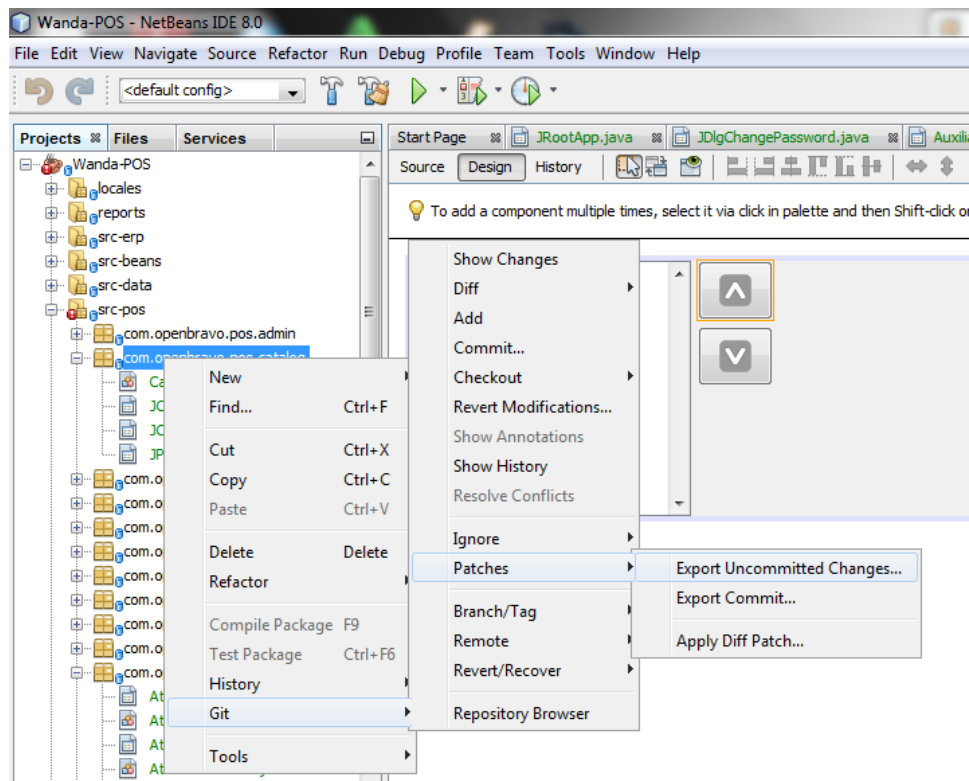


Figure 25: Patch export of uncommitted changes

And here is the head of the patch file:

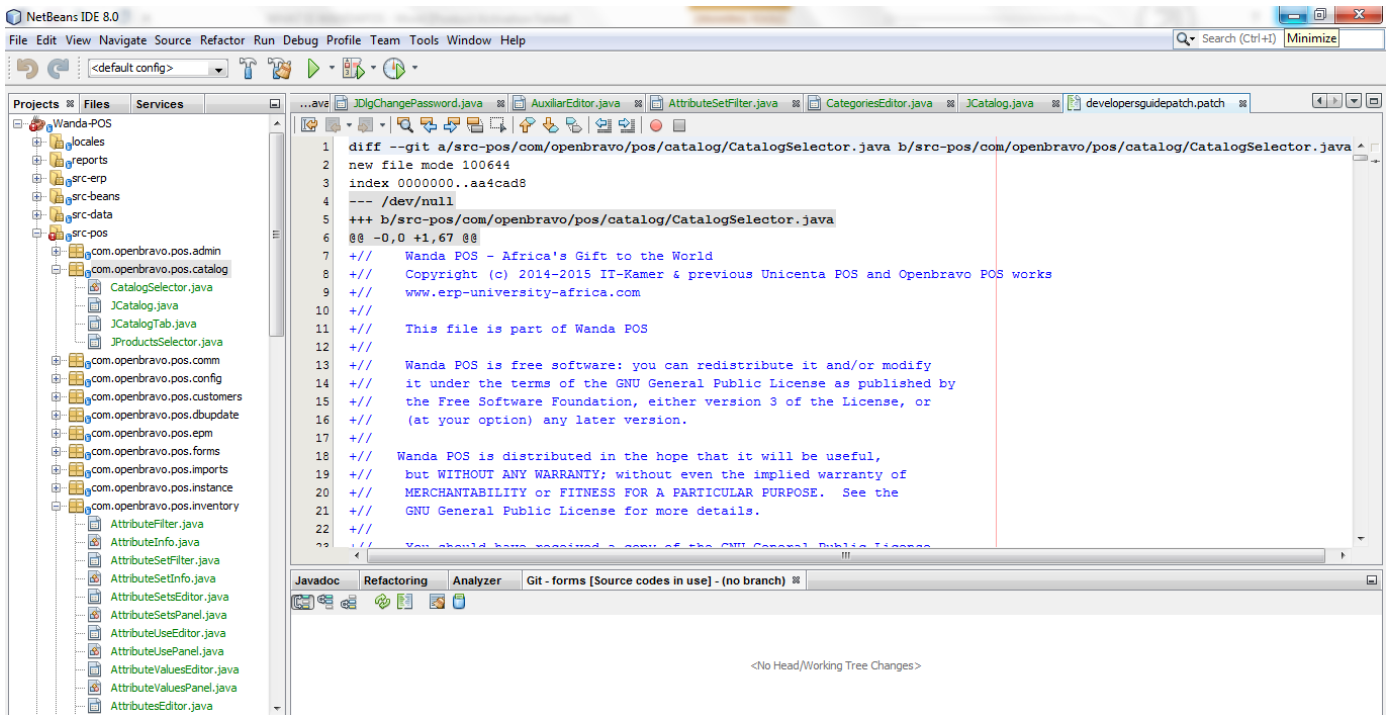


Figure 26: Patch file content

How to submit a patch

At Wanda pos, documentation is a key issue. Any minute work has and must be documented in order to be reviewed or accepted. So, any patches you write have to include the following, in their documentation:

- What problem you want to solve and why
- What the patch aims at doing
- How you did what you did
- Snapshots of what you did
- Snapshots of your working product after the patch has been applied

After this has been done, your work should be emailed to any of our support team members for approval, before we publish your document. We are morally upright enough to give credits to who deserves it, when he deserves it. So we will give you the credits you deserve. We do not intent to remove your name as Author... Your document remains yours.

Applying a patch from someone else

In Netbeans, patches are applied in seconds. As done on the screenshot below, Right-click on the project name (Wanda pos), select Git -> Patches -> Apply Diff Patch

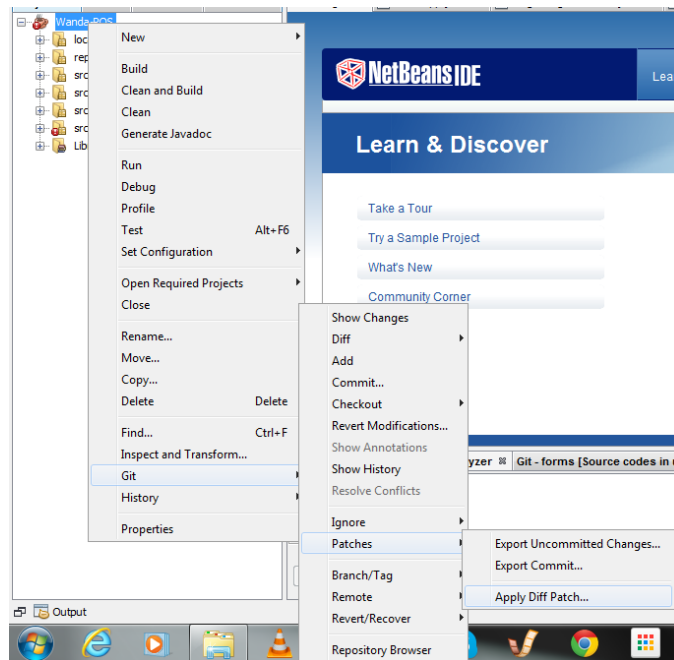


Figure 27: Patch application

Then a window appears, navigate and select the patch you wish to apply, as shown below:

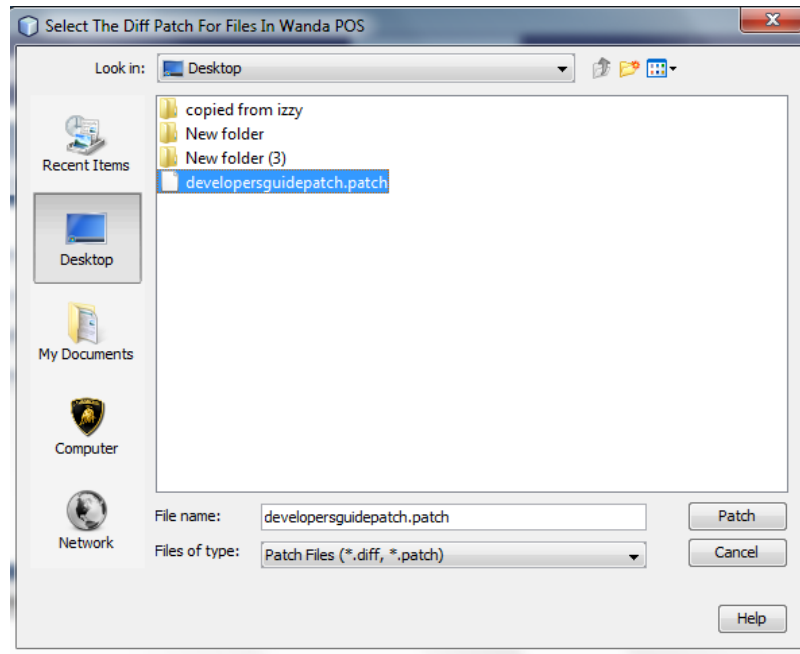


Figure 28: Patch file

For this document, I reverted the changes made to the tooltip in the catalog panel so that the application of the patch can be effectively tested. So, this patch will render the tooltip text for the 'Up' button of the Catalog panel. Make sure that you do not right-click on the whole project to apply a patch, if you know the specific package where the patch has to be applied. If you do that, you will find yourself looking at your screen for several seconds just for the patch to be applied.

Select the patch and click on 'Patch'. You then see this, and you can check your modifications

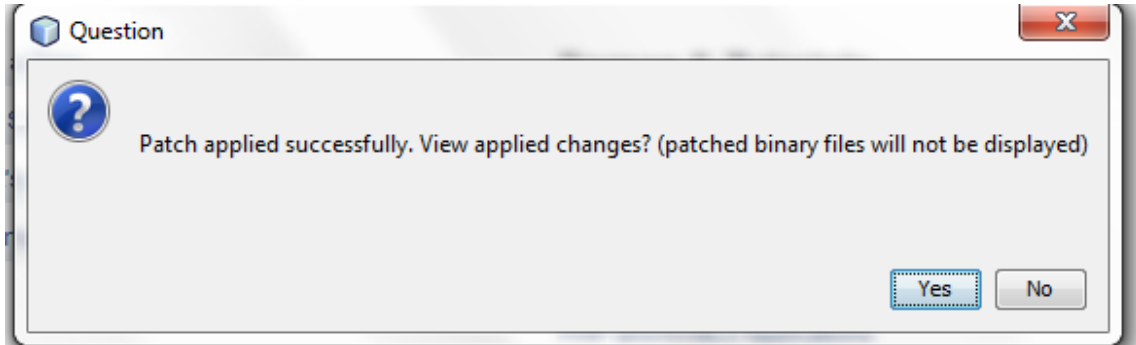


Figure 29: Patch application info

Tool reference (programming languages)

To contribute to wandapos, you need a good level of java programming.

However, for contributors-to-be that are new to java programming, we recommend the book: JAVA HOW TO PROGRAM 9th edition by Paul DEITEL and Harvey DEITEL.

Upon completion of the above book, we recommend that you study Java Patterns programming.

Library reference

Documented by Tatiotir M. Raoul, in his paper: Wanda pos deployment into Netbeans.

Getting documentation updated

There is always room for improvements in our documentation, especially as the software product is bound to grow larger in the future. In our sourceforge.com files directory, you can have a view of the documents we uploaded. However, any document uploads have to be reviewed by our team of developer's. So, the publishing is first done on our google group page [here](#)

You can just email us your document at: steve-jobs-project-cameroon@googlegroups.com.

And this is the team that will review your work. You can always have your name included, just stay close by:

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Your document will then be reviewed and the final publishing will be done by us, to our sourceforge page.

Please we expect you to follow this hierarchical structure designed to avoid 'noise' on our sourceforge page.

Crash / bug tracking

If you have a bug, go to our sourceforge page [here](#) and raise a ticket. If you have any doubts about what a ticket is, you can visit [this page](#).

Click on Ticket as shown below:

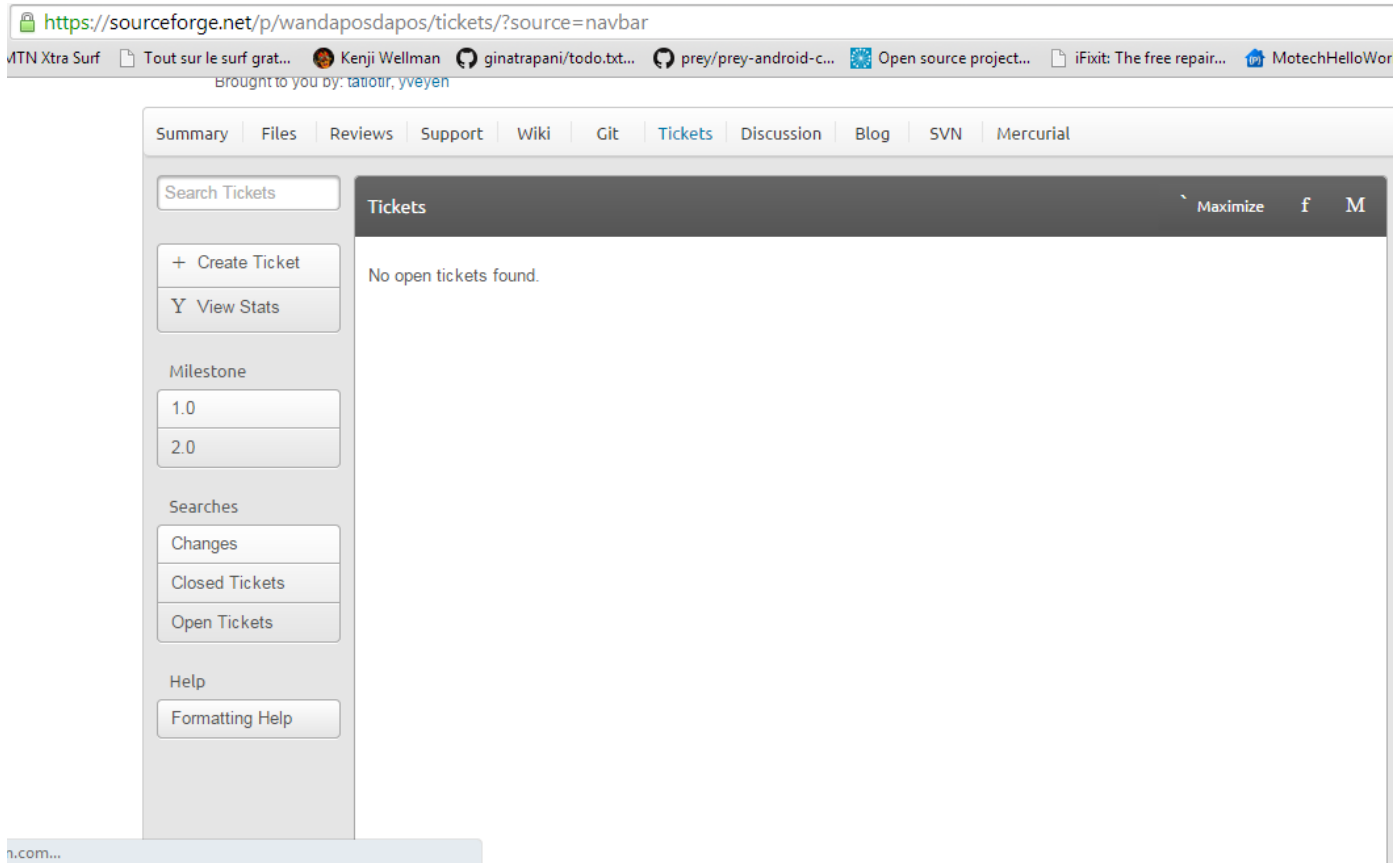
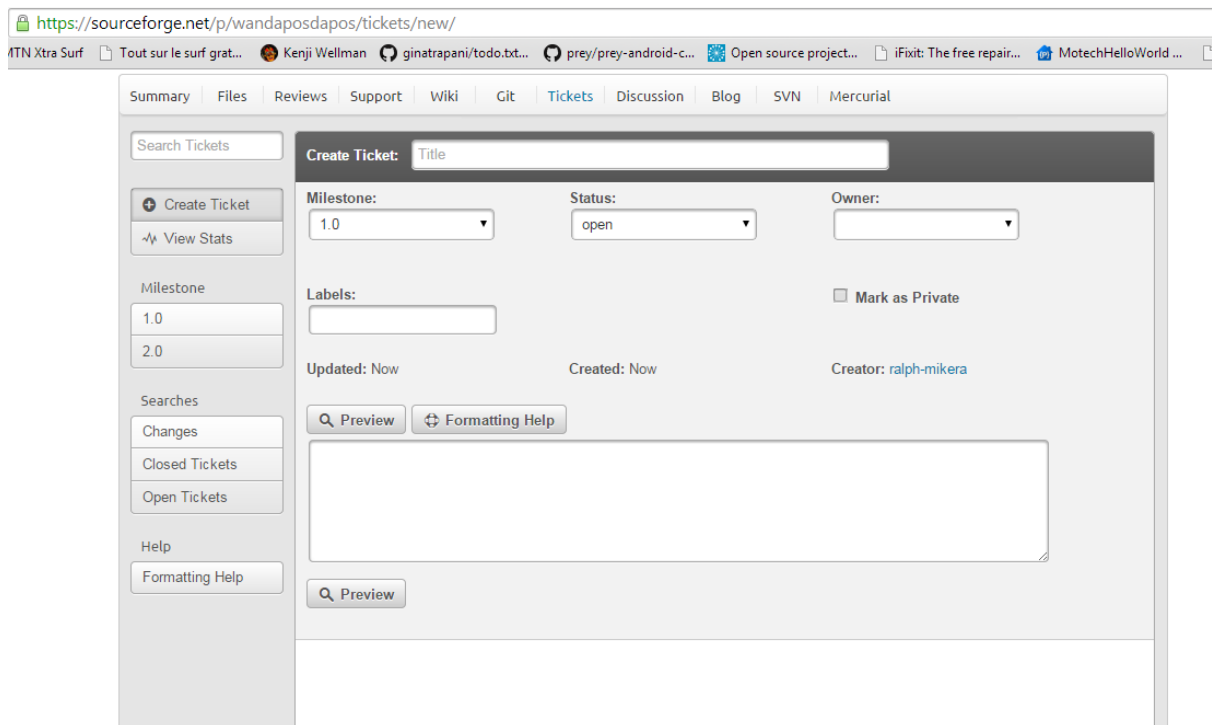


Figure 30: Ticket view

Click on 'Create ticket' so that you fill the information shown below.



The screenshot shows a web browser window with the URL <https://sourceforge.net/p/wandaposdapos/tickets/new/>. The browser's address bar and tabs are visible at the top. Below the browser window, the SourceForge interface for creating a new ticket is displayed. The page has a navigation bar with links: Summary, Files, Reviews, Support, Wiki, Git, Tickets (highlighted), Discussion, Blog, SVN, and Mercurial. On the left side, there is a sidebar with a search box labeled 'Search Tickets', a 'Create Ticket' button, a 'View Stats' button, a 'Milestone' dropdown menu showing '1.0' and '2.0', a 'Searches' section with links for 'Changes', 'Closed Tickets', and 'Open Tickets', and a 'Help' section with a 'Formatting Help' button. The main content area is titled 'Create Ticket: Title' and contains several form fields: 'Milestone:' with a dropdown menu showing '1.0', 'Status:' with a dropdown menu showing 'open', 'Owner:' with a dropdown menu, 'Labels:' with a text input field, and a checkbox labeled 'Mark as Private'. Below these fields, it shows 'Updated: Now', 'Created: Now', and 'Creator: ralph-mikera'. There are two 'Preview' buttons and a 'Formatting Help' button. A large text area for the ticket description is located below the buttons.

Figure 31: Ticket creation

When you join the Wanda pos, you have to know that you are no longer working as an individual, but rather as a community, so, you can fix any bugs you discover or share it to us through emails.

Developer websites

Here are the websites any Developer at Wanda pos should get acquainted with:

Reference	Description	Link
Wandapos Support	For users who seek support on certain issues concerning Wanda POS	http://wandaapos.com/support.html
Wandapos Download	Link to download the latest version of Wanda POS	http://sourceforge.net/projects/wandaposdapos/files/latest/download?source=files
Wandapos Developers' support	For developers who are interested in working on Wanda POS	http://wiki.idempiere.org/Cm:Cameroon

Support libraries for wandapos	For other libraries needed for smooth operation of Wanda POS	http://sourceforge.net/projects/wandaposdapos/files/
WandaPos website	For users who want to visit the Wanda POS website	http://www.wandaapos.com
Wandapos Wiki	For those who want to meet the real gurus behind the success of Wanda POS	http://sourceforge.net/p/wandaposdapos/wiki/Home/

As a Wanda pos developer, you can always email us so that we give you the wiki registration process online. This is a platform that enable that enables the easy sharing of information among ourselves.

Stay productive

This section provides advices for developers to stay and remain productive in the wandapos community.

Here are the laws:

- Dedicate time for your Wandapos project
- Work on the bugs that affect important sections of the application
- Keep updating the documentation
- Code the right way, follow java coding rules.
- Test your code before any submission
- Go step wise in the choice of bugs, don't work on several bugs at a time. This renders you less productive. Take a bug, fix it, document your work and select another and do same.
- Get advice / google before working on a patch
- Do not ask us questions that Google can give you answers to
- Check out the [smart way to ask questions](#).
- Document your work.

Going deep into the code (uml, class diagrams)

Check out recent versions of the Wanda pos developer's guide.

Conclusion

Wanda pos is paving its way to be one of the best software in the world. Today, approximately two weeks after its release, its registers > 200 weekly downloads, this already crushes and eliminates some potential competitors like Smart POS as shown below:

Email us any requests you have, any unsolved problem and any misunderstandings. We are there for you, to make Wanda pos a success.

We hope this document gave you the introduction to developing with Wanda pos. However, we look forward to hearing from you, in your comments on this document, and in your subsequent works.

Thanks.

Teaser

Hello!
What software did you fork?

Unicenta

And unicenta forked openbravo
right?

Yeah! And Openbravo forked Tina pos

I believe the documentation is
good! Reason why you fork such a
project that has undergone so
many changes.

Actually, there is no documentation.

Then you should be crazy to fork
such a project!

I will provide the documentation.

Ok my open source KING !!!!!!!!!!!