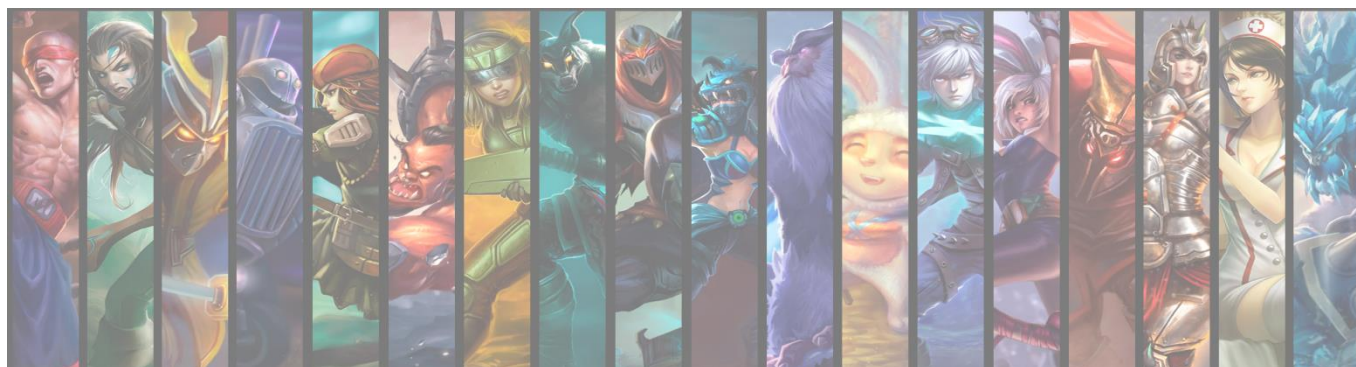




User Manual



Manual for version 1.2 of *LoL Assembler* tool

Designed and written by Alberto Martin Cajal

Software and document released under *GNU GPL v3.0*

**For additional information and news about *LoL Assembler*,
visit the official blog <http://glimpse-23.blogspot.com.es/>**

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1. INTRODUCTION



1.1. What is *LoL Assembler*?

LoL Assembler is a tool for strategic picks in League of Legends (R), the most successful MOBA ever. *LoL Assembler* helps you to build the perfect team in a smart way, using counter-pick data from the community of players and your own customizable information. The tool is completely free, and can be used in all game modes, with a bunch of related features. Whether you are a newbie who needs a little impulse to start in the competitive way, an experienced player seeking for challenger tier, a trainer who wants a decision support system or just a gamer with passion for chess-like planning and strategies, *LoL Assembler* will aim you in the fields of justice.

The main features of the software are:

- **Free:** *LoL Assembler* is a tool from the community to the community. Developed by a passionate player for passionate players. As League of Legends itself, this software is totally free. Forever. You won't need to pay for updates or bug-fixes. Just download it, and enjoy.
- **Easy:** *LoL Assembler* is specially designed to be easy to use. All operations can be performed by simply pushing graphic buttons –like the UI of the game. Easy to install and fix (if it crashes somehow), works in Windows, Mac and Linux. You only need Java installed in your machine. And of course, there is a reference manual with all you need to know to become a Summoner's Rift master tactician.
- **Powerful:** *LoL Assembler* use complex algorithms to calculate different ratios like “what champion should be banned”, “what champion should be picked”, “what champion works better in the actual composition”, “what champion will be picked by the enemy”, and many more, based on the information available both in the community and personal section (as you can see in the next point). All this operations are performed quickly and automatically, so you only need to focus on take the final decision.
- **Customizable:** *LoL Assembler* gives you the opportunity to use community information or personal information (or both). Community information is similar to those from pages like ChampionSelect, Mobafire, Lolcounter, and other forums with counterpick data. But, what if you have your own opinions? *LoL Assembler* features allows you to generate and maintain your personal counterpick information, along with special data like “most loved/hated champions”, “popular champions (the ones who become OP with the last

patch)”, and “wombo-combos (the composition you saw one time and want to try it)”. Whether you trust in the player database, or you have own ideas, *LoL Assembler* will work fine.

- **Complete:** *LoL Assembler* supports the previous features in all game modes – ranked and normal, both 5vs5 and 3vs3- along with an information window to check for specific counterpick data, combos, personal information, and so on. You can use *LoL Assembler* when you are scaling the ladder to gold division, when you are having fun with friends in Twisted Treeline, or in a relaxed evening of “brain-storming” strategies.

1.1.1 How the tool works?

LoL Assembler is just a normal desktop application. Simply run and enjoy. All you need to work with it is explained in this manual.

1.1.2 What information the tool uses, and where it comes from?

Two different sources of data are processed by the tool:

- **Community data:** counterpick information built by the comments and opinions of the community along Internet. This information is divided in 4 categories, similar to those which can be found on many blogs: Strong Against, Weak Against, Even Against and Works Well. Giving a certain champion, with this categories you can know which enemies you should wreck, which enemies should destroy you, which enemies will be in equal conditions, and which champions will be powerful allies due to various synergies in the game.
- **Custom/personal data:** counterpick information customized by the user, and personal information.

The *counterpick information* is organized in a similar way (Strong Against, Weak Against, and so on), but now, the user fulfills it with his own opinions

The *personal data* is divided in the following categories: Hot Ones, Loved Ones, Hated Ones and Combos. Hot Ones are those overpowered champions, very popular at the moment, and picked/banned by everyone because that; Loved Ones are the user’s favorite champions, while Hated Ones are the living nightmares. And Combos are combos, champion combinations or team compositions with amazing synchronization. You can even establish at which positions these champions are hot, loved or hated (Top, Mid, Jungle, ADC or support).

While the community data is downloaded directly from the blog (and updated every week), so it will be always available and ready, the custom/personal data is fully modifiable by the user (it can be leaved empty, partially or fully complete).

This allows *LoL Assembler* to give pick and ban recommendations using different opinions: from a well trusted community database, and from users own experience.

1.1.3 What can I do with this tool and why?

With *LoL Assembler* you can:

- Check precise information of a champion (Strengths, weakness, synergies, both from community and personal data, if it's a popular one, a favorite one or a hated one, combos in which it is involved, and positions where it shines) in a very fast way.
- Obtain ban recommendations in ranked games, discovering possible enemy strategies and own-team flat points, anticipating their next movements.
- Obtain pick recommendations both in ranked and normal games, aiming to build a balanced team, in which the individual power and the combination with teammates are take in consideration.
- Remember team compositions and meta-break picks, applying them in the best situations.

In summary, *LoL Assembler* supports you (see what I did here? *support*) in many ways: from establishing priorities in ban/pick phases, correlate big chunks of information to discover unexpected strategies. *LoL Assembler* best description is "decision support tool". It gives you a tactical platform to start if you are a new player, and boost your knowledge and game mechanics when are closer to higher tiers.

1.2. License and Disclaimer

1.2.1. License

LoL Assembler is released under the following license:

GNU GPL v3.0

Check it at GNU official webpage: <https://www.gnu.org/licenses/gpl-3.0.en.html>

1.2.2. Disclaimer

League of Legends (R) is a free-to-play; session-based, multi-player on-line battle-arena computer game developed by Riot Games, Inc., a Delaware Corporation (the "Game").

Its wholly owned subsidiary, Riot Games Limited, an Irish limited company, operates and publishes the Game in the European Union, the Russian Federation, and other international territories, and provides related services.

1.3. Troubleshooting

Due to an inexistence of community feedback, troubleshooting, like FAQ, cannot be established. Further releases will contain information about how to fix or repair the tool. However, basic instructions about tool management are provided in section 2.5.

1.4. Feedback and Contact

You can contact me to:

- Report a bug.
- Share an opinion.
- Talk about a desirable feature in future tool releases
- Say Hello

Pretty much everything you want. I will try to answer all the questions. I will check these sources:

- **Blog's comments section:** <http://glimpse-23.blogspot.com.es/>
- **Twitter:** @amartin_g23
- **Gmail:** amartin.glimpse23@gmail.com (notice the dot between "amartin" and "glimpse23")

1.5. FAQ

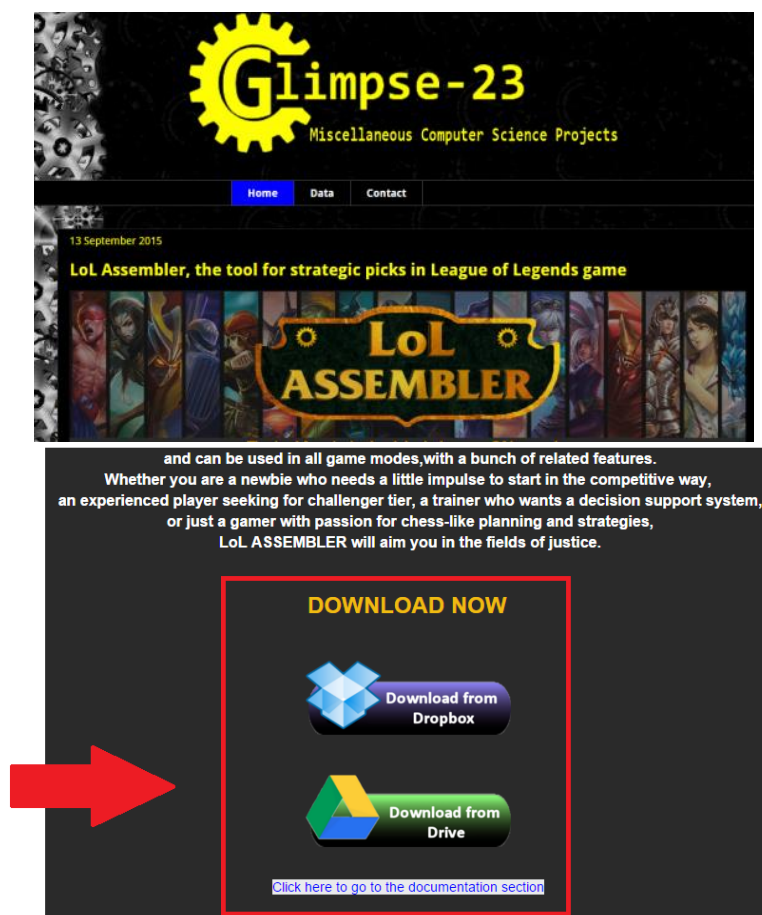
There are not yet Frequently Asked Questions. Future releases will gather community feedback and elaborate a FAQ list. Despite this, it's highly recommended to check the blog's FAQ section regularly, because it will be updated more frequently than this manual (for practical reasons): <http://glimpse-23.blogspot.com.es/>

2. QUICKSTART

2.1. Download

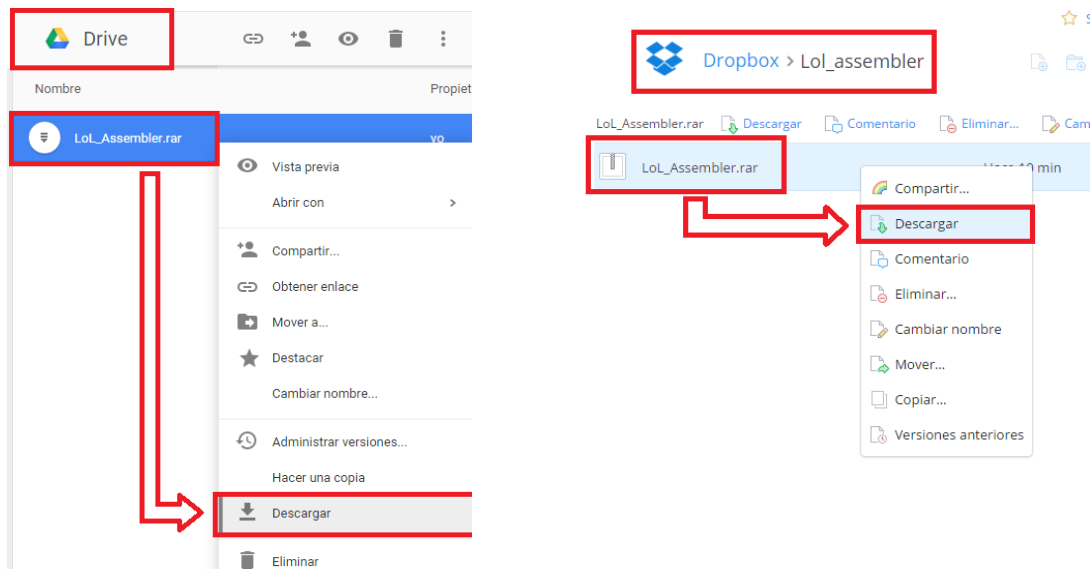
LoL Assembler is available for download both in Google Drive and Dropbox public folders, so you don't need to register in neither of them. To download *LoL Assembler*:

- Go to Glimpse23 official webpage: <http://glimpse-23.blogspot.com.es/>
- From *LoL Assembler* post, scroll down a little until you see the download buttons.

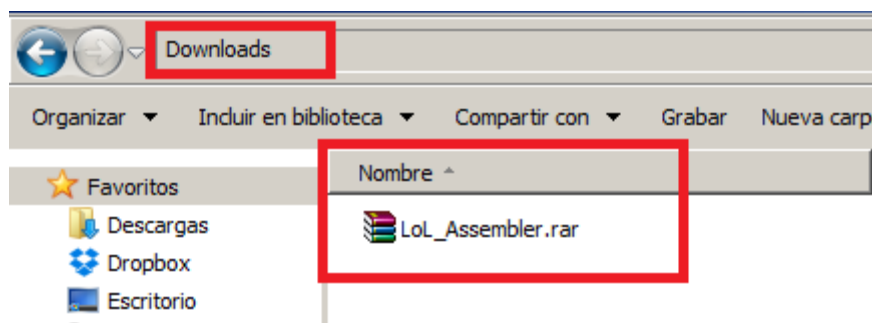


- Push “Download from Drive” or “Download from Dropbox”, depends on your preferences. For direct access, copy and paste the following URLs in your browser navigation bar, and press Enter.
 - Drive URL: <https://drive.google.com/drive/folders/0B9rP65a1Z-6OS2JpTEtXQWJoYVE>
 - Dropbox URL: <https://www.dropbox.com/sh/0yfa00yzkotdlii/AADRYlFIQgMxHQ7wsVAg7xCCa?dl=0>

- In Dropbox or Drive, just right-click on the “LoL_Assembler.rar” file, and then select download. The download process should start almost immediately.



At the end of this process, you should have the “LoL_Assembler.rar” file in your PC, in your download folder (default), or in the specified directory before the process started.

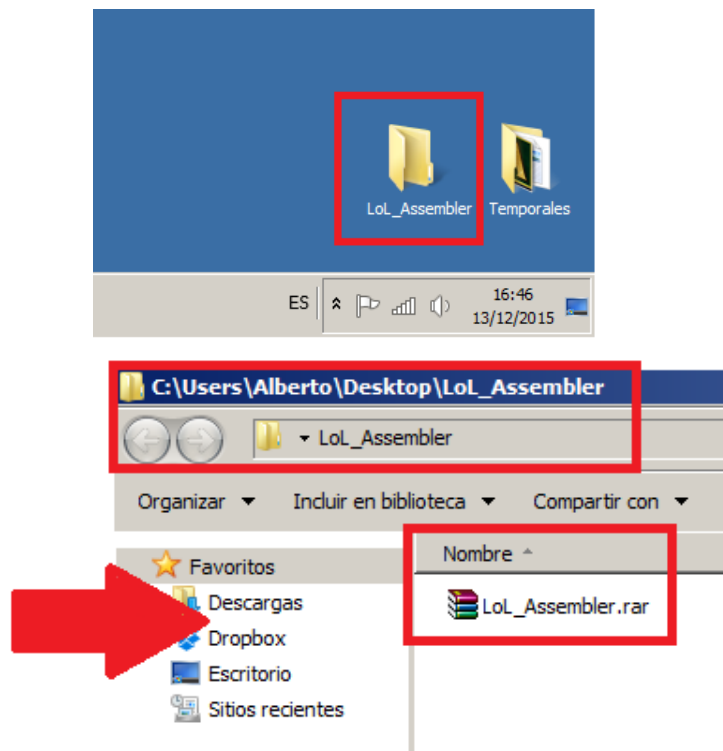


2.2. Install

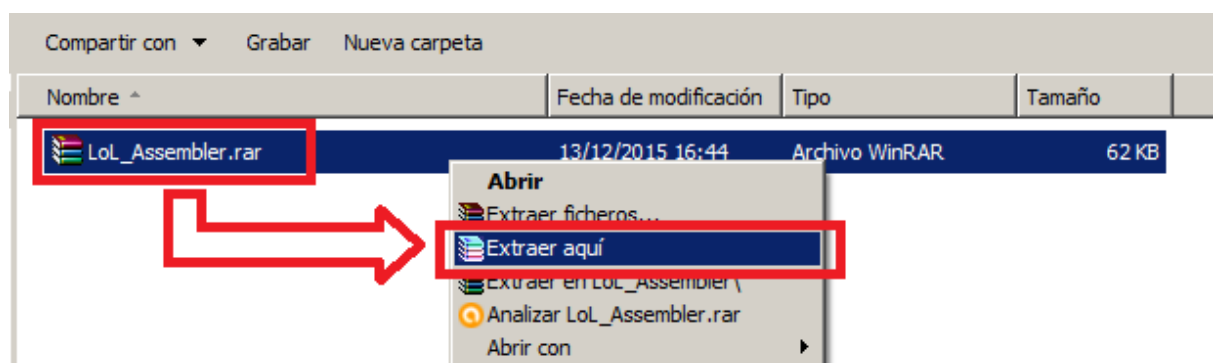
LoL Assembler uses Java as core technology, so you don't need to install nothing (besides Java, obviously). Check Java official page for more details: <https://www.java.com/download/>

To “install” *LoL Assembler*:

- Move “LoL_Assembler.rar” to a well located directory. It’s recommendable to create an empty folder for the program, to avoid problems during update/delete/access operations. I.e.: create a folder called “LoL Assembler” in the desktop. Then move the .rar there.

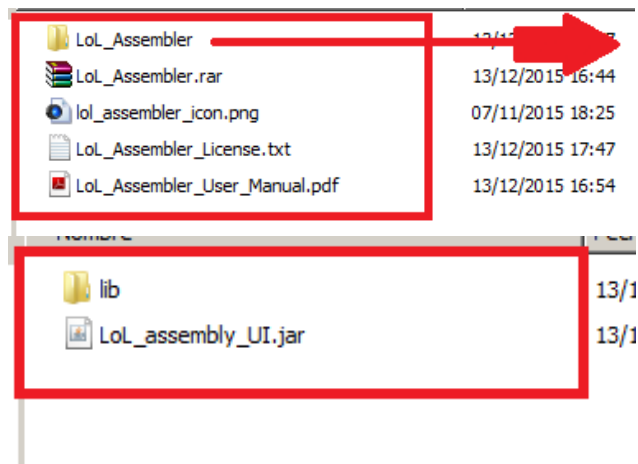


- Extract “LoL_Assembler.rar”, by right-clicking the .rar, and selecting “Extract here”. (If you don’t have WinRAR, you can download it from here: <http://www.win-rar.com/download.html?&L=0>. You can use any other program which allows the extraction of compressed files).



- Once the extraction is finished, you will obtain:
 - This very manual (a .pdf file).
 - The license of the tool (in .txt).
 - A ico image called “lol_assembler_icon.ico”

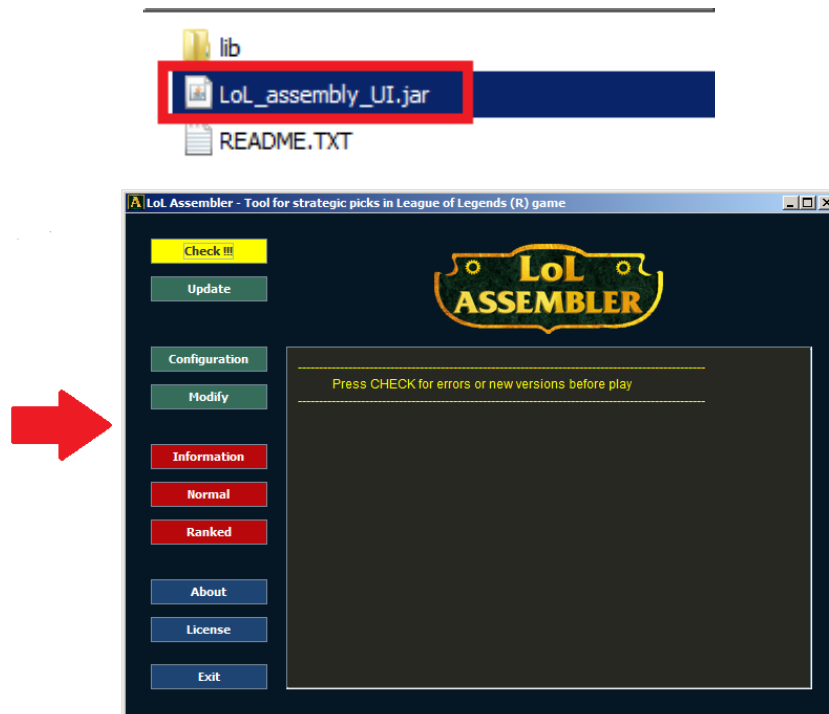
- A folder called “LoL_Assembler” (which, from now on, will be referred as “extraction folder”), with the following files: LoL_Assembler.jar (the “executable” file), and a folder called “lib”.



You don't need to perform any additional operations. *LoL Assembler* is ready to go.

2.3. Run

To run *LoL Assembler*, just double click on “LoL_Assembler.jar”. The main interface will appear almost immediately (for more detailed information, check section 3).

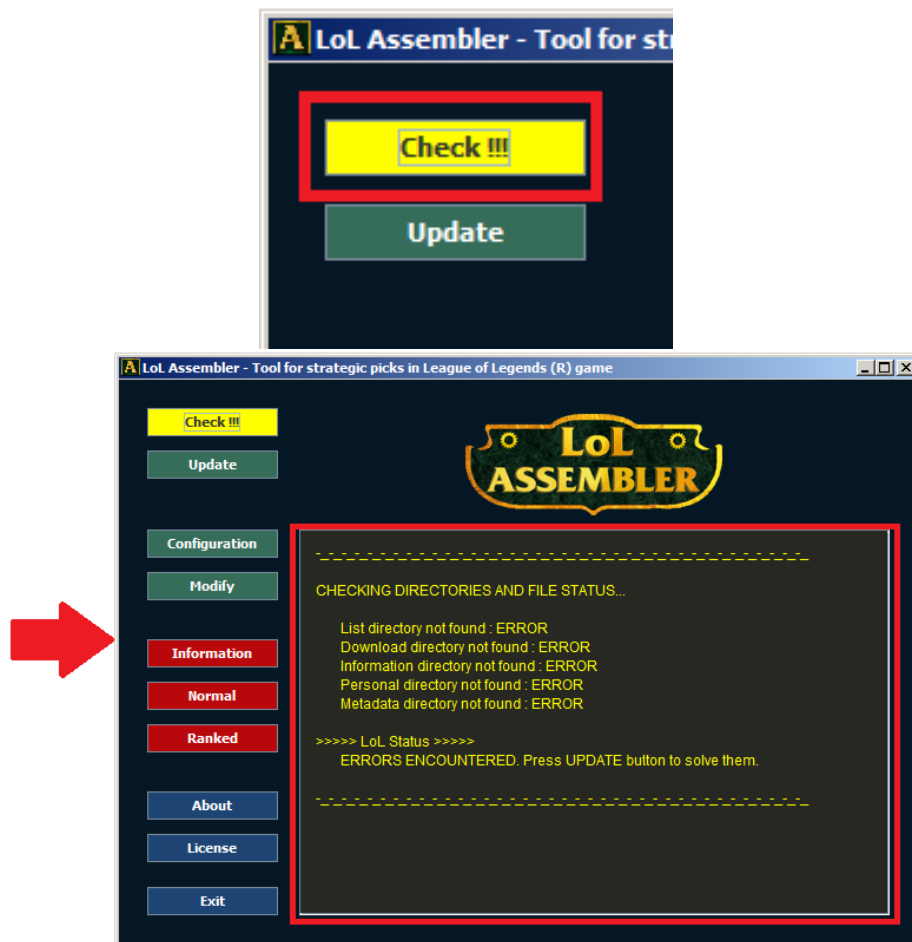


NOTE: Don't move “LoL_Assembler.jar” or “lib” folder to another directory, or the tool won't work correctly. This section provides at the end a way to start the program from any point in your computer, in case you want to access it without browsing to its actual place.

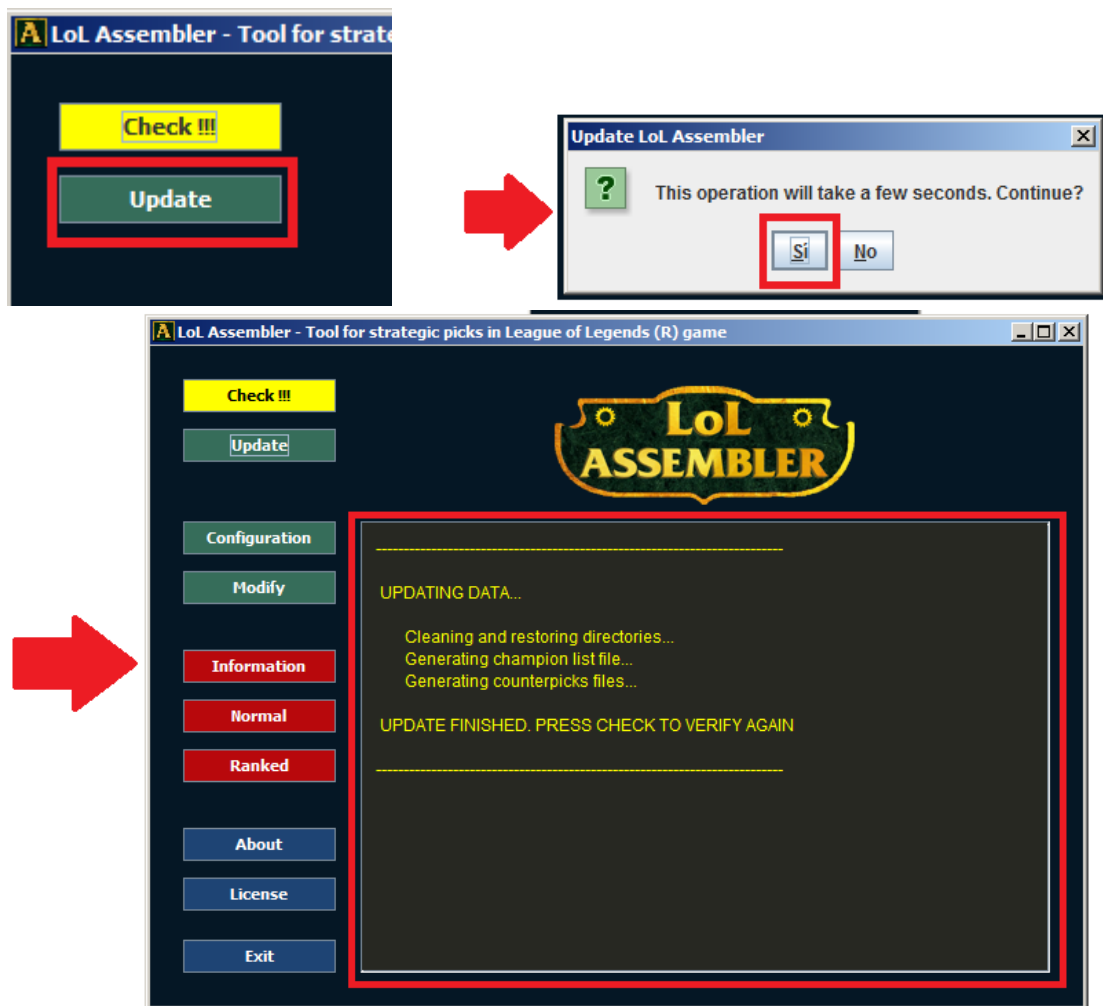
2.3.1. First run:

The first time you execute *LoL Assembler* (the first time after a new “installation”) the program is empty. To generate all the related folders and files, do the following:

- Press “Check” button to check the tool status. The command line interface (known from here as CLI) will prompt, alongside with very useful information - last update, current software version and if it's the newest available- an error message, specifying the missing files or directories (totally normal), and asking for an update.



- Press “Update” button to update the program, and select “yes” to confirm the operation. “Update” really doesn’t upgrade your software, but clean the related folders, directories, and check everything is fine, as long as check if exist a newer version of the tool (in that case, will tell you to download from the blog).

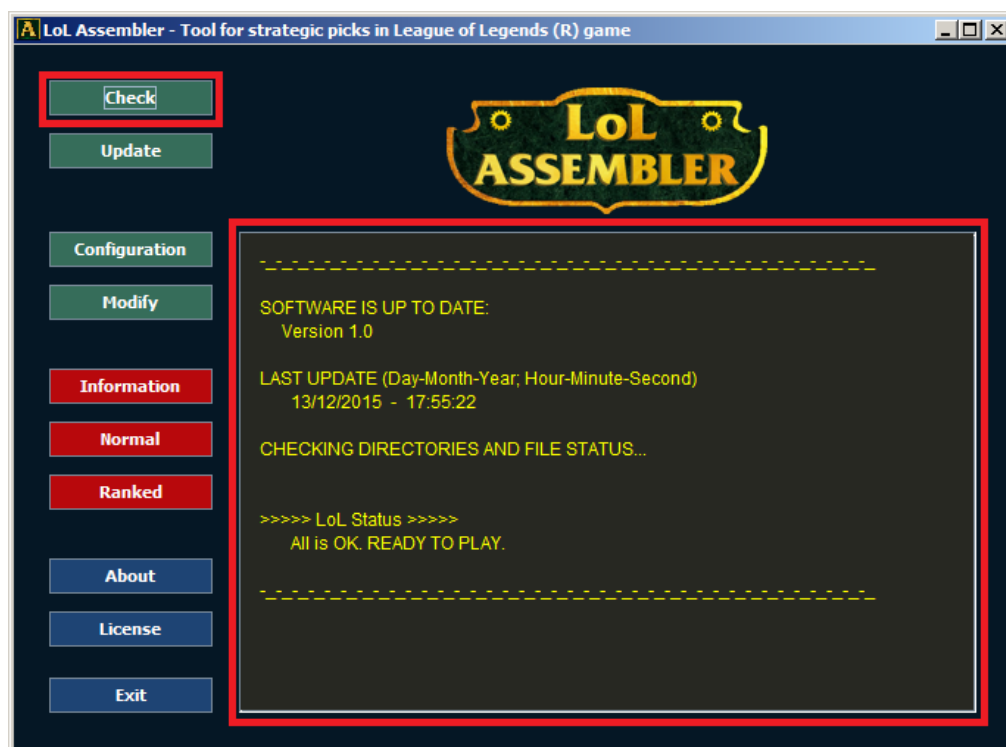


- If you enter now in the extraction folder, you will notice that the program has created a bunch of folders, some of them with files. These folders are:
 - “championList”: contains the list of champions.
 - “downloads”: contains the gathered data from the official blog (this will be covered later).
 - “information”: contains the processed data from the official blog, which leads to the main information of the tool, like “strong against” data and so on (covered later too)
 - “meta”: contains information useful for the tool to maintain status and perform certain operations
 - “personal”: contains files which can be modified by the user, leading to what it’s called “personal/custom information” (explained later)

NOTE: As we will see, there are certain files of these folders that can be modified, or even deleted. However, there are others that must not be touched under any circumstance, but uninstall of the tool. These “untouchable ones” are “lib” and “meta” folders. More details about the rest of the files can be found ahead in this document.

championList	13/12/2015 17:55	Carpeta de archivos	
downloads	13/12/2015 17:55	Carpeta de archivos	
information	13/12/2015 17:55	Carpeta de archivos	
lib	13/12/2015 17:45	Carpeta de archivos	
meta	13/12/2015 17:55	Carpeta de archivos	
personal	13/12/2015 17:55	Carpeta de archivos	
LoL_assembly_UI.jar	13/12/2015 17:27	Executable Jar File	491 KB

- Press “Check” again. This time, CLI should return an “OK” message –as well as a color change in “Check” button, from yellow (warning), to green (ok!)-.



LoL Assembler is ready!

Now, go to “Operations” section to further information about what you can do with this tool.

2.3.2. Next runs:

Now, every time you execute *LoL Assembler*, the tool will ask you to “Check” the status before start any operation, just to ensure that:

- Everything is OK (there’s no critical folders or files missing)
- The software is up to date.

If CLI returns an “OK” message, you are ready to go. If not, check section 2.5 to repair the tool (very easy process).

2.3.3. Updates:

As has been told, update process “refresh” the data of the tool (only the community-driven data, not the custom one). It’s recommended to update the program once a week, the same frequency the blogs data will be updated (the program connects directly to the blog to obtain this information). Update the program is not a must, but build strategies with outdated counterpick data can be very tricky (i.e.: that “special” patch that turns a weak champion into an Olympus God).

To update the tool:

- Press “Update” button.
- Press “Yes” to confirm operation
- Once the process is finished, you need to press “check” to verify the correct status of the refreshed/updated tool.

NOTE: Once more, update process only refresh the data, not the tool software. To obtain a new version of the software -new features, fixed bugs, prettier UI-, you need to download it and “install” it. Before install a new version, you can copy and paste the full custom/personal data directory, to later add in the recent deployment without losing any of your personal information. This process is fully described in section 5.2, under “Backups” paragraph.

NOTE (2): While all tool versions will be kept in Drive and Dropbox sites (under “Old versions” folder), it’s recommended to “uninstall” the older version of the tool before “install” a new one. Or you can simply create a new folder for every new deployment.

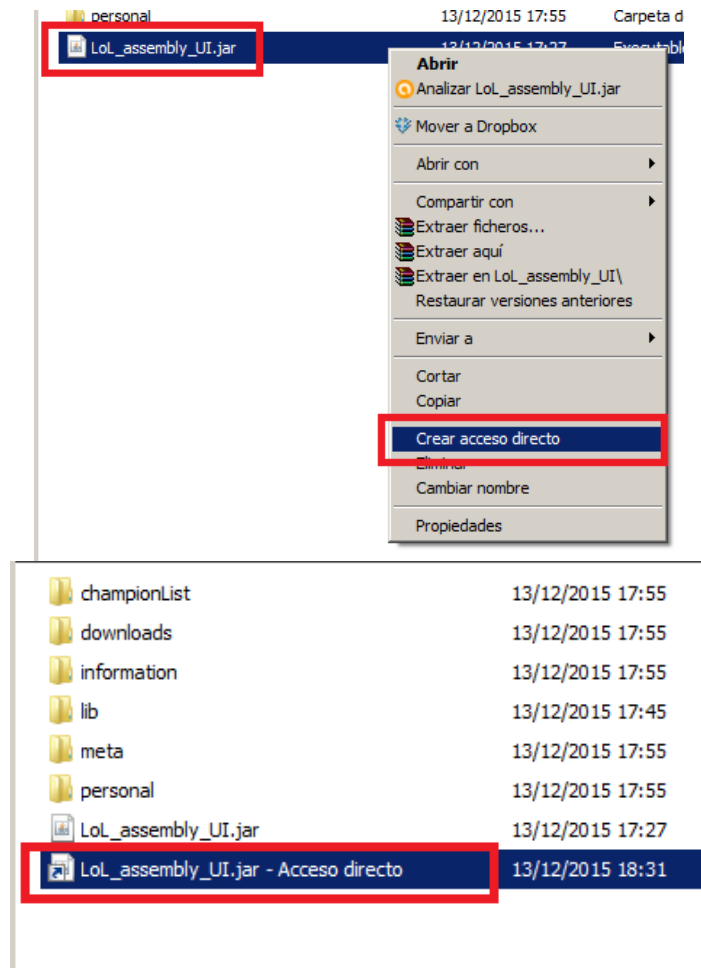
Said that, Enjoy your strategies!

2.3.4. Creating awesome desktop shortcut with LoL Assembler icon:

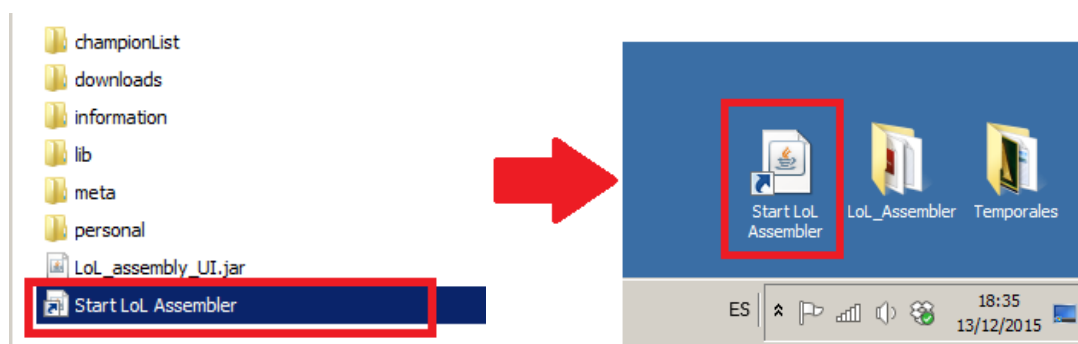
NOTE: This is an optional operation. It is not necessary to run the tool.

If you want to create a desktop shortcut with the “A” icon, and put it alongside with the actual “L” icon of League Of Legends:

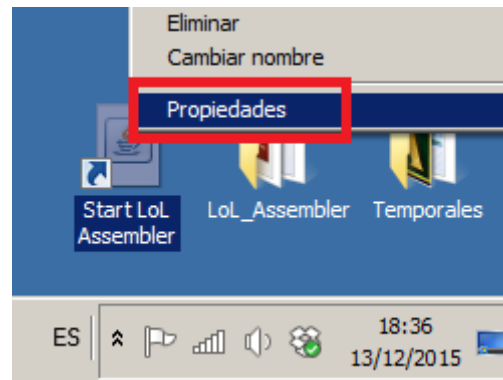
- Right-click on the .jar file, and then select “create desktop shortcut”. A new element will be created, with the same name than the .jar file plus “desktop shortcut” string at the end.



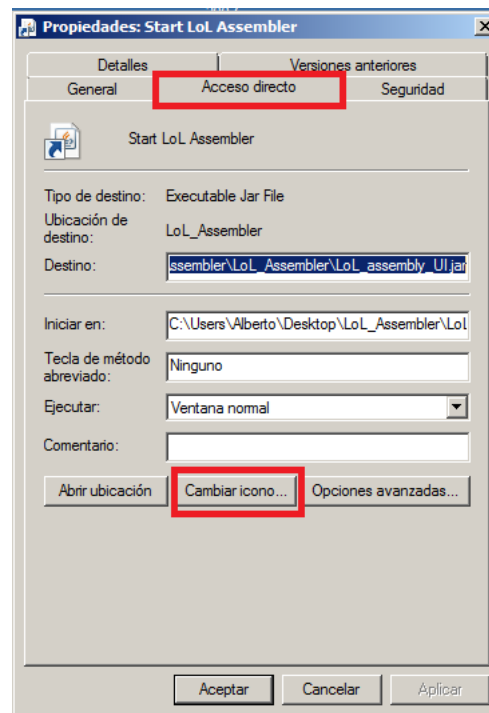
- Change the name of the shortcut (i.e: "Start LoL Assembler"), and move it to the desktop.



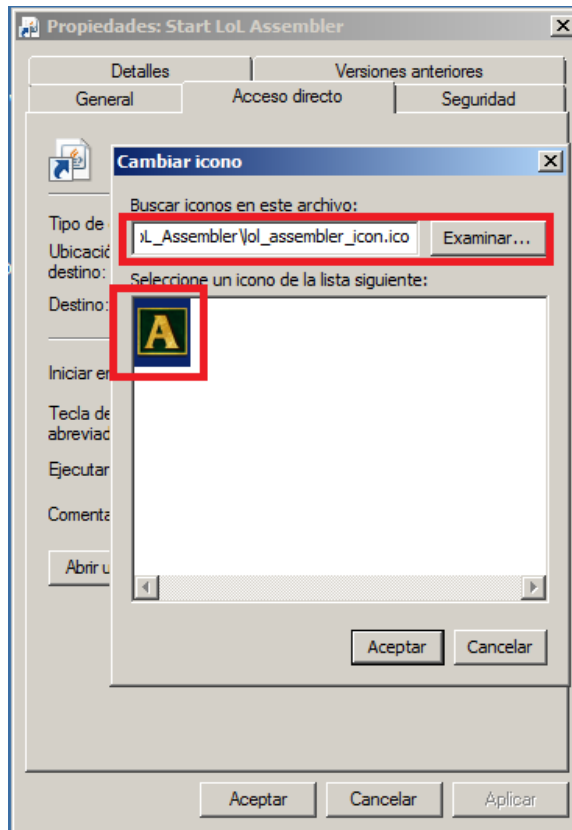
- Right-click on it, and then select “Properties”.



- In the “Desktop shortcut” panel, press “Change icon” button.

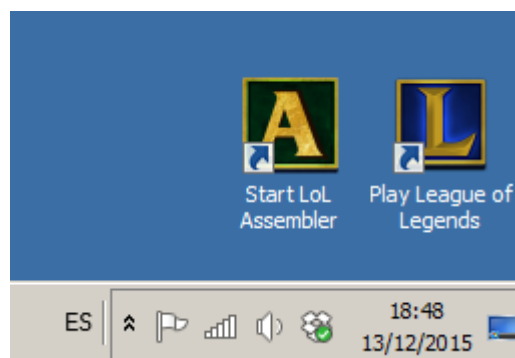


- Press “Browse”, and navigate to the directory where the LoL_assembler_icon.ico is (one level ahead the “extraction directory”), and select the .ico.



- Accept and accept again.

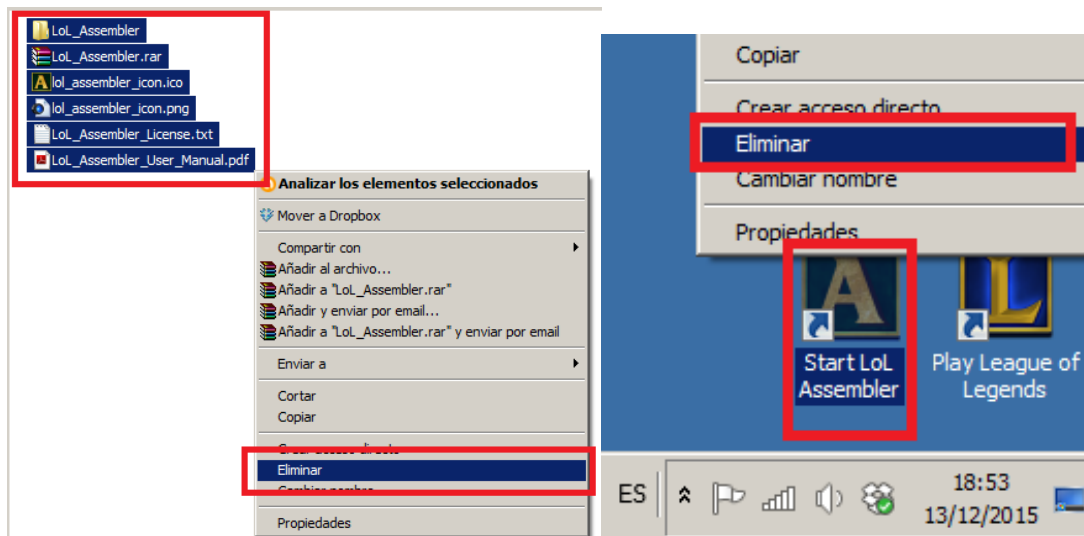
Now you have a shortcut with the official *LoL Assembler* logo. Launching both the game and tool is easy, and looks nice!



2.4. Uninstall

LoL Assembler is not installed, neither is uninstalled. To “uninstall” *LoL Assembler* from your computer, you only need to remove all related files. That’s it:

- *LoL Assembler* directory (with the .rar and all extracted files).
- Desktop icon (if you created it).



Once you remove those files, the tool will no longer exist in your PC (*insert sad face here*)

NOTE: If they exist, you can save your “customized/personal” files by simply copying them on another directory. They can be integrated again in a future new *LoL Assembler* installation in a very simply way (basically, paste again in the correct directory. For more information about this, check section 5.2, “Backups” paragraph.

2.5. Repair

Although *LoL Assembler* has been developed to be as straightforward and robust as possible, it can crash -as any other program-. To repair it, you have 2 options, one of them more drastic than the other:

- **Update the program.** Just execute “LoL_Assembler.jar”, and press “Update” button. This operation is intended to “refresh” the internal data and folder structure of the tool, as well as recover them if they are missed. Updating the program won’t delete the customized/personal information (unless manual erase is performed, the user custom data is never deleted in updating or checking status operations)
- **“Reinstall” the program.** Shutdown and start again works in this tool, too. Just delete the *LoL Assembler* related files (check previous section), download the latest version of the software (you can find it in the official blog, and will be screen prompted in the update operation, in case your installed version is older than the last released), and install again.
NOTE: before deleting *LoL Assembler*, save your custom/personal data files (as has been depicted in section 5.2, in “Backups” paragraph).

3. MAIN INTERFACE

The main interface of *LoL Assembler* is showed when “LoL_Assembler.jar” is executed. From it, all operations can be performed.



The purpose of every button and element are as follows:

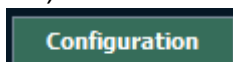
- **Check button:** perform the “Check tool status” operation (section 4.1).



- **Update button:** perform the “Update tool” operation (section 4.2).



- **Configuration button:** perform the “Tool configuration” operation (section 4.3).



- **Modify button:** perform the “Create customized/personal information” operation (section 4.4).



- **Information button:** starts the “Information mode” (section 4.5).



- **Normal button:** starts the “Normal game mode” (section 4.6).



- **Ranked button:** starts the “Ranked game mode” (section 4.7).



- **About button:** shows general information about *LoL Assembler* (section 4.8).



- **License button:** shows *LoL Assembler* license (section 4.9).



- **Exit button:** exits the tool (section 4.10).



- **CLI:** Command Line Interface, where messages about checking status process, update process, errors and other advices are prompted. The tool has been designed to be verbose in this aspect, giving full feedback to the user in each operation (how things are going, what’s missing, when you are ready to go, and so on).

```
-----  
SOFTWARE IS UP TO DATE:  
Version 1.0  
  
LAST UPDATE (Day-Month-Year; Hour-Minute-Second)  
13/12/2015 - 17:55:22  
  
CHECKING DIRECTORIES AND FILE STATUS...  
  
>>>> LoL Status >>>>  
All is OK. READY TO PLAY.  
-----
```


4. OPERATIONS

4.1. Check tool status

To perform a full tool's health test, press "Check button" (button 1 in the Main Interface).



This operation will return the state of *LoL Assembler*, making the user aware of:

- Missing critical files.
- New software versions available.
- Date of the last update.
- General status ("good" or "bad").

All this data is prompted in the CLI (element number 11 in the Main Interface). An example output is as follows:

```
-----  
SOFTWARE IS UP TO DATE:  
Version 1.0  
  
LAST UPDATE (Day-Month-Year; Hour-Minute-Second)  
18/11/2015 - 18:36:48  
  
CHECKING DIRECTORIES AND FILE STATUS...  
  
>>>>> LoL Status >>>>>  
All is OK. READY TO PLAY.  
-----
```

The tool requires a check every time it's executed. Trying to start a mode without it will prompt an error message asking for that operation.

```
-----  
Press CHECK for errors or new versions before play  
-----
```

The tool requires a check after every update too.

4.2. Update tool

To update the tool, press “Update button” (button 2 in the Main Interface).



Updating the tool will perform the following operations:

- Delete all folders and related files, **EXCEPT** the folder and files containing the custom/personal data (if they are not empty).
- Download and generate again the list of champions.
- Download and generate again the counterpick information.
- Refresh “last update date”.

These operations are prompted in the CLI.

```
-----  
UPDATING DATA...  
  
Cleaning and restoring directories...  
Generating champion list file...  
Generating counterpicks files...  
  
UPDATE FINISHED. PRESS CHECK TO VERIFY AGAIN  
-----
```

Updating the tool (once more) does not upgrade the software, only keep up to date the community counterpick information. This information is downloaded directly from the official blog, available for direct check in the “Data” section (<http://glimpse-23.blogspot.com.es/p/data.html>). Updating the tool ensures that you are creating your strategies following the latest information.

Actually, only counterpick information is downloaded from the blog (Strong Against, Weak Against, Even Against and Works Well), as well as the champion list. The other custom/personal data (Personal Strong Against and the others; Hot Ones, Loved Ones, Hated Ones and Combos), as their name indicates, are user-driven.

4.3. Tool configuration

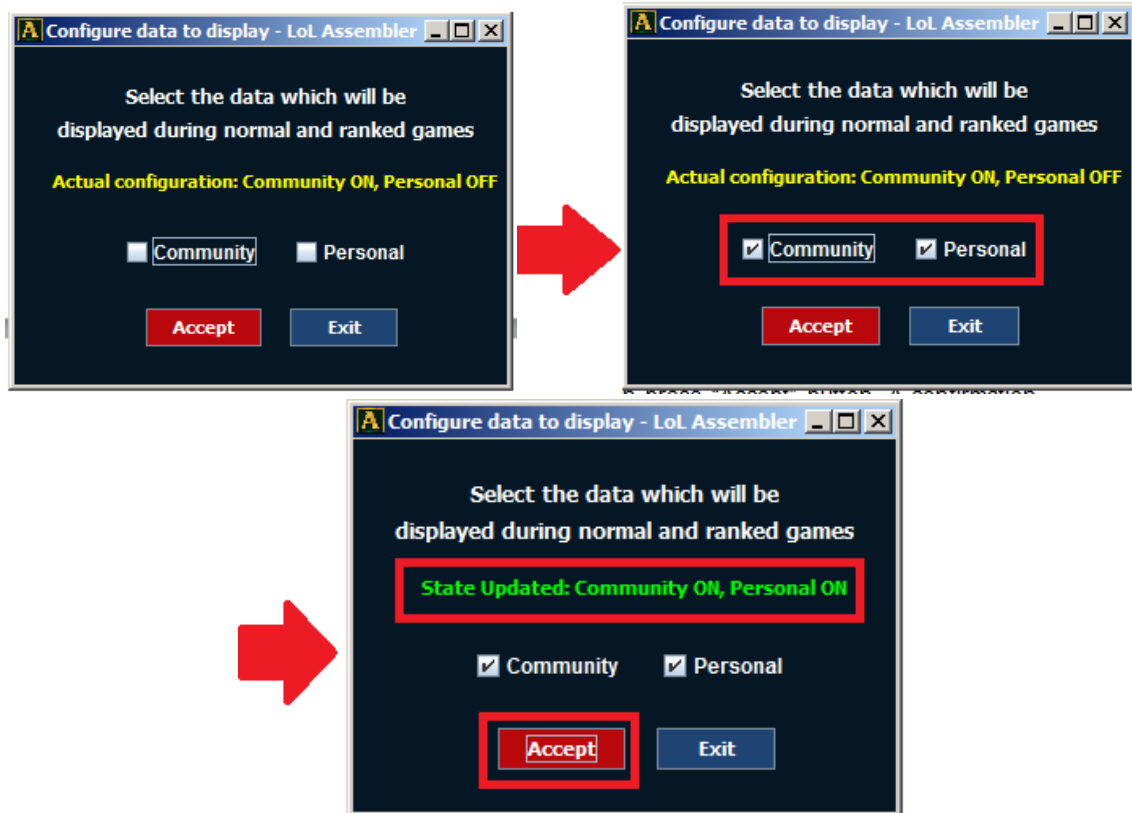
The “Tool Configuration” window allows you to choose what kind of data will be used in normal and ranked game modes:

- Only community information.
- Only personal information.
- Both of them.

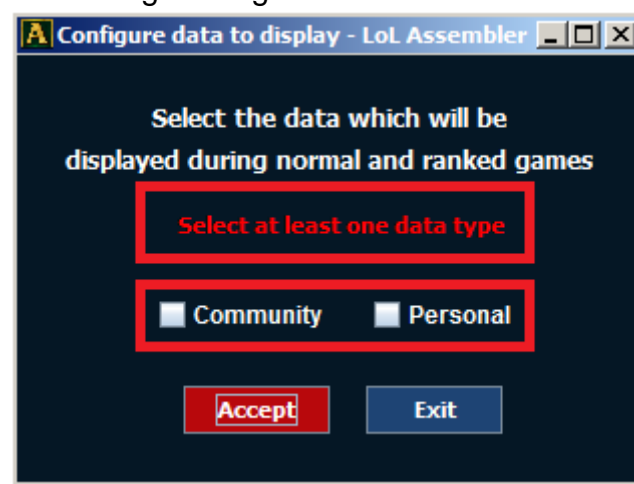
To access it, press “Configuration” button:



Just check or uncheck the options, and then press “Accept” button. A confirmation message in green color will appear in the window.



NOTE: at least one of the data types must be active. Unchecking both will cause an error, prompting a red message telling the user to check at least one of them.



Tool configuration just adjust how many data will be processed and showed (in terms of “human perceptible time”, there’s no difference between process both or one data type)

When “Community information” is used, the tool will provide information about bans, picks and combos following that data. Same apply to “Personal information”. When both data types are active, **they DON’T GET MIXED**:

- The CLI will print a section with the bans/picks/combo recommendations from the community data (in fact, a big “COMMUNITY” text line will be showed).
- The CLI will print, well differentiated from above part, recommendations from the custom/personal data.

```
CHAMPION --- SCORE --- TAGS --- COMBOS --- POS
-----
*****PERSONAL*****
Bard --- 0,15 --- [Hot, ] --- [] --- [HOT: -; ]
>>>
Akali --- 0,15 --- [Hot, ] --- [] --- [HOT: -; ]
>>>
Aatrox --- 0,15 --- [Hot, ] --- [6, ] --- [HOT: -; ]
>>>
*****COMMUNITY*****
Katarina --- 0,20 --- [No tags] --- [] --- []
>>>
Nunu --- 0,18 --- [No tags] --- [] --- []
>>>
Wukong --- 0,16 --- [No tags] --- [2, ] --- []
>>>
```

In summary, tool configuration establishes the recommendations you want to see during a game.

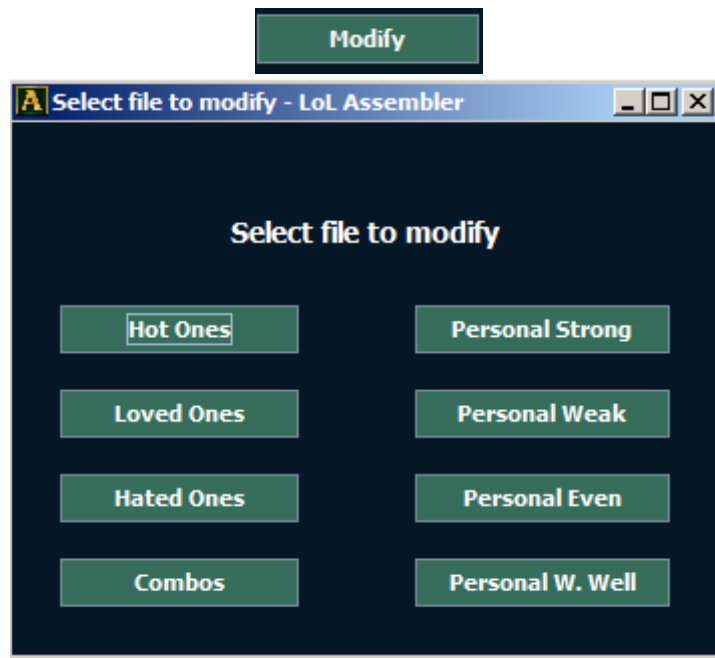
4.4. Create custom/personal information

NOTE: This is very important! In the next interfaces you’ll see combo boxes to select champions. You can search for them scrolling up or down, or writing their names for an auto completion –to write in the combo box, click on it and then press SPACE; it allows you to edit the component. In certain computers, you don’t need to do this, and can write directly the name of the champ-, like the LoL itself. It makes the life a little easier.

To work with the user custom/personal information (which involves add, modify or delete data), follow this steps:

- Check tool status, if you didn’t do yet (section 4.1).

- Press “Modify” button. This will show the window from where you can select the file to modify. The files are divided in two groups (mentioned earlier):
 - The personal group (Hot Ones, Loved Ones, Hated Ones and Combos)
 - The custom group (Personal Strong Against, Personal Weak against and so on)



- Just press the button of the file you want to modify.

From this point, the available operations for both groups are pretty similar, but with a few different features. Depends on the choice, the tool works in one way or another.

NOTE: Many of the following operations imply text prompting. In these, the message “No information available” is very common. This doesn’t mean a malfunction in the game. Like we said before, some files can be empty with no problem (the user didn’t fill them yet, or didn’t want to). So this message means that there’s not information to be printed.

>> No information available

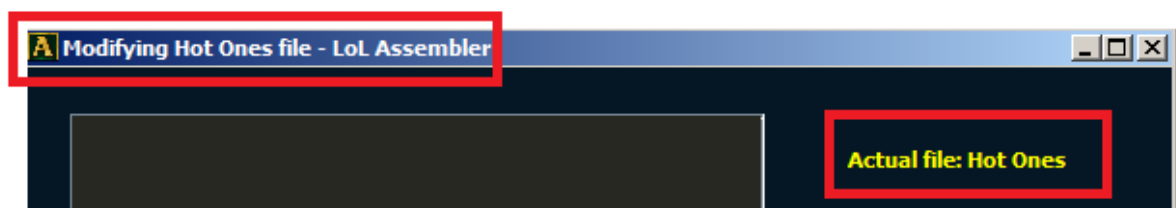
4.4.1. Modify a “personal group” file:

If you pressed “Hot Ones”, “Loved Ones”, “Hated Ones” or “Combos” buttons, the next interface will appear:



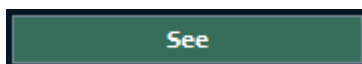
Alongside with another CLI (a usual element in all windows), there are a bunch of buttons to start to operate with the data.

Both the title of the interface, and the upper right message shows what file has been selected (to avoid mistakes).



From here, you can perform these operations:

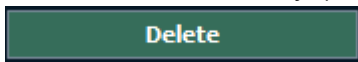
- See the data inside the file, pressing “See” button.



- Add data to the file, pressing “Add” button.



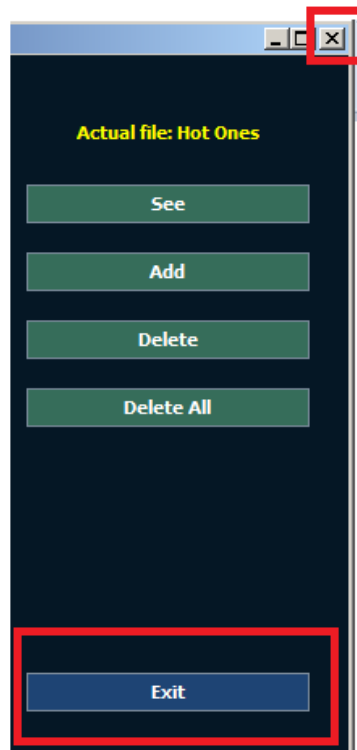
- Delete ONLY an entry (we will cover this ahead), pressing “Delete” button.



- Delete ALL the file, pressing “Delete All” button.



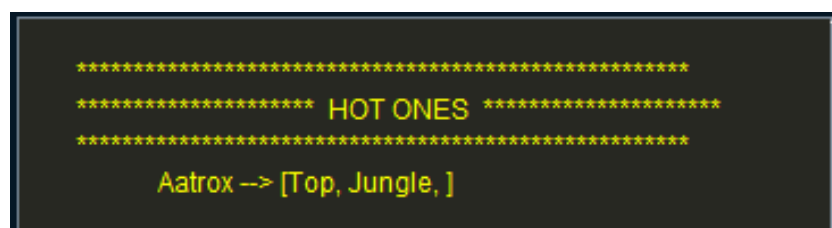
- Exit this interface, pressing “Exit” button or closing it (the typical “X” at upper right).



See data

See the data allows you to check the current state of the selected file (that is, the current hot/loved/hated champions or combos). Just pressing “See” button will prompt in the CLI the content of the selected file. In this way, you can:

- Verify that a recent operation has been completed successfully.
- Check the current content of the file to avoid repetitive operations.
- Enjoy the panorama (?).




```

*****
***** LOVED ONES *****
*****
Akali --> [Mid, ]
Ashe --> [Mid, ADC, Support, ]
Heimerdinger --> [Top, Support, ]

```

While hot/loved/hated champions are shown together with their positions, combos are shown with their ID (a number that univocally identify them, useful later in the Delete operation).

```

*****
***** COMBOS *****
*****
1.: Aatrox-Ahri-
2.: Amumu- Anivia- Jarvan-IV- Leona-

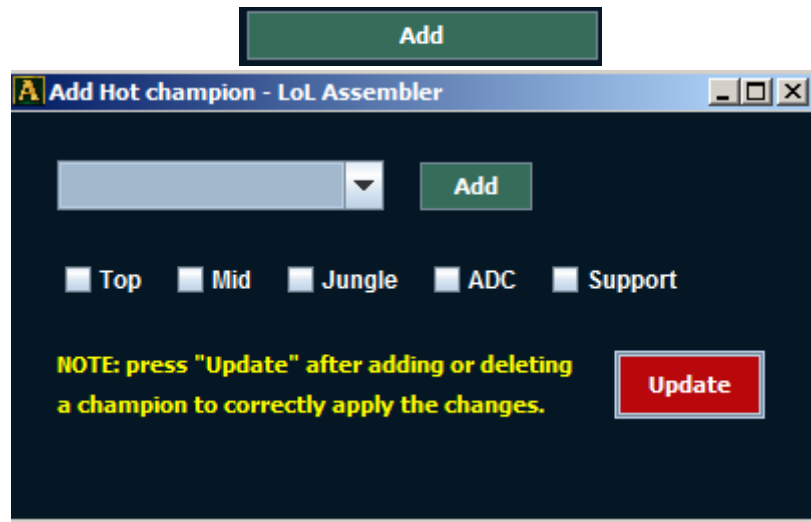
```

Add data

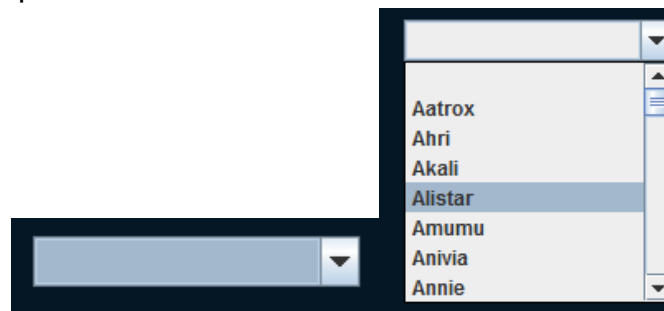
Add data allows you to classify champions in the selected group. For example, add Viktor and Veigar to Loved Ones (because they are your favorite champions), Darius to Hot Ones (because he is overpowered right now), Lee Sin to Hated Ones (those damn jumps), and Jarvan-Anivia-Morgana to combos (AoE FTW!). And what is better, you can establish in which positions this champions stand out. For example: Viktor is a “Loved One”, but more specific, is a “Loved One” in Mid and Support (trust me, I tried this); or Diana, a “Hot One” in the Jungle. You can specify the positions or leave them empty.

This information -positions and classification- will be used to give you recommendations in pick and ban phases, and of course, will be available for just check it. To add champions to a certain group:

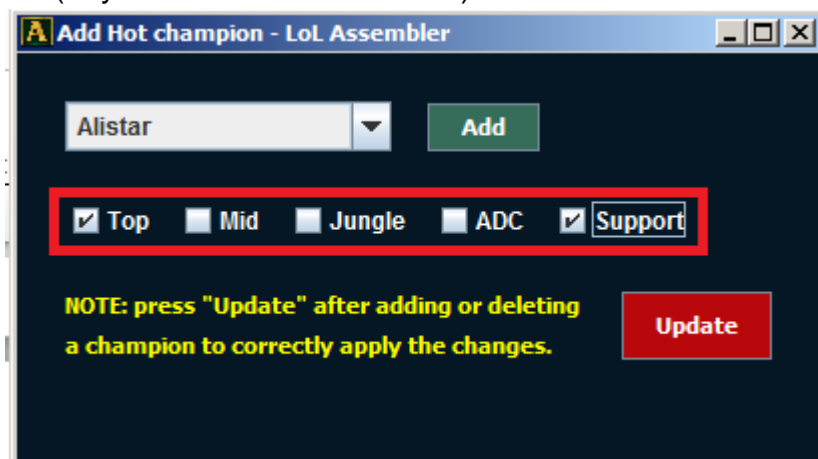
- Press “Add” button (in the general interface). This will open the inner interface. In which the follow operations can be performed. Again, in the title of the inner interface you can check that you are performing the intended operation.



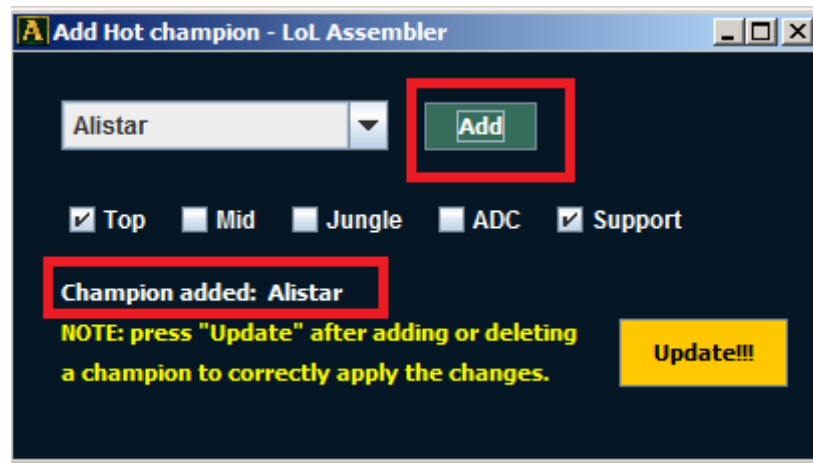
- Select the champion in the combo box.



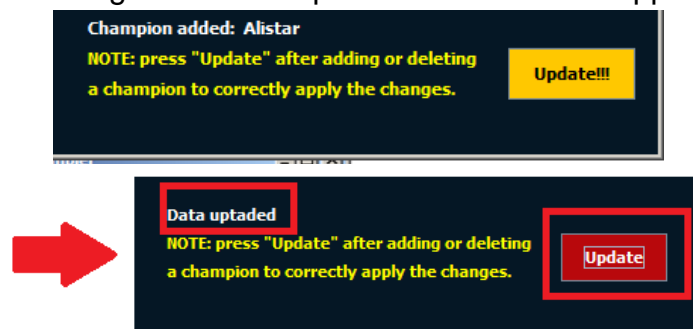
- If you want, check or uncheck the positions where the champion receives that classification (any combination is admitted).



- Press “Add” button (in the inner interface). A confirmation message will appear under the combo box. As you will notice, the “update” button will change it color.



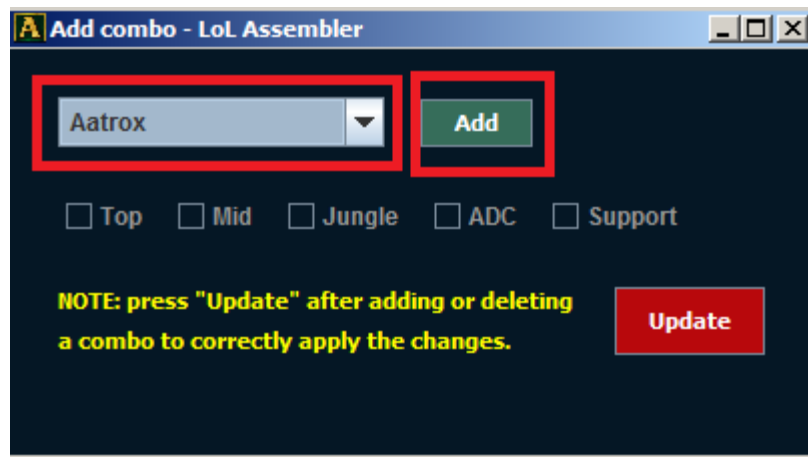
- Press “Update”. This operation is critical (if you don’t press update, the data won’t be saved), so that’s way “Update” button glow like a star (poetic feeling right here). After doing that, “Update” button will return to its original state, and a confirmation message about the update of the data will appear.



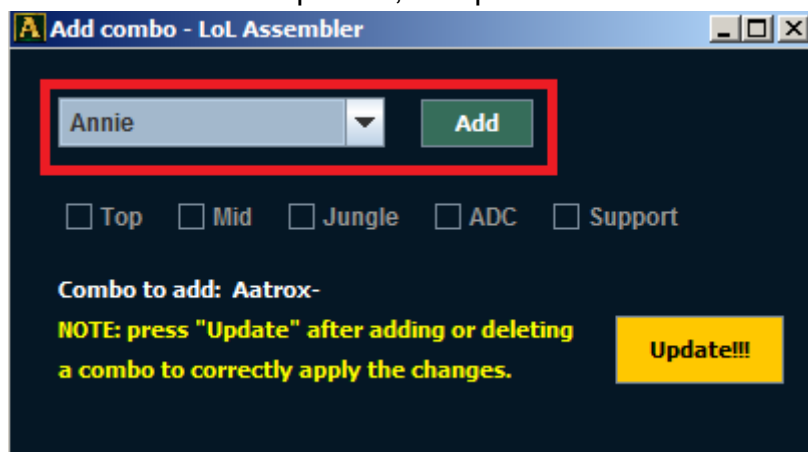
- Repeat as many times you want (select champion, select positions, press “Add”, and then “Update”).

To add combos, things are a bit different. First, you can’t establish positions (they are specified individually), but more important, you don’t need to press “Update” after every “Add”. To add combos, once you are in the inner interface of the intended operation:

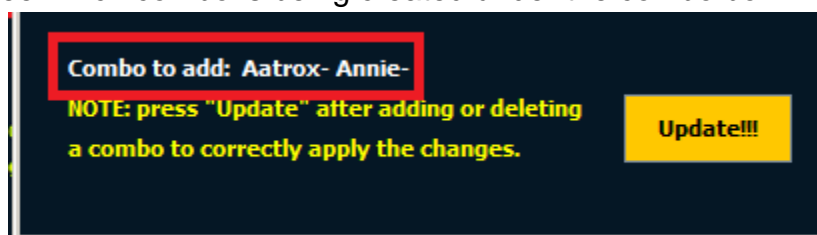
- Select the champion you want in the combo, and then press “Add”.



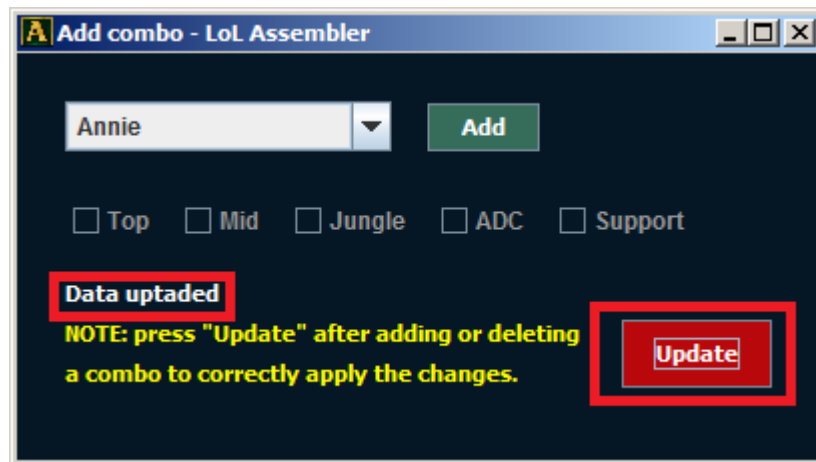
- Now, select the next team component, and press “Add”.



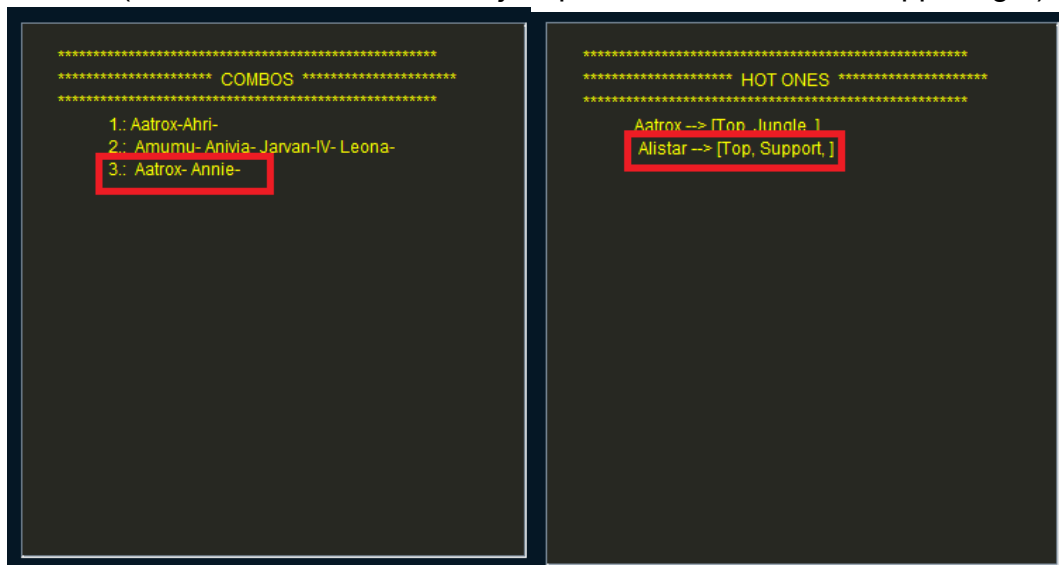
- You will see which combo is being created under the combo box.



- When you finally added all the intended champions, it's time to press “Update”. The combo will be saved.



You can check now that your operations (adding combos, hot, loved or hated champions) have been completed successfully in the general interface, pressing “See” button (to exit the inner interface, just press the “X” button at upper right).



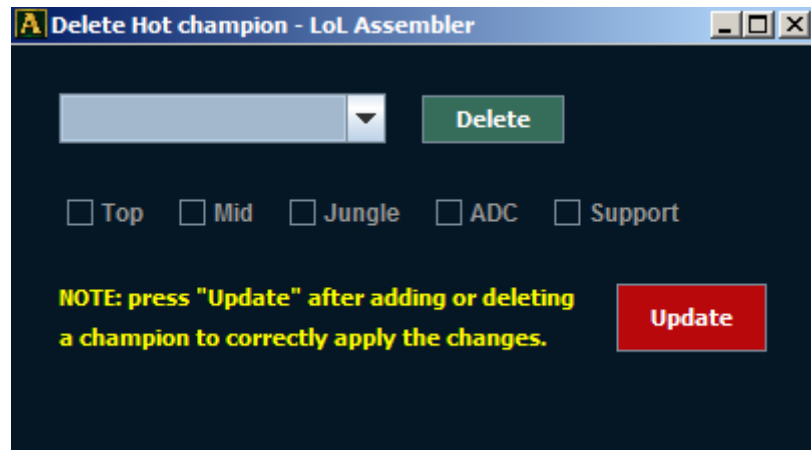
NOTE: If you want to modify the positions of a certain champion, you don’t need to delete it and add it again (although it’s a valid operation). Adding again the champion with the wanted positions will do the trick.

NOTE 2: While you can obviously select the combo’s components, you can’t select their related IDs. The IDs are assigned automatically by the tool, starting from number 1, and fulfilling the empty spaces. So, if you add three combos the first time, they will have IDs 1, 2 and 3. If you delete the number 2, the next time you add a combo, it will receive ID 2. This doesn’t affect the way the user uses the tool, since the IDs and the combo’s components are displayed when he needs them, but it’s good to clear the things out.

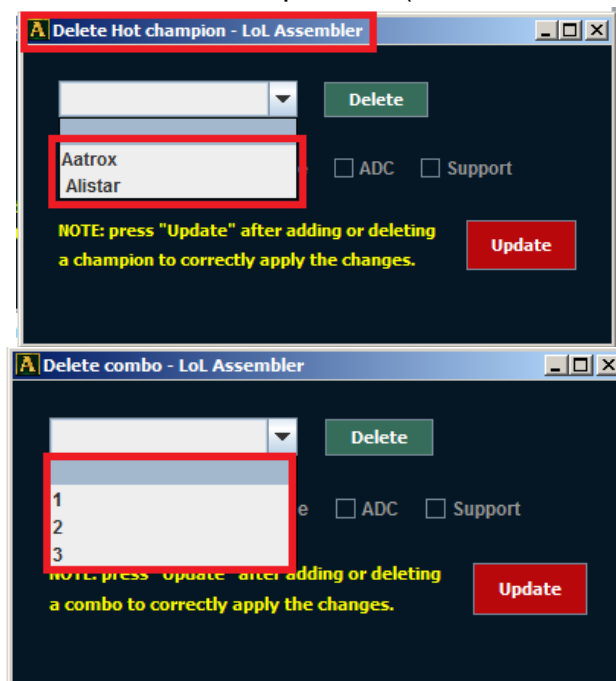
Delete data

Delete data allows you to remove a certain champion or combo (you know, that champion that was “Hot One”, but after the last patch, it’s back to a normal state). Deleting a champion or combo is very easy:

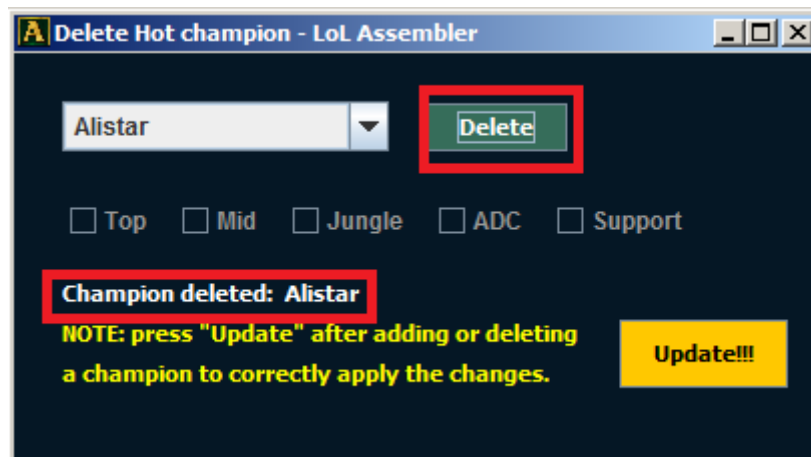
- Press “Delete” button. You will access to the inner interface (pretty similar to “add” mode, but with the positions disabled).



- Select in the combo box the champion to delete or the combo to delete. As you can notice, in case of hot/loved/hated champions, only the current added champions in the selected file appear. In case of combos, the combo box shows the IDs instead of the full composition (aesthetic decision).

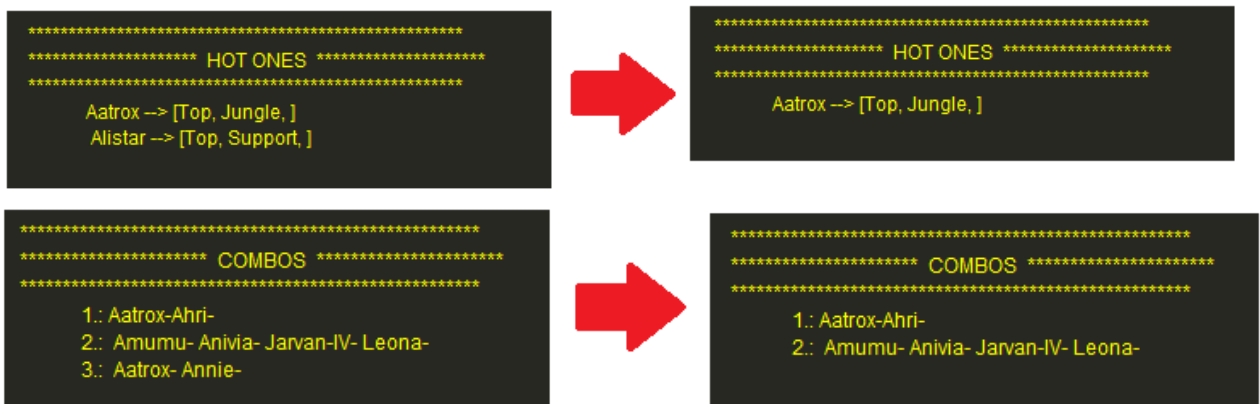


- Press “Delete” button in the inner interface. A confirmation message will appear under the combo box.



- Like adding operation, to save the changes now is necessary to press “Update”.

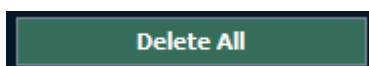
Back to the general interface, you can check now that your operations have been completed successfully by pressing “See” button.



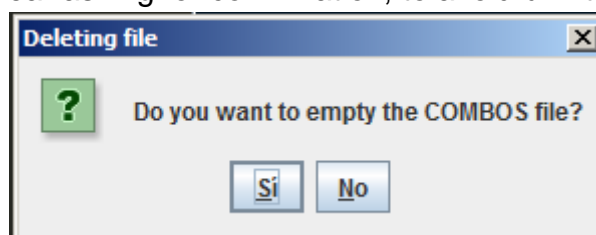
Delete all data

Delete All data allows you to remove the whole selected file. **Warning!** This operation is aimed to clear all the hot/loved/hated champions or combos, not only one entry (be sure of it). To delete all the data:

- Press “Delete All” button.



- A window will appear asking for confirmation, to avoid unintentional clicks.



- If “Yes” is pressed, the file will be cleared. The CLI will prompt a confirmation message.

```
*****
COMBOS FILE has been cleared
*****
```

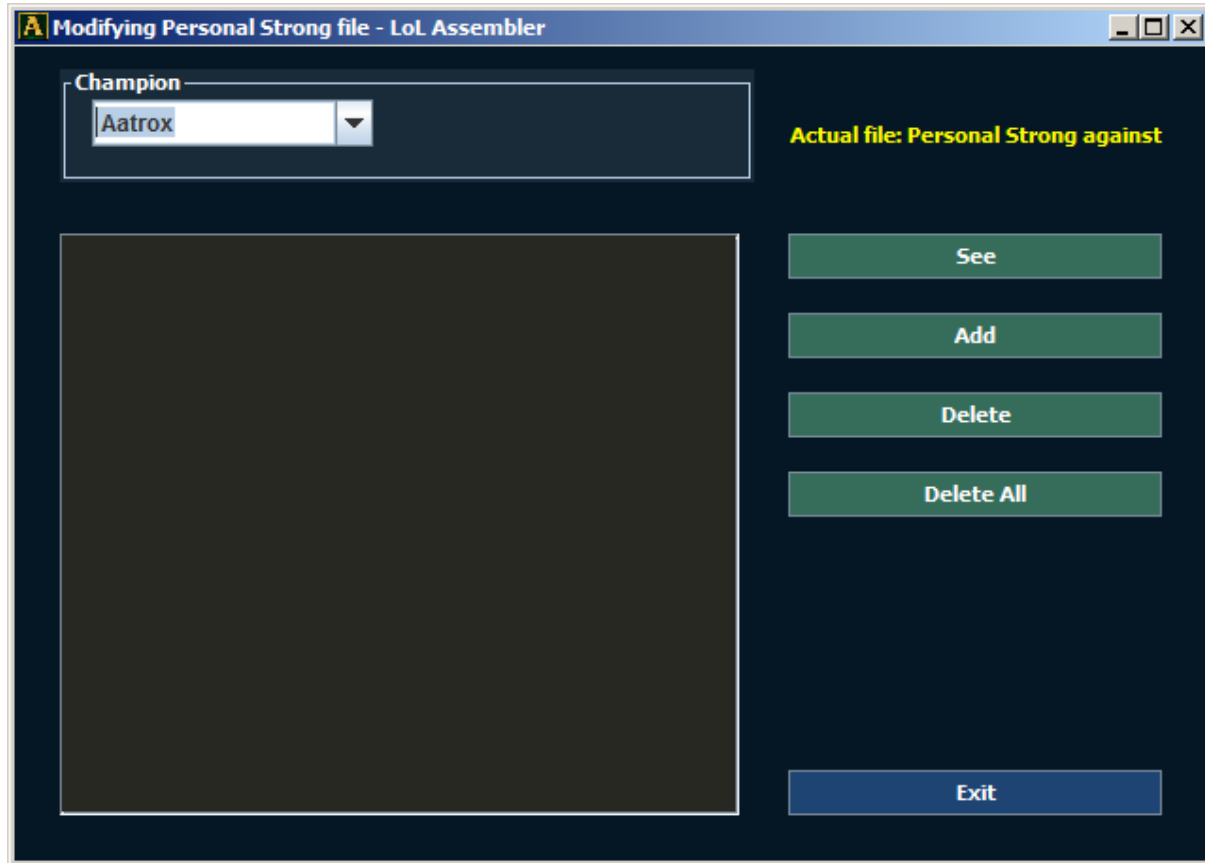
Once more, pressing “See” allow you to check if the file has been deleted.

```
*****
***** COMBOS *****
*****
>> No information available
```

NOTE: By “delete” or “clear”, I mean that all the data contained in a file is removed, but no the physical file itself (the .txt). Otherwise, the “Check” operation will cause an error, and the program would be forced to update. More information about how to deal manually with the data files is included in section 5.2.

4.4.2. Modify a “custom group” file:

If you pressed “Personal Strong”, “Personal Weak”, “Personal Even” or “Personal Well” buttons, the next interface will appear:



It's pretty similar to the "personal group" one but, alongside the common elements (CLI and buttons), there is a combo box to choose whose champion will be modified. That is, you need to choose a champion before starting the operations (except for the "Delete All" operation). Modifying the custom data works as follows.

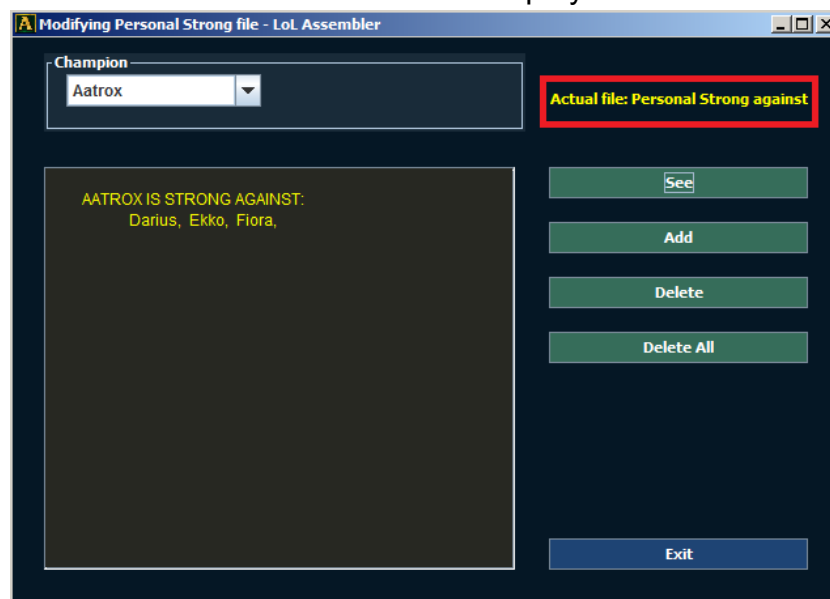
See data

See data allows you to check, for a certain champion (chosen in the combo box), the related data in the objective file. To do that:

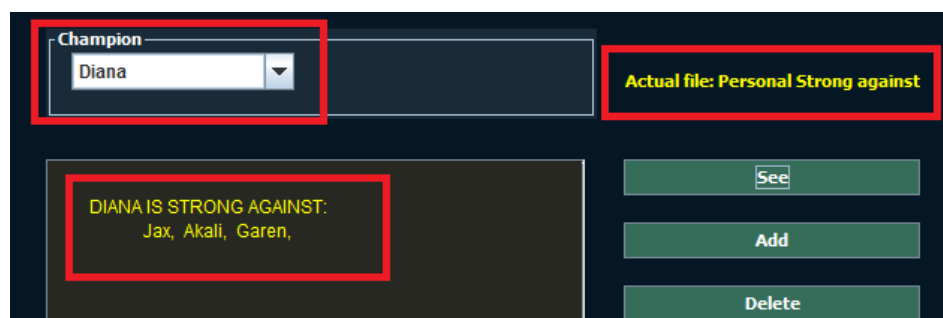
- Select a champion in the combo box.



- Press "See" button. The information will be displayed in the CLI.



For example, if you pressed "Personal Strong", then select Diana in the combo box, and then press "See" button, the "Diana is strong against: Jax, Akali, etc." information will be printed (that is, the personal information previously added to Diana).



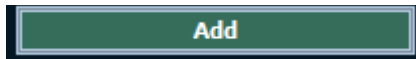
Add data

Add data allows you to customize the counterpick information (strong, weak, even and against). This operations works in a similar way to the one for adding personal combos (explained in the section 4.4.1). To add custom data:

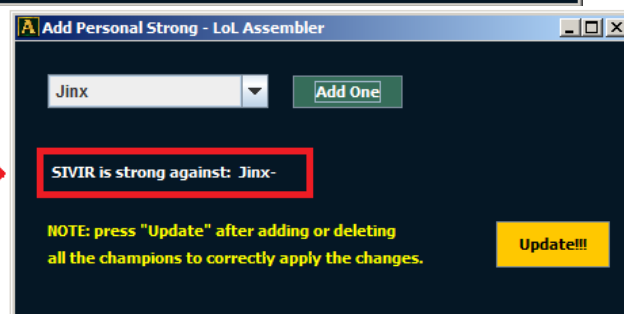
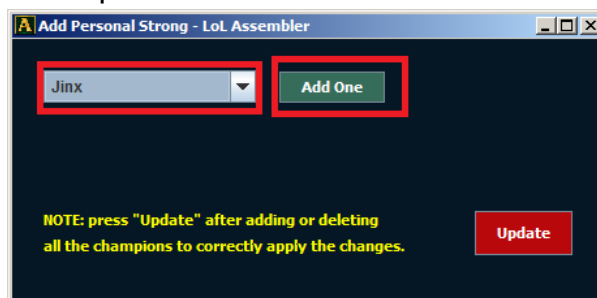
- Select the objective champion in the combo box.



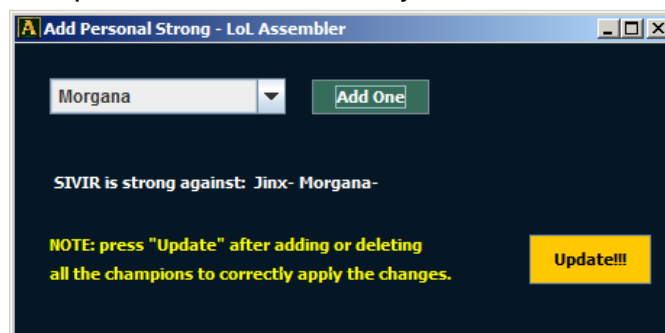
- Press "Add".



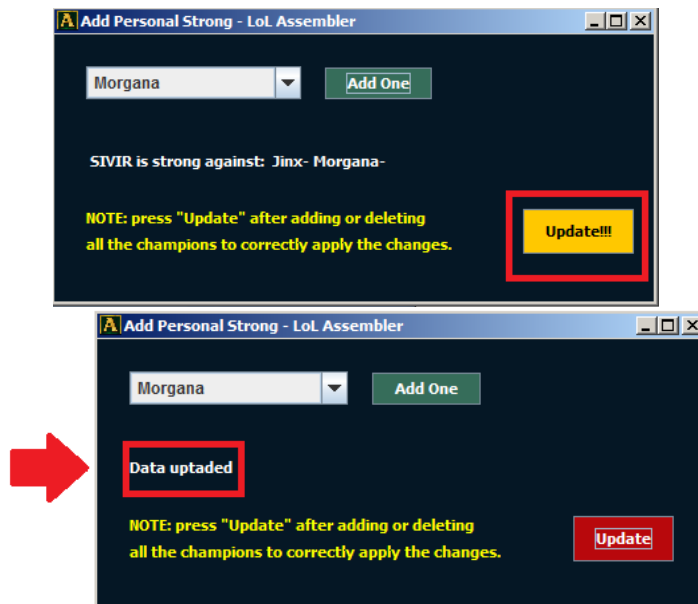
- In the combo box of the inner interface, select the champion you want to add to the specific file. Then press "Add one".



- Repeat previous step with all the elements you want.



- Finally, press "Update" (highlighted during all this process).



Again, pressing “See” in the general interface will confirm if the operation has been completed successfully.

SIVIR IS STRONG AGAINST:
Jinx, Morgana,

Specifically, what we have done in the previous steps is this (imagine that after playing a lot of games with Sivir, our personal feelings is that she is strong against Jinx and Morgana. Community data doesn’t contemplate that, so...):

- We chose “Personal Strong Against” file, because we want to add some data in that section.
- Then, we select Sivir in the combo box. And now, we press “Add”.
- In the inner interface, we select Jinx, and press “Add one”. Now we select Morgana, and press “Add one” again.
- Finally, we press “Update”.

Voila! Now, our custom “Strong against” data says that Sivir is strong against Jinx and Morgana. From now on, on normal and ranked games, if we query our custom data, this information will be provided when picking Sivir. Nice and easy.

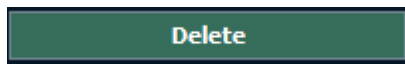
Delete data

Delete data allows you to remove information in two different ways (the explanation can be tricky, so I will cover it with a detailed example). You can:

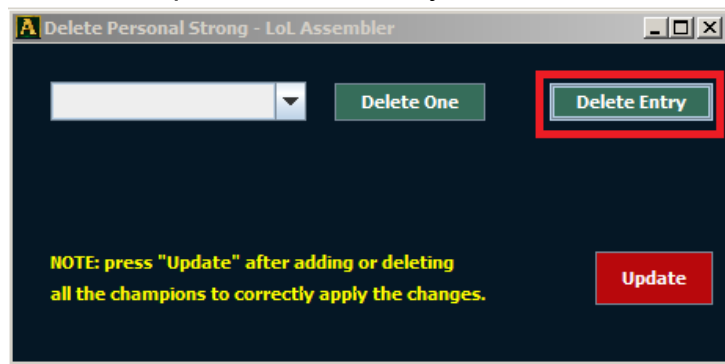
- Delete a whole entry: that is, remove all the data of a certain champion for the selected file. To do this:
 - Select the champion you want to “clear”.



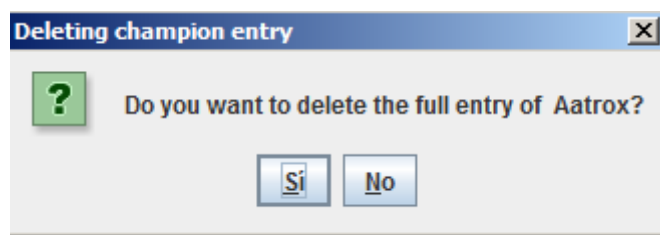
- Press “Delete”.



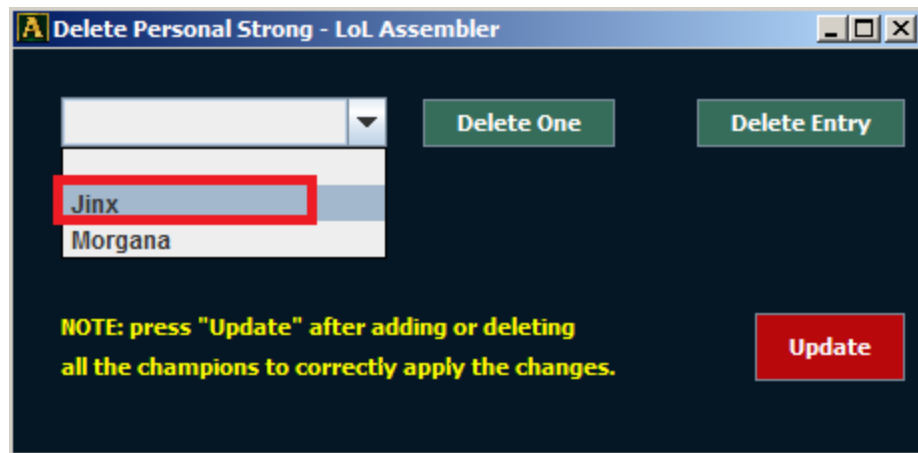
- In the inner interface, press “Delete entry” button.



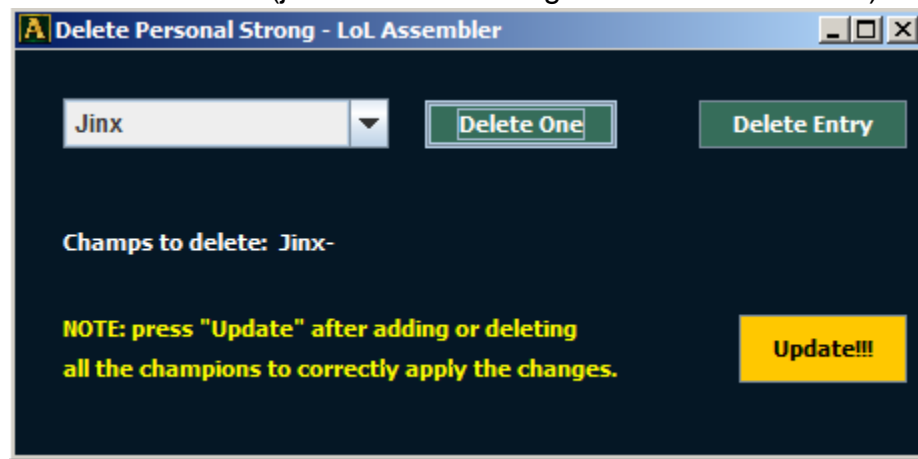
- A confirmation window will appear. If “yes” is pressed, the data is deleted.



- Delete certain elements: that is, remove parts of the data of a certain champion for the selected file. To do this:
 - Select the element (champion) to be erased from the combo box, and then press “Delete” button (same way).
 - In the inner interface, select in the combo box the element to erase. The combo box contains only the available elements (i.e: following the example of “Sivir is strong against Jinx and Morgana”, in the combo box will appear only Jinx and Morgana).



- Now, press “Delete One”. A confirmation of the operation will appear under the combo box (just like the messages in the other modes).



- Repeat the two previous steps for each element you want to delete.
- After all the deletes, press “Update”.

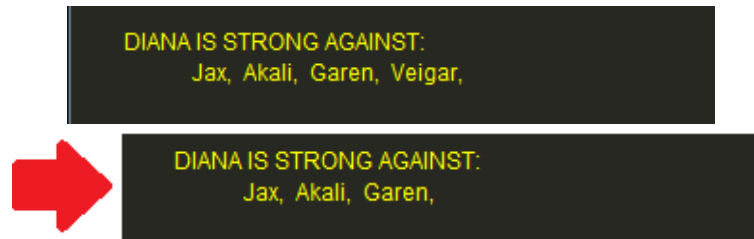
For example, considering the follow situation in which, in “Personal Strong” we have an entry like this:

“Diana IS STRONG AGAINST Akali, Jax, Garen, Veigar”, we can:

- Delete the whole entry: that is, remove “Diana” entry. After this, in “Personal Strong” won’t be any related data to Diana.

DIANA IS STRONG AGAINST:
>> No information available

- Delete certain elements: that is, remove Veigar (because yes). After this, checking the “Personal Strong” data of Diana will return “Diana IS STRONG AGAINST Akali, Jax, Garen”.



The existence of both delete modes gives a higher level of control over the data.

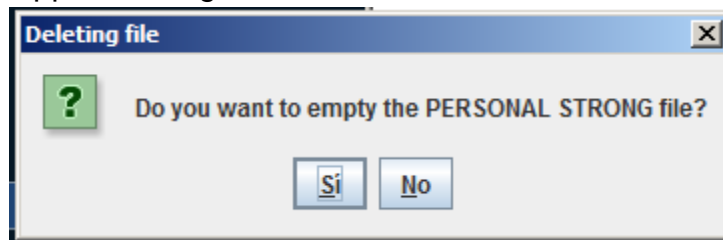
Delete All data

Delete All data allows you to remove the whole selected file. In this case, there's no need to select a champion (the operation is the same that "personal group" files). To delete all the data:

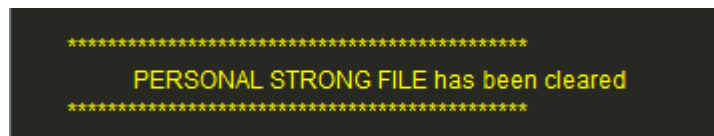
- Press "Delete All" button.



- A window will appear asking for confirmation, to avoid unintentional clicks.



- If "Yes" is pressed, the file will be cleared. The CLI will prompt a confirmation message.



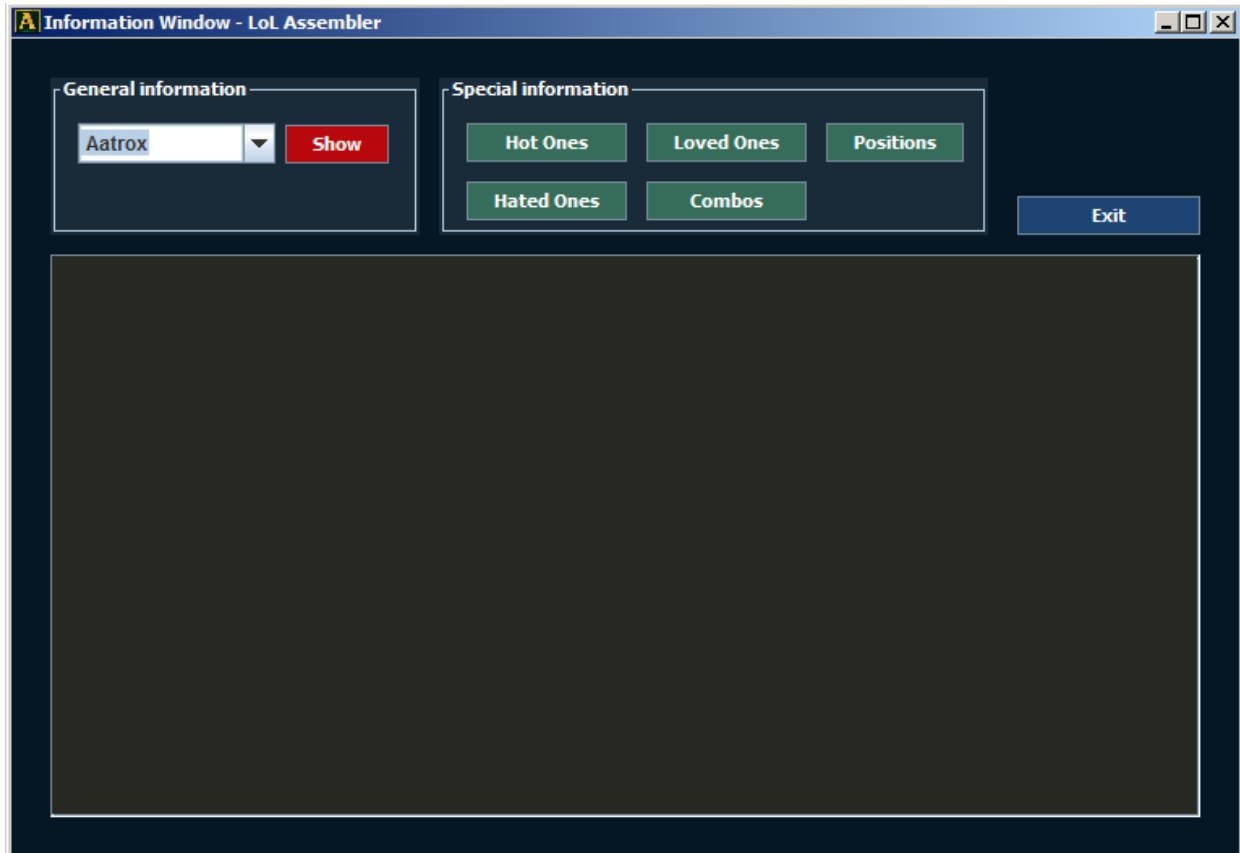
Once more, pressing "See" allow you to check if the file has been deleted (any selected champion will return a "No information available" message).

4.5. Information mode

“Information” button will start the “Information mode”.



“Information mode” is the outside-game data-source. In this interface, you can check all the related tool data in a (I hope so) very structured way. The interface is this:

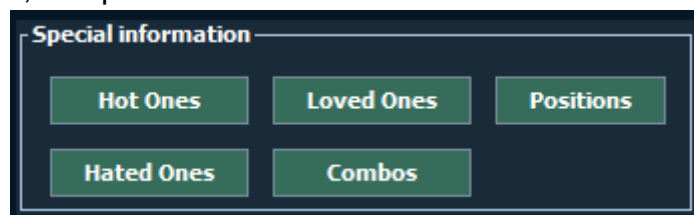


You can see:

- A CLI, as usual.
- General Section, compound of a combo box and “See” button.



- Special Section, compound of a bunch of buttons related to the personal data.



- Exit button (no need to explain).

On your marks, set, and...these are the operations you can perform.

4.5.1. Check Full Champion Information

This operation prints the whole information of a certain champion. To do this:

- Select the champion you want to study.



- Press "Show" button.



To describe the output, we will follow an example with... Viktor! (Best Mid ever, no doubt). Checking Viktor will return this:

```
*****
*****  VIKTOR  *****
*****
TAGS: [ Hot - Loved - ]
    >> Hot: Mid,
    >> Loved: Mid, Support,

STRONG AGAINST:
  Community: [ Swain, Katarina, Rumble, Fizz, Karthus, Ahri, Ryze, Yasuo, Akali, Malzahar, Diana, Zed, ]
  >>>
  Personal: [ Morgana, Azir, Katarina, ]

WEAK AGAINST:
  Community: [ Syndra, Talon, Ziggs, LeBlanc, Fizz, Lux, Zed, Diana, Annie, Brand, LeBlanc, Nidalee, ]
  >>>
  Personal: [ Evelyn, Diana, ChoGath, ]

EVEN AGAINST:
  Community: [ Vladimir, Nidalee, VelKoz, Lissandra, Akali, Kennen, Malzahar, Akali, Teemo, Fizz, Skarner, Ahri, ]
  >>>
  Personal: [ No personal information available ]

WORKS WELL WITH:
  Community: [ Jarvan-IV, Malzahar, Amumu, Sona, ChoGath, Zilean, Akali, Aatrox, Diana, Leona, Rammus, ]
  >>>
  Personal: [ No personal information available ]

COMBOS WITH [ Viktor ]:
  1. Viktor- Jinx- Jayce-

  2. Viktor- Wukong- Taric- Quinn-
```

Section by section, “Information” mode shows:

Tags:

“Labels” of the champion, that is, if he’s “Hot One”, “Loved One” or “Hated One”.

```
TAGS: [ Hot - Loved - ]
```

Positions:

Lanes where the champion is relevant and why. For example, Viktor is a “Loved One” in Mid and Support, and for certain patches, a “Hot One” in Mid lane. Of course, there is a correspondence between tags and positions.

```
>> Hot: Mid,  
>> Loved: Mid, Support,
```

Counterpick information:

Both community and custom data about Strong Against, Weak Against, Even Against and Works Well (conveniently separated).

```
STRONG AGAINST:  
Community: [ Swain, Katarina, Rumble, Fizz, Karthus, Ahri, Ryze, Yasuo, Akali, Malzahar, Diana, Zed, ]  
>>>  
Personal: [ Morgana, Azir, Katarina, ]  
  
WEAK AGAINST:  
Community: [ Syndra, Talon, Ziggs, LeBlanc, Fizz, Lux, Zed, Diana, Annie, Brand, LeBlanc, Nidalee, ]  
>>>  
Personal: [ Evelyn, Diana, ChoGath, ]  
  
EVEN AGAINST:  
Community: [ Vladimir, Nidalee, VelKoz, Lissandra, Akali, Kennen, Malzahar, Akali, Teemo, Fizz, Skarner, Ahri, ]  
>>>  
Personal: [ No personal information available ]  
  
WORKS WELL WITH:  
Community: [ Jarvan-IV, Malzahar, Amumu, Sona, ChoGath, Zilean, Akali, Aatrox, Diana, Leona, Rammus, ]  
>>>  
Personal: [ No personal information available ]
```

```
STRONG AGAINST:  
Community: [ Swain, Katarina, Rumble, Fizz, Karthus, Ahri, Ryze, Yasuo, Akali, Malzahar, Diana, Zed, ]  
>>>  
Personal: [ Morgana, Azir, Katarina, ]
```

Combos:

Combos in which the champion is involved (it’s one of the components).

```
COMBOS WITH [ Viktor ]:  
1. Viktor- Jinx- Jayce-  
  
2. Viktor- Wukong- Taric- Quinn-
```

In summary, this operation retrieves all the data of a certain champion, and prints it together in the CLI. Like the modify operations, certain files can be empty, so in that cases, the “No information available” message will be prompted when trying to check non-existent data.

4.5.2. Check Hot/Loved/Hated champions, Combos or Positions

Pressing “Hot Ones”, “Loved Ones”, “Hated Ones”, “Combos” or “Positions” buttons will print the related data in the CLI. “Hot/Hated/Loved” appear together with the relevant positions of each one.

```
*****
***** HOT ONES *****
*****
>> Viktor --> [Mid, ]
>> Darius --> [Top, ]
>> Jarvan-IV --> [Top, Jungle, ]
>> Leona --> [Support, ]

*****
***** HATED ONES *****
*****
>> Blitzcrank --> [Support, ]
>> Ekko --> [Mid, ]
>> Kalista --> [ADC, ]
```

“Combos” prompt the combos with their ID, and “Positions” gather the champions by their relevant positions, and sort them by their tags. It’s easy to see with the Viktor example.

```
*****
***** COMBOS *****
*****
1. Viktor- Jinx- Jayce-
2. Viktor- Wukong- Taric- Quinn-
3. Rumble- Sejuani- Sivir-
4. Soraka- Sona-
5. Teemo- Vayne- Jayce- Fizz- Fiddlesticks-
```

```

*****
***** POSITIONS *****
*****
<--- TOP --->
    >> Hot: [ Darius, Jarvan-IV, ]
<--- MID --->
    >> Hot: [ Viktor, ]
    >> Loved: [ Viktor, ]
    >> Hated: [ Ekko, ]
<--- JUNGLE --->
    >> Hot: [ Jarvan-IV, ]
<--- ADC --->
    >> Hated: [ Kalista, ]
<--- SUPPORT --->
    >> Hot: [ Leona, ]
    >> Loved: [ Viktor, ]
    >> Hated: [ Blitzcrank, ]

```

In this way, you can access really fast to a higher level of abstraction (instead of checking one by one the champions to know which of them are “Hot”, or going to the modify interfaces and perform the “See” operation, as depicted in section 4).

NOTE: Maybe it’s obvious, but all the information is correlated. That is, if Rumble (cool ultimate btw) is a “Hated One” (sorry little yordle), in his full information will appear the tag “Hated”. And now, if you press “Hated Ones”, Rumble will be printed, together with the rest of the hated champs. There’s no data inconsistency, so you can trust in every returned results (from “information mode”, from modify interfaces, game modes...).

4.6. Normal game mode

Hooray! Now the fun begins! “Normal game” mode allows you to build a team for normal games (in blind pick mode), using community data, custom/personal data or both of them, depends on your configuration (section 4.3). In “Normal game” mode, the tool gives you pick recommendations in order to build a team in which their components:

- Are strong against the enemies (and aren’t weak against them).
- Include your loved champions and hot champions.
- Works well together.
- Considers your personal combos.

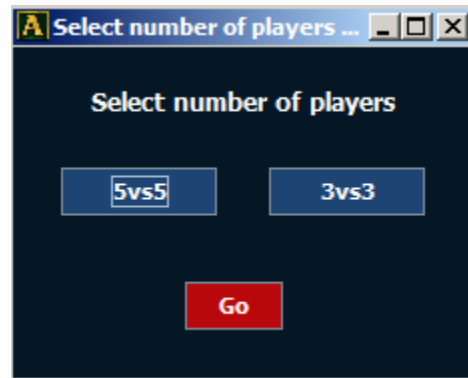
For a detailed explanation of the logic behind this recommendations, take a look to the section 5.3.

To start a “Normal game” mode, after checking the correct status of the tool:

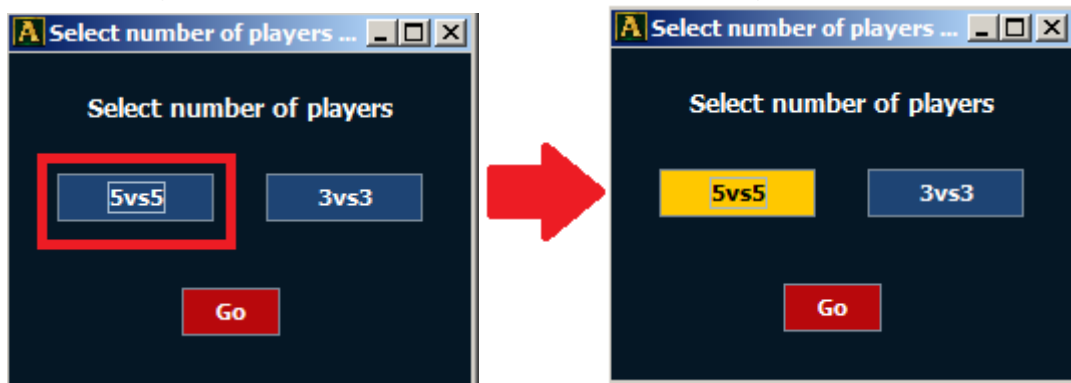
- Press “Normal” button.



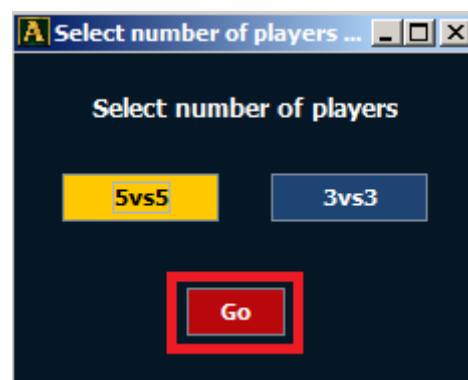
- A small configuration window will appear, asking for the number of players.



Here, choose if the normal game is a 5vs5 (Summoner's Rift or even Dominion) or a 3vs3 (Twisted Treeline). After choosing one of them, the button will glow (you can press the other one to change the player number).

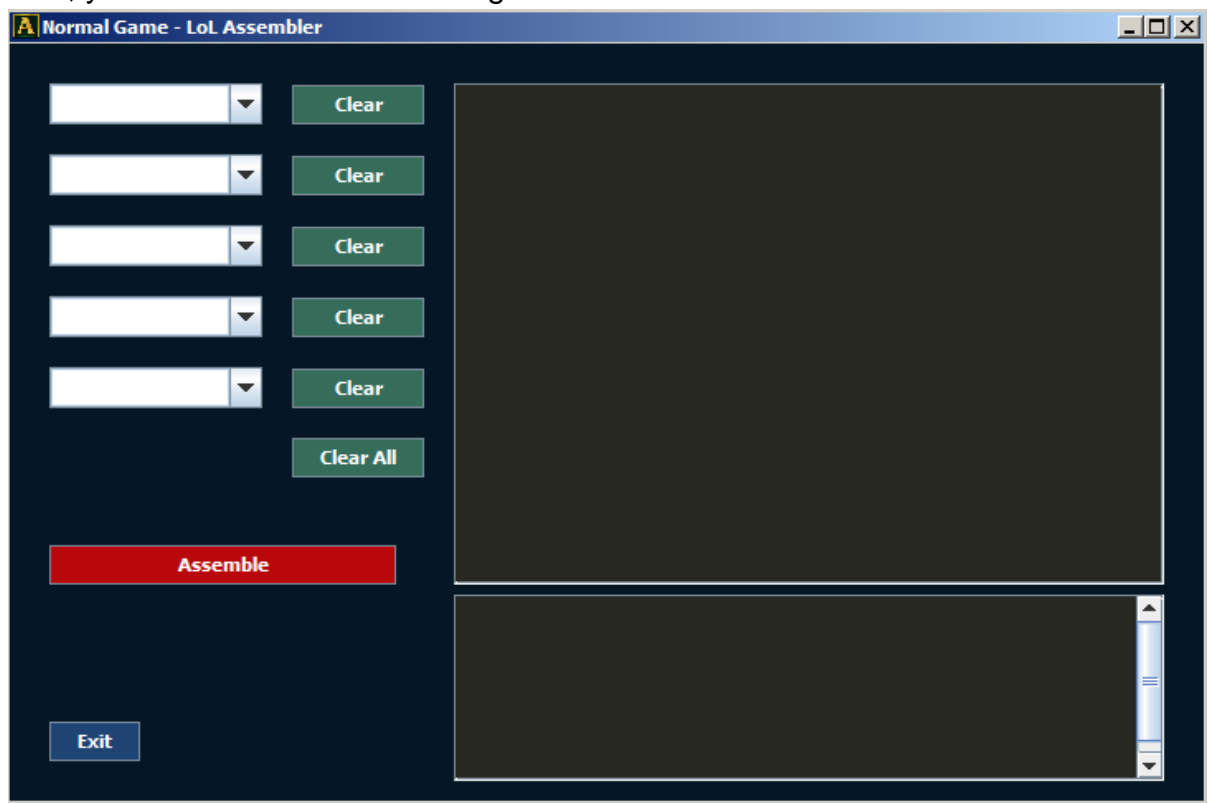


- Press “Go” button.



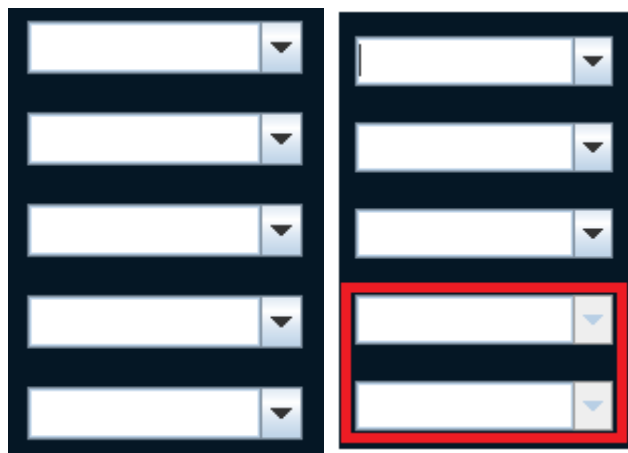
4.6.1. Normal game interface

Now, you should be in the normal game interface.

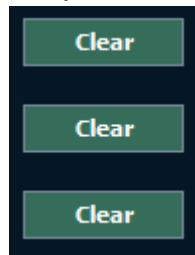


The components are:

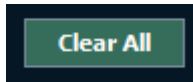
- **Combo boxes:** to choose the champions. In a 5vs5 game, all are enabled, while in 3vs3, only the first three of them are activated.



- **“Clear” buttons:** to erase the champion selected of the related combo box.



- **“Clear All” button:** to erase all combo boxes (fastest than do it one by one).



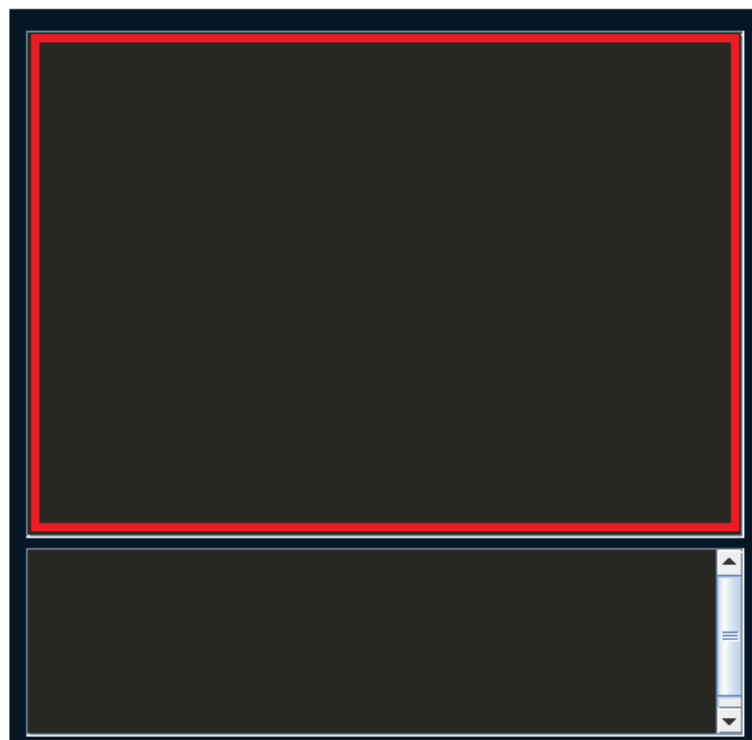
- **“Assemble” button:** this will execute the assembling operation, and will return the recommended picks.



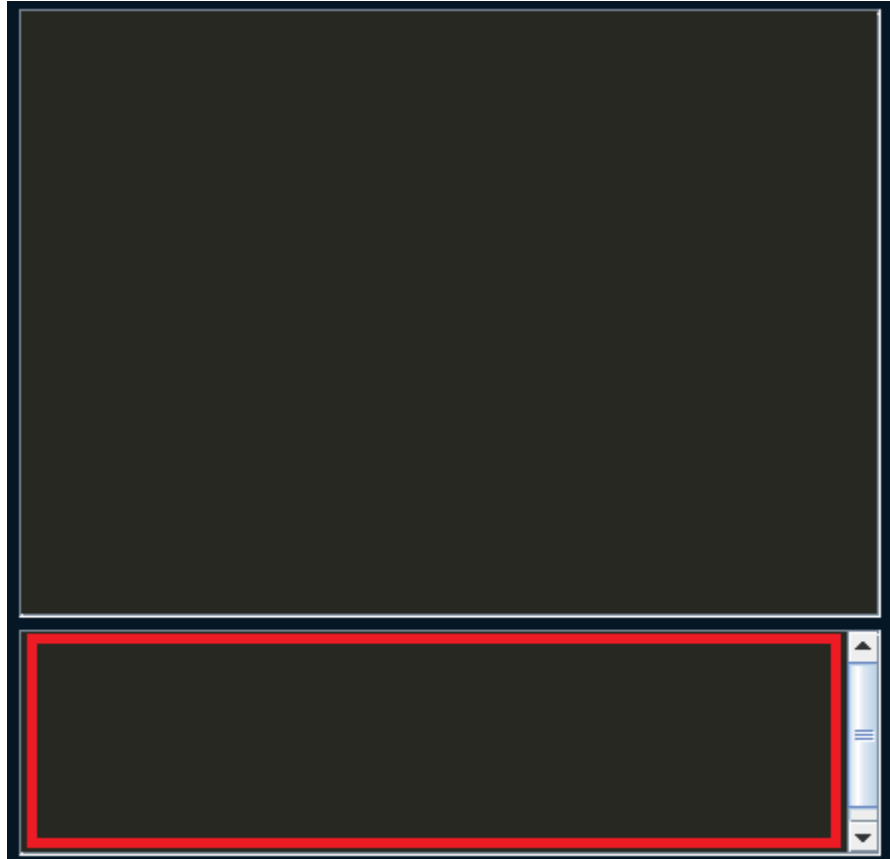
- **“Exit” button:** no need to explain.



- **Pick recommendations CLI:** the upper one. Here will appear the recommended picks, with a bunch of different values and measures (we will cover this very soon).





- **Available combos CLI:** the lower one. Here will appear the combos that can be achieved either with the picked champions, or the recommended ones (patience my padawan, everything will be covered).



With just these elements, you can start to ask for recommendations.

4.6.2 Building a team

I will explain how this interface works with a real example. Imagine we entered in a normal 5vs5 game. 

We have already our “Hot ones”, “Loved Ones”, “Hated Ones” and “Combos”. Because we were lazy, we didn’t fulfill any custom data, so the configuration is set to use only community data. 

After closing the room’s door, grabbing the water bottle and putting on the headsets and microphone, we are ready to go.

First contact

The first step is to tell the tool what champions are already picked (by picked, I mean “selected”, but they don’t need to be locked).

If no one in our team has already selected a champ, we can press directly the “Assemble” button. And this will happen:

```
-----
RECOMMENDED PICKS

CHAMPION --- SCORE --- TAGS --- COMBOS --- POS
-----
*****COMMUNITY*****

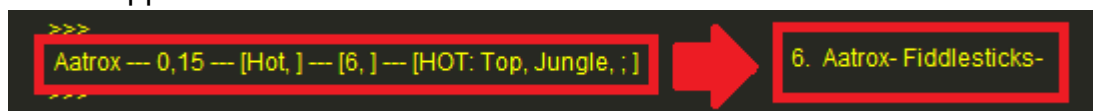
ChoGath --- 0,30 --- [Hot, Loved, ] --- [] --- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>
Brand --- 0,15 --- [Hot, ] --- [] --- [HOT: -; ]
>>>
Aatrox --- 0,15 --- [Hot, ] --- [6, ] --- [HOT: Top, Jungle, ; ]
>>>
Ekko --- 0,15 --- [Hot, ] --- [] --- [HOT: Mid, ; ]
>>>
Draven --- 0,15 --- [Hot, ] --- [] --- [HOT: ADC, ; ]
>>>

-----
COMBOS

*****COMMUNITY*****

6. Aatrox- Fiddlesticks-
```

The first recommendations! As you can see, if no one chose a champion, the tool gives us recommendations of the hot champions and loved champions (a good point to start: pick either one of your favorites, or an overpowered one). At the same time, if some of that recommended picks are involved in a personal combo... magic! The combo will appear too in the lower CLI.



So, the tool is telling us that:

- It’s a good idea to pick a hot champion or a loved champion (or both).
- If we pick one of the above champions, we will be able to complete a certain combo (or combos).

There’s a lot of information right here, and even when it’s sorted in the same way the “Header” says, it’s a good idea to explain it. In the “Recommendations” CLI, we have:

- **Community information separated from personal information:** The header saying “Community”, more than just a visual candy, states where the community-based recommendations start. In this example, the tool configuration only uses community data, but if custom/personal data was activated, another header saying “Personal” would appear, with the same function that the first one.

```

-----
                        RECOMMENDED PICKS
-----
CHAMPION --- SCORE --- TAGS --- COMBOS --- POS
-----
*****COMMUNITY*****

ChoGath --- 0,30 --- [Hot, Loved, ] --- [] --- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>
Brand --- 0,15 --- [Hot, ] --- [] --- [HOT: -, ]
>>>
Aatrox --- 0,15 --- [Hot, ] --- [6, ] --- [HOT: Top, Jungle, ; ]
>>>
Ekko --- 0,15 --- [Hot, ] --- [] --- [HOT: Mid, ; ]
>>>
Draven --- 0,15 --- [Hot, ] --- [] --- [HOT: ADC, ; ]
>>>

```

- **The name of the recommended champion** (no more to say).

```

ChoGath --- 0,30 --- [Hot, Loved, ] --- [] --- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>

```

- **The score of the champion:** just a mathematical value, calculated by the tool, used to sort the recommendations by relevance. The higher the value is, more important the champion become.

```

ChoGath --- 0,30 --- [Hot, Loved, ] --- [] --- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>

```

How the tool calculate this value? For further information, check the section 5.3, but in summary, a champion receives his score based on his tags (Is he loved, hated or hot one? Does he appears in combos?), in his strengths, weaknesses and synergies with the rest of the team members. For example: if Ashe is “Loved One”, and she is strong against some of the enemy champions, her score will be higher than Vayne’s one, cause the last one is weak against some of the enemies, and she is not classified in any tag (hot nor loved).

- **Champion tags:** easy one. The tags says if the champion is “Hot”, “Loved” or “Hated”.

```

ChoGath --- 0,30 --- [Hot, Loved, ] --- [] --- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>

```

- **Combos:** list of IDs of the combos where the champion is included. For example, imagine that we obtain Aatrox as a recommended pick. Aatrox appears in the combo with ID 6. So in this occasion, the “combos” brackets will show the number 6.

```
Aatrox -- 0,15 -- [Hot, ] -- [6, ] -- [HOT: Top, Jungle, ; ]
>>>
```

- **Positions:** in the same way “Information mode” does, this brackets contain, for each tag, the positions in which the champion is relevant (so if we going to pick Viktor, the brackets will tell us that he is a Loved One in Mid lane and Support lane). In this case, we can see that Cho’gath is a “hot champion” in top, mid, jungle and support (that is, it’s overpowered in these positions; damn you void cockroach), and a “loved champion” in mid and jungle (we really like play cho’gath in these positions).

```
ChoGath -- 0,30 -- [Hot, Loved, ] -- [ ] -- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>
```

There’s one important thing: the recommendations won’t consider all the champions of the game, only those who surpass a minimal score, or have something “to say” in the actual state (are hot ones in example, or counter the full enemy team). In the same way, some of the brackets can be filled with “nothing”. Except the champion name and their score, which always appears, tags, combos and positions can be empty (because a certain recommendation can lack of this information).

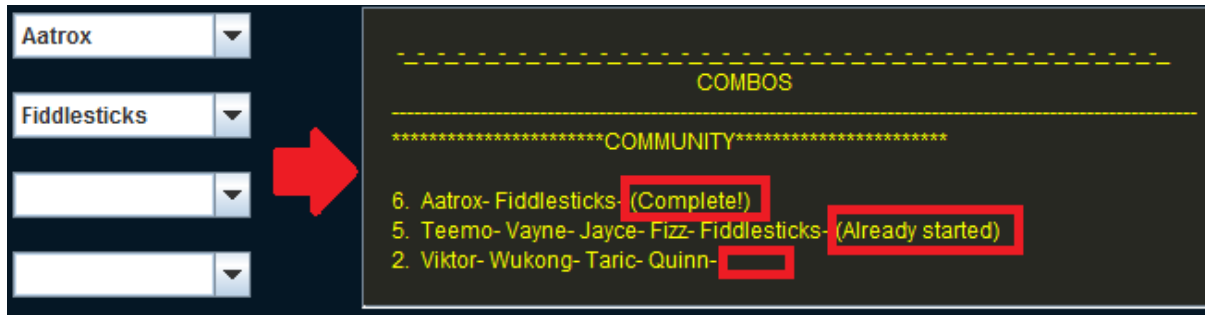
```
Ekko -- 0,15 -- [Hot, ] -- [ ] -- [HOT: Mid, ; ]
>>>
Draven -- 0,15 -- [Hot, ] -- [ ] -- [HOT: ADC, ; ]
>>>
```

Now, for the “Available combos” CLI, the thing becomes easier. Like the “information mode”, here will appear those combos who can be achieved following the recommended picks, or the already picked champions.

```
-----
COMBOS
-----
*****COMMUNITY*****
6. Aatrox-Fiddlesticks-
```

So we have the combos IDs, the components of the combos and, in certain situations, a “special message”: if the combo is complete, a “Complete!” message will appear. If the combo contains a champion who has been already picked (that is, a champion who is selected in one of the combo boxes), an “Already started” message will appear, telling us that this combo has, at least, one of their components ready to fight. If the combo is not started, the message won’t appear.

So, the combos are sorted following this: in first place, the fulfilled ones; then the ones which are started, and finally, the possible ones.



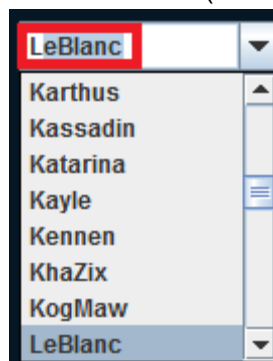
NOTE: Although the combos could have a score like the pick recommendations, I think it's easier to show a simply message telling you the state of every one. Otherwise, the assigned value for each combo would be too fuzzy (it must be calculated following each individual component, and then, all possible combinations between them.)

Add champions

The first contact was useful to understand the way the tool gives us information, and the first operation we can perform (obtain recommendations without any champion selected).

Now, imagine that, in the same 5vs5 game, there are someone who already asked for Mid lane, and another one who called for ADC. These teammates pick LeBlanc and Lucian, and now, we can obtain another round of recommendations using these two components. To do this, just:

- In one of the combo boxes, select LeBlanc (or whoever the champion is).



- In another combo box, select Lucian.

LeBlanc	▼	Clear
Lucian	▼	Clear
	▼	Clear
	▼	Clear
	▼	Clear
Clear All		

- Press “Assemble”.

Assemble

And... magic again! We have a new set of recommendations.

```

ChoGath --- 0,30 --- [Hot, Loved, ] --- [] --- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>
Leona --- 0,24 --- [No tags] --- [] --- []
>>>
Akali --- 0,20 --- [No tags] --- [] --- []
>>>
Braum --- 0,20 --- [No tags] --- [] --- []
>>>
Thresh --- 0,18 --- [No tags] --- [] --- []
>>>
Udyr --- 0,18 --- [No tags] --- [] --- []
>>>
Nami --- 0,16 --- [No tags] --- [] --- []
>>>
Veigar --- 0,16 --- [No tags] --- [] --- []
>>>
Ekko --- 0,15 --- [Hot, ] --- [] --- [HOT: Mid, ; ]
>>>

-----
COMBOS
-----
*****COMMUNITY*****

4. Soraka- Sona-
6. Aatrox- Fiddlesticks-
2. Viktor- Wukong- Taric- Quinn-

```

As you can see, we have a different list of champions, with different scores, and probably, new available combos.

Why? Because this time, the tool is providing us data about champions who:

- Are Hot ones or Loved Ones
- Are included in personal combos
- And (hype increases), works well with the CURRENT selected champions, Leblanc and Lucian!

And this works with any number of selected champions (from one to four). The tool will calculate, one by one, the most suitable options, and finally, put them together (for more information, check section 5.3). Just repeats the previous steps (select the champions in the combo boxes, and press “Assemble”).

We can see this in our example:

- With LeBlanc and Lucian in the team, there are a couple of very suitable options like Cho’gath, Leona or Akali.

```
ChoGath --- 0,30 --- [Hot, Loved, ] --- [] --- [HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle, ]
>>>
Leona --- 0,24 --- [No tags] --- [] --- []
>>>
Akali --- 0,20 --- [No tags] --- [] --- []
```

- But if another teammate call for Nocturne in the jungle, then a new option appears with higher score (Twisted Fate in this case).

CHAMPION	SCORE	TAGS	COMBOS	POS
*****COMMUNITY*****				
ChoGath	0,30	[Hot, Loved,]	---	[HOT: Top, Mid, Jungle, Support, ; LOVED: Mid, Jungle,]
>>>				
Leona	0,24	[No tags]	---	---
>>>				
Twisted-Fate	0,20	[No tags]	---	---
>>>				
Akali	0,20	[No tags]	---	---
>>>				

Every time a new champion is added, the tool recalculates the scores, seeking in every step the most synergized and powerful team possible. So, how this can be used to assemble a good team for a normal game? Just as follows:

- Add the champions who have been already selected, or leave all empty (no one has chosen yet).
- Press “Assemble”, and obtain the recommendations.
- Now, ADD the selected recommendation (or any other champions) to the actual team.
- Press “Assemble” again, and obtain the updated recommendations.
- Repeat until you and your team decided all the components.

Following the previous example: two of your partners choose LeBlanc and Lucian, then you run the recommendations, and the tool says that Chog'gath is a good option. Another of your partners say "hey! good one! I take it", so your team is now compound by LeBlanc, Lucian and Cho. You add this last one to the combo box, and run again the recommendations, and you receive the new best options. And this again and again until everyone has one champion.

CHAMPION	SCORE	TAGS	COMBOS	POS
*****COMMUNITY*****				
Lulu	0,26	[No tags]		
>>>				
Aatrox	0,24	[No tags]	[6,]	
>>>				
Leona	0,24	[No tags]		
>>>				
Akali	0,20	[No tags]		
>>>				

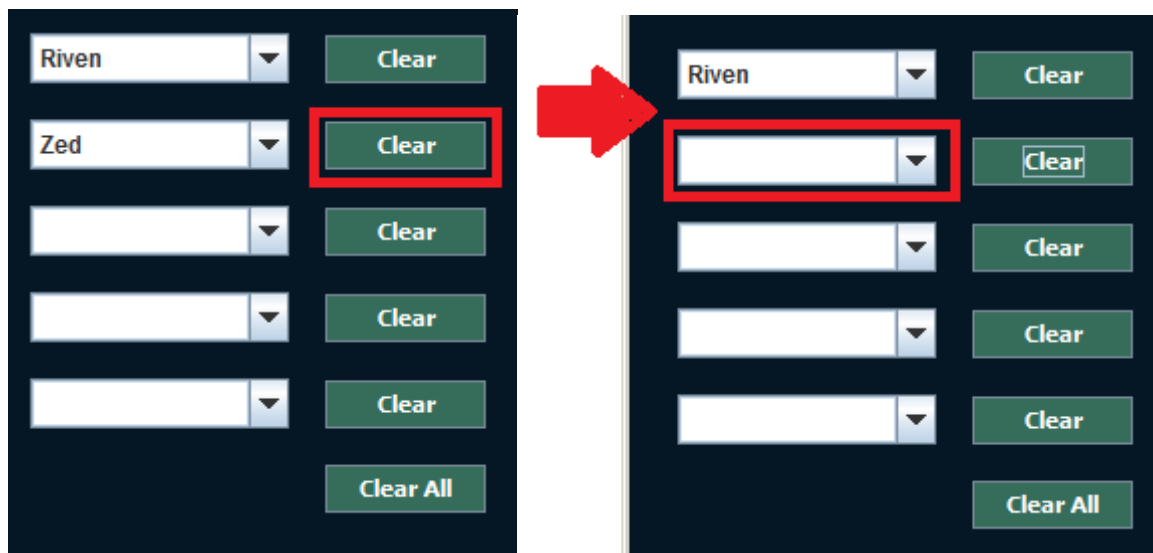
Clear champions

We know how to obtain recommendations adding champions to the team (that is, "tell me the best options for build a team with Sona on it; now, the best options for a team with Sona and Rengar; now, Sona, Rengar and Corki...)

Of course, you can ask for recommendations for a certain number of given champions, without the need of increase their number ("I want recommendations for a team with Urgot, Anivia and Amumu on it; hum, now with Urgot, Anivia, but instead Amumu, Nasus"). You just need to select the wanted champions in the combo boxes.

But, what if you want to REVERT an operation? That is: receive recommendations based on only a few components of the team? This is when the "Clear" and "Clear All" buttons enters in the equation.

For example, if you asked for recommendations for a team composed by Zed and Riven, but now, you want recommendations only based on Riven, just press the related "Clear" button (that is, the "Clear" button next to the combo box with Zed selected).



Pressing “Assemble”, you will receive recommendations calculated using only Riven as the selected champion.

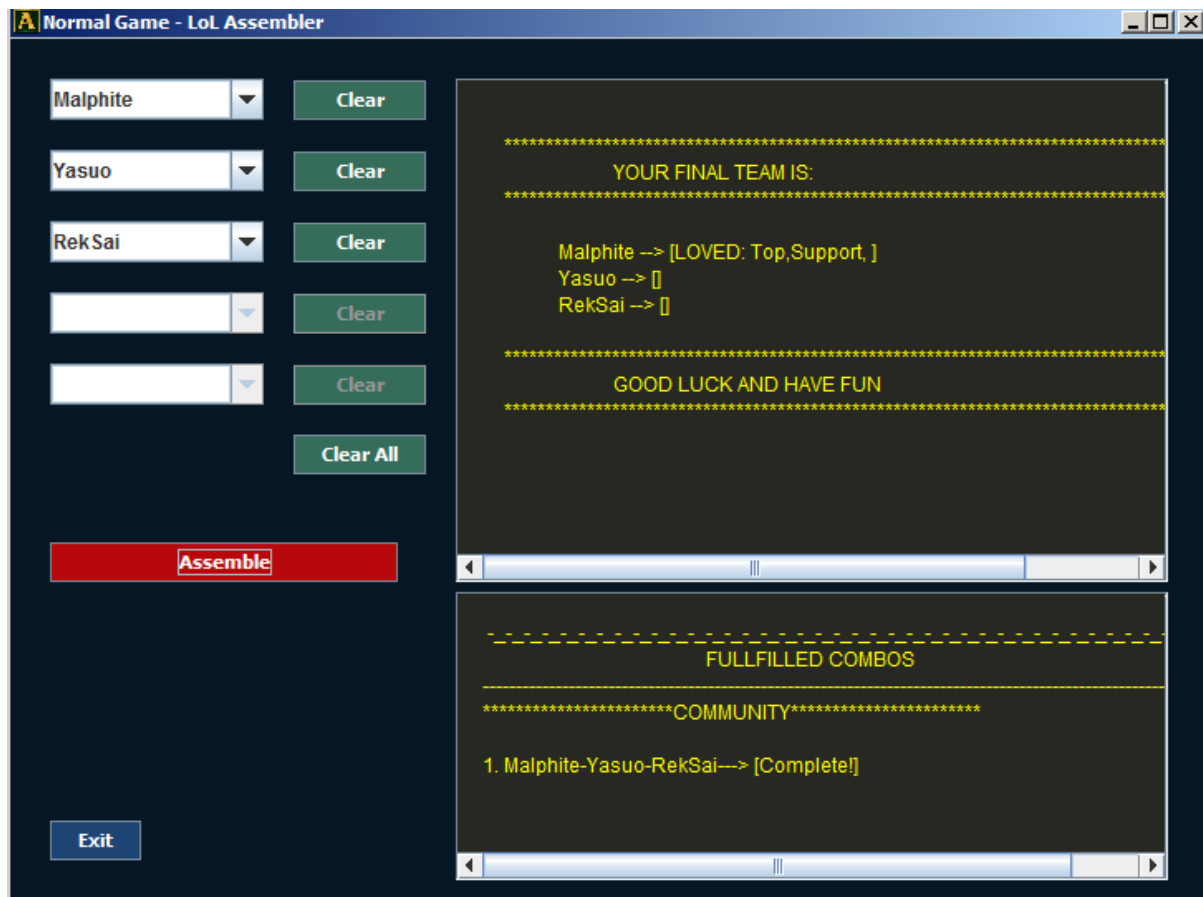
And yes, pressing “Clear All” will empty all combo boxes. Asking for recommendations then will return the “first contact” results, as we saw earlier.

NOTE: Probably what I explained here is... pretty obvious. But hey, I don’t want to miss anything. In summary, you can ask for recommendations with any number of selected champions, and you can go back or forward, adding or deleting champions from the equation.

Final team

For the final part: if you press “Assemble” with all the combo boxes selected (five champions or three, depends on the game mode), you won’t receive any recommendations, because your team is complete!

What you receive instead it’s a prompt with the components of your team with their tags and relevant positions, so you can check everything is correct. And what is important too, the achieved combos.



So this is how you assemble teams for normal matches, in 5vs5 or 3vs3 games. If you want to maximize the utility of the tool, check section 6 for a couple of tips that will increase the strategic flavor of your decisions. Good luck and have fun!

4.7. Ranked game mode

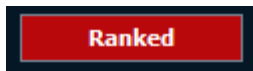
Prepare your LP, call for “Duo bot premade”, and start *LoL Assembler*. “Ranked game” mode allows you to build a powerful team following similar -but expanded- goals and mechanics to those explained in the previous section, but this time, for a Ranked Game. In this mode, the tool gives you both BAN and PICK recommendations in order to:

- Avoid potential enemy picks, anticipating their movements and breaking their strategies.
- Choose the best champions in each phase: hot or loved ones, strong against them or not weak against them, synergized with the actual composition, and more.

Even when the logic behind this recommendations shares the same roots that “Normal game” ones, the algorithms for Ranked games are fairly more complex - because Ranked games are more complex too. For a detailed explanation of “why”, “where”, “how” and the rest of questions, take a look to section 5.4

To start a “Ranked game” mode, after checking the correct status of the tool:

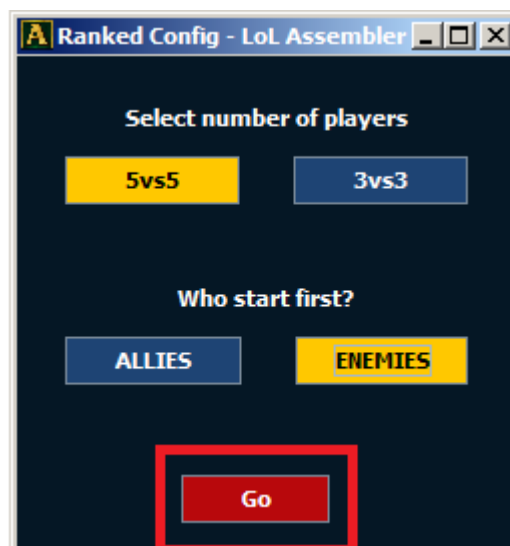
- Press “Ranked” button.



- A small configuration window will appear, asking for :
 - The number of players (nothing more to say)
 - Who starts the ban phase (or simply “Who starts”). The choices are “allies” (your team) or “enemies”, depends on who does the first ban. Just press the correct one (you can swap any times you want).



- Press “Go” button.

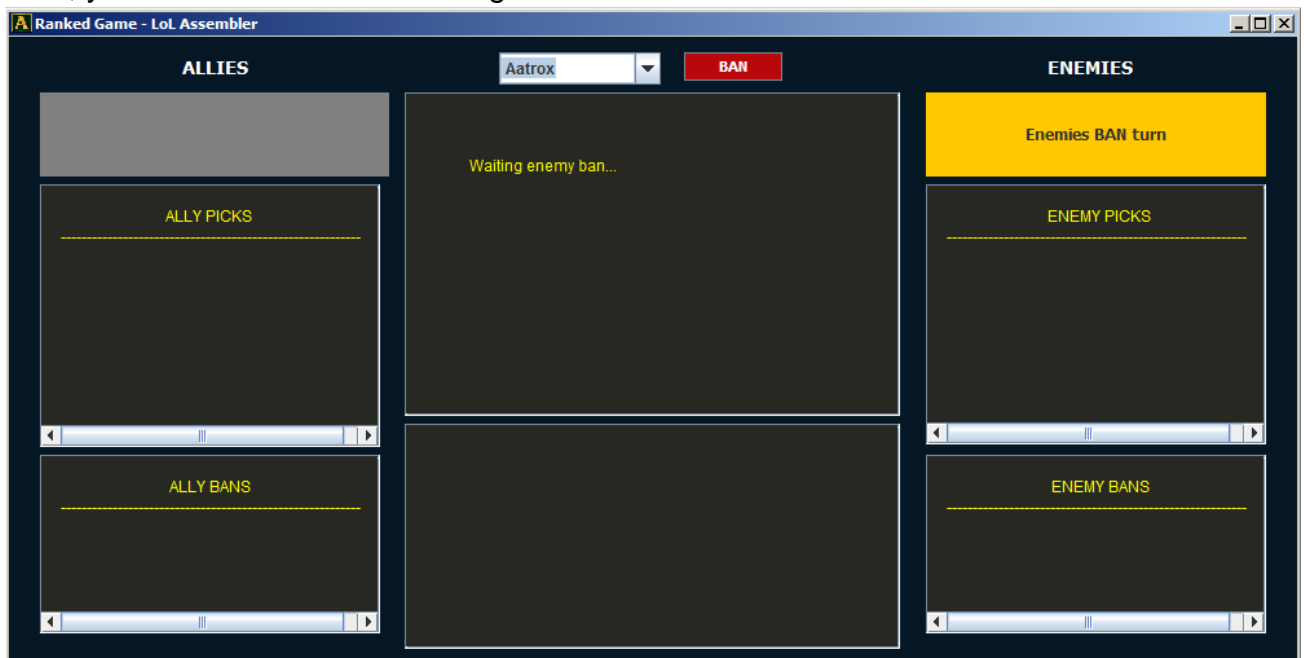


And prepare your fingers to road to gold (?) tier.

NOTE: This is becoming a habit but... in “Ranked game” mode, you need to establish who start first, because the order is important (yeah, this is pretty obvious). I mean, for the tool the order really matters: depends on who many picks you will have (only one in the first turn, if “allies” starts, but two if “enemies” does), the algorithms will calculate different things, always aiming to obtain the best options. Meh, let’s just say that the tool needs to know who start first, in order to reproduce the same game turns (first you, then me, again you...)

4.7.1. Ranked game interface

Now, you should be in the ranked game interface.



As you can see, the similitude with the real LoL is very high. With this in mind, you can identify very quickly the components:

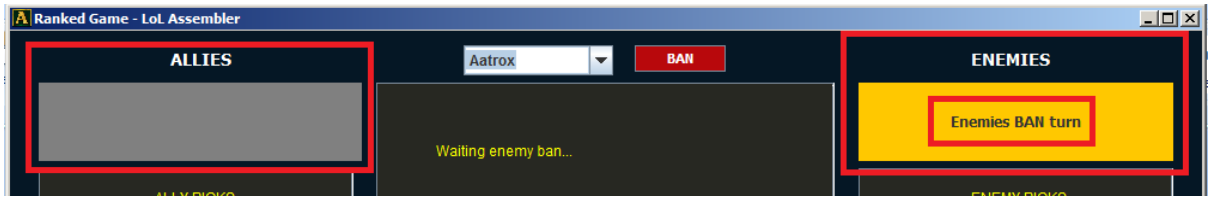
- **Combo box:** in the upper center. To choose the champions, both in ban and pick phase.



- **Ban/Pick button:** the action trigger. After selecting a champion, pressing it will ban/pick that champion, depends on the current phase of the game.



- **Ally and enemy message:** Highlighted text (or darkened one) to help you know what's happening right now (that is: who is banning or picking).



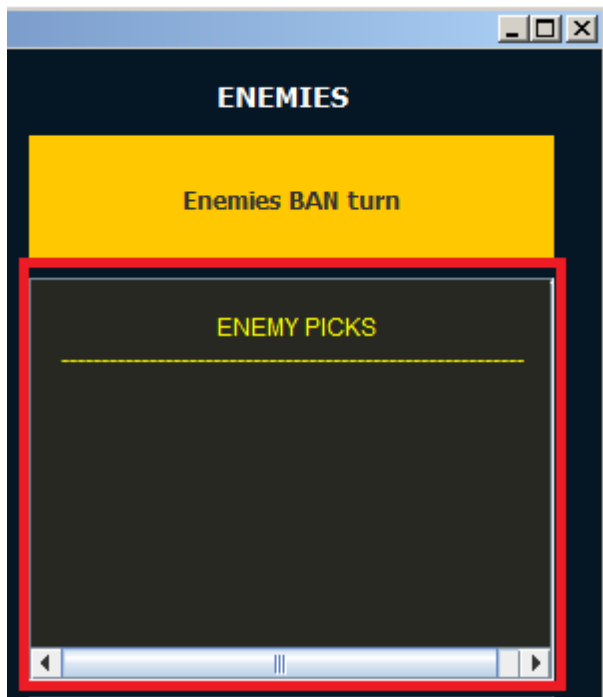
- **Ally picks CLI:** Upper left. It will show the champions picked by your team (in the correct order).



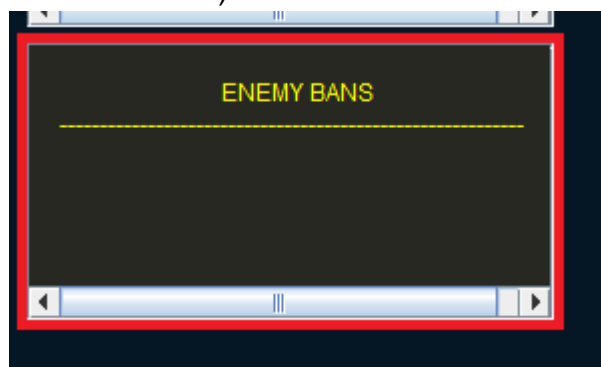
- **Ally bans CLI:** Lower left. It will show the champions banned by your team (in the correct order).



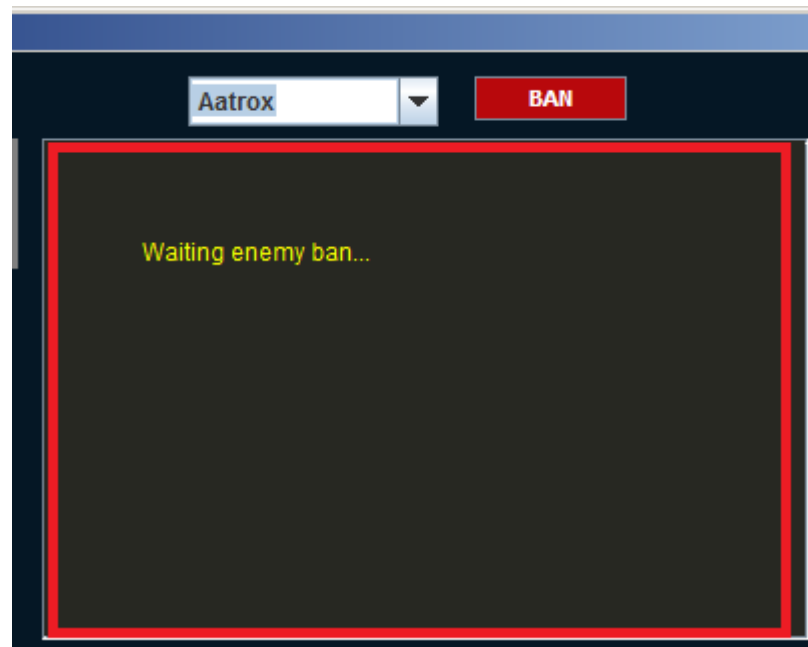
- **Enemy picks CLI:** Upper right. It will show the champions picked by the enemy team (in the correct order).



- **Enemy bans CLI:** Lower right. It will show the champions banned by the enemy team (in the correct order).



- **Ban/Pick recommendations CLI:** Upper center. It will show the recommended bans and picks, in a similar way to what we saw in “Normal game” mode (scores, tags, positions...).



- **Available combos CLI:** Lower center. Here will appear the combos that can be achieved either with the picked champions, or the recommended ones (only during pick phase).



This interface can seem intimidating, but in fact, it's easier than "Normal game" one. Not only has been designed to be very similar to the LoL real one: all the operations in this window can be performed with just a combo box and a button. In addition, all CLI has a permanent header telling you what it's the content of each one, making near to impossible miss something.

Once the elements have been depicted, is time to describe how this mode works.

NOTE: Many of the elements involved during this mode has been already explained in the "Normal game's building a team" section, so they will be ignored in the part ahead (in order to avoid an unnecessary extension of the document)

4.7.2. Building a team

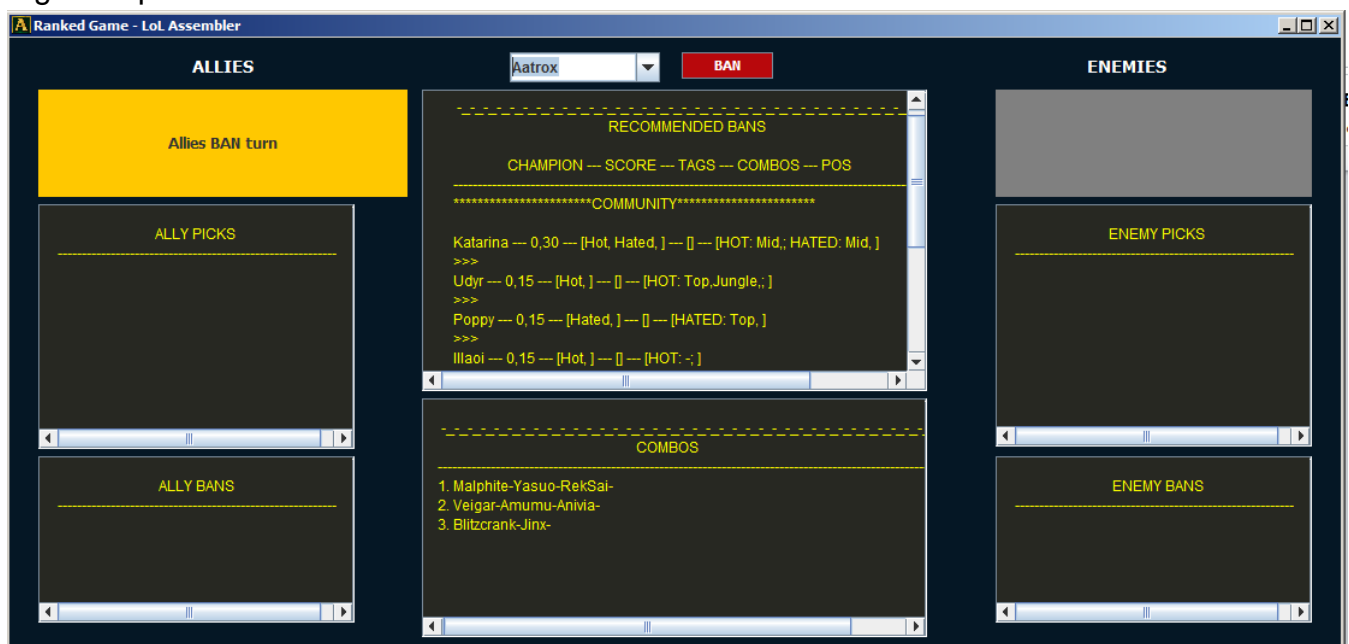
In summary, once you chose the number of players (5vs5 or 3vs3) and who starts (allies or enemies), all comes down to select champions, and ban/pick them, just like in the real game. The mode goes through two phases, with very similar mechanics between them. Those phases are: BAN Phase and PICK Phase (did you expect something different?!?). One more time (Daft Punk reference right here), you can check section 5.4 to gain deeper knowledge about the tool's logic for this ranked recommendations.

BAN PHASE

The first phase is the banning phase. During it, the tool gives you recommendations about the champions you should ban, based on:

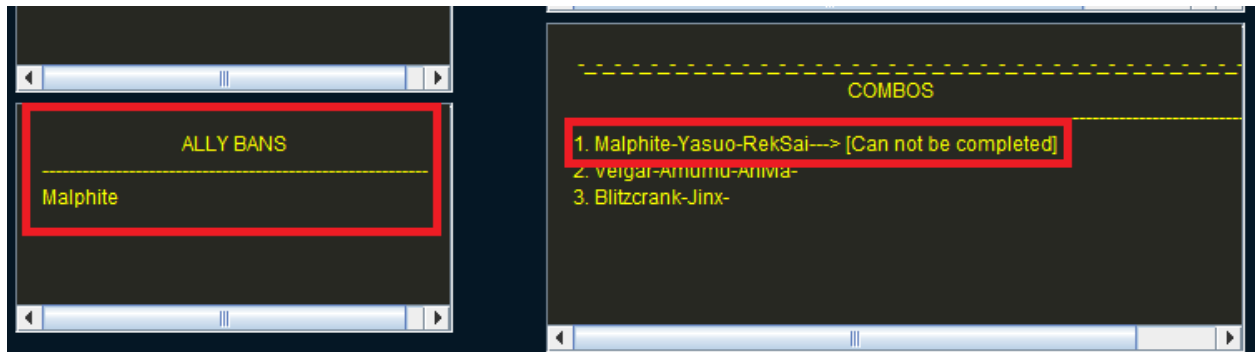
- Hot champions (they are so overpowered to let the enemy pick them).
- Hated champions (you can't play against them... DELETE TEEMO!!).
- Possible enemy picks: the tool will calculate, based on the bans the enemy does, their future picks. For example, if they ban Zed, and Zed is strong against Katarina, the tool will tell you "Hey, they banned Zed, so there's a chance they will pick Katarina. Probably you should ban her to avoid make their dreams come true"

Every ally turn, the CLI will prompt the recommended bans, with their related scores, tags and positions.



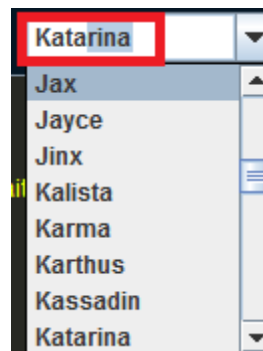
Combos here aren't calculated: all of them are shown, in order to give you a clue of which of them are going to be dismantled if you ban certain champions. In fact, if you

—or the enemy team- bans a champion who is a combo component, the combo will be printed together with the flag “Cannot be completed”.



This is just like “Normal game” mode, so I won’t expand here. To ban a champion, simply:

- Select the champion to ban in the combo box (following the recommendations or your own ideas).



- Press “Ban” button.



After that, you will notice a couple of things:

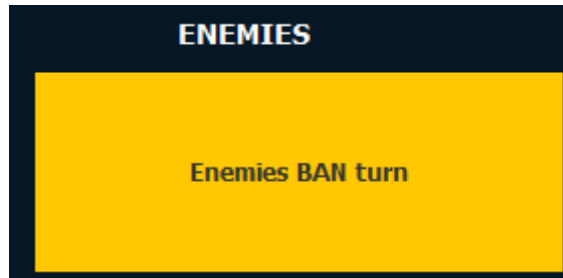
- Ally bans CLI will update their state, showing the banned champion (Katarina, in this case).



- Ally message is now turned off.



- Enemy message is glowing now, telling you that its enemy ban turn.

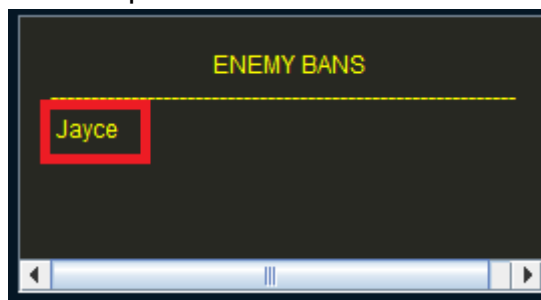


Now, is enemy ban turn. So the only thing you can do is wait for it. That is: wait in the game itself for the enemy ban. Once they do it, come back to the tool, and (again):

- Select the champion who has been banned in the game.
- Press “Ban” button.

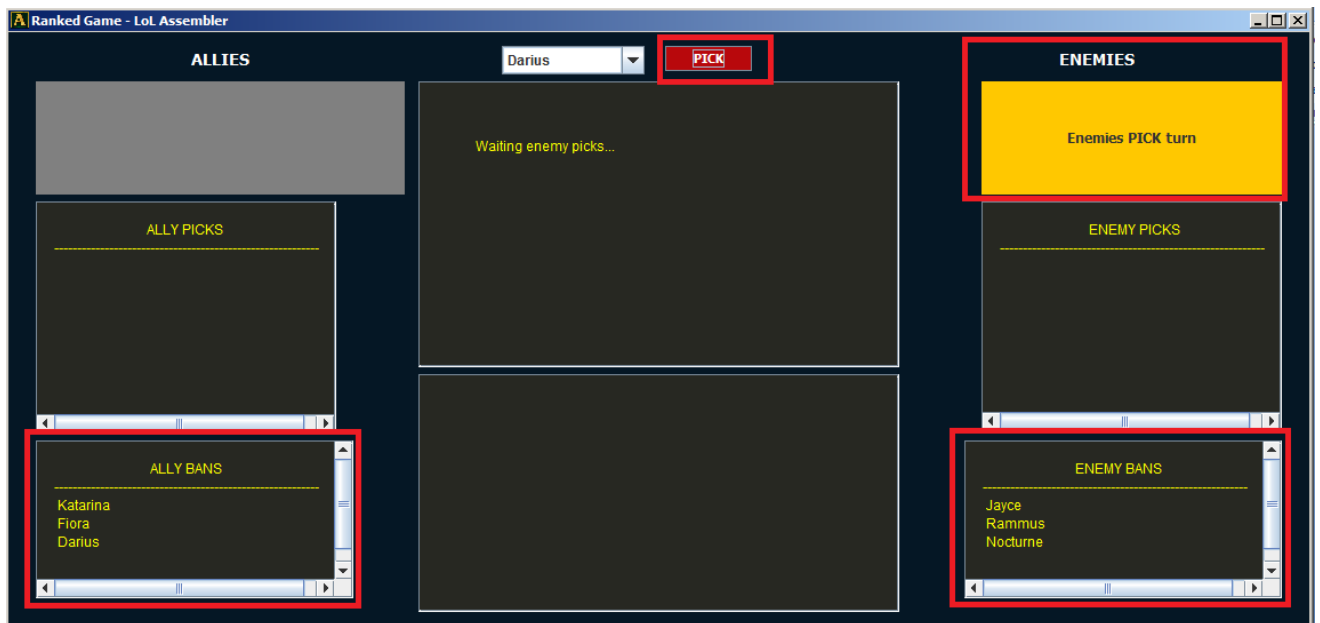
The world upside down! After that, you will notice:

- Enemy bans CLI has been updated.

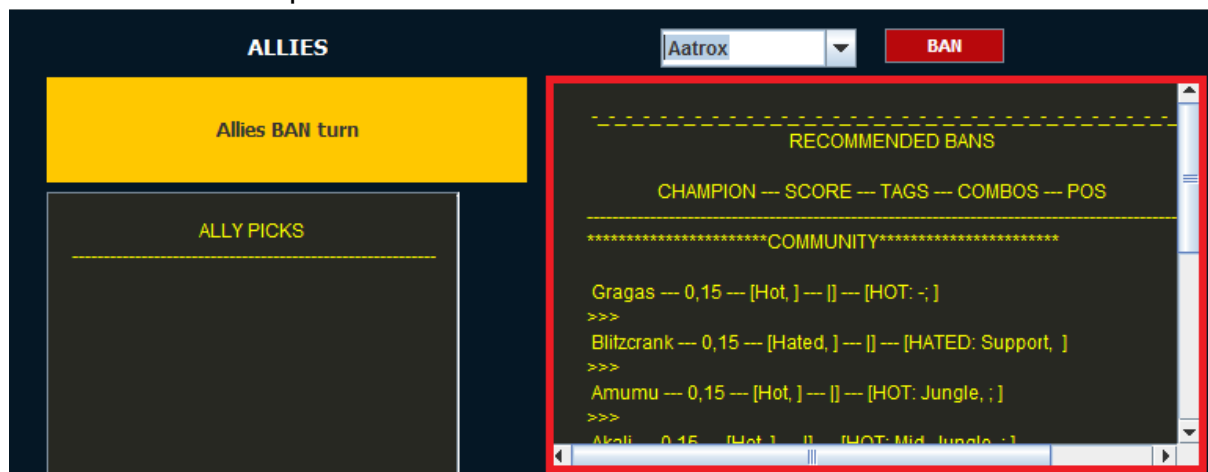


- Enemy message is now turned off.
- Ally message is glowing now, telling you “all right! It’s our turn again!”

That is, the normal flux of the game. You ban a champion, its enemy turn. The enemy ban a champion -then the tool calculates the recommendations-, it’s your turn again. And this will continue until there are 6 banned champions (pure LoL rules here), moment when the pick phase starts.



Before cover that, a clarification: if your team is the starter (the first ban turn is yours), the recommendations are based only on Hot and Hated champions, because, as you can notice, the enemy didn't ban anything, so there's no information to work with but the personal one.



However, if the enemy team is the starter, the first recommendations will consider all the points explained at the beginning. Related to the combos: all combos are shown during each ban phase, state update in each step (still available or cannot be complete).

Said that, time for the picks!

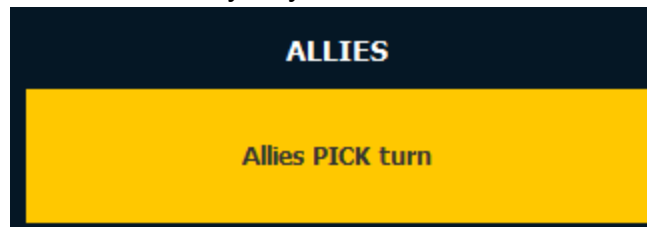
PICK PHASE

Now that there are 6 champions banned, it's time to pick your heroes for the fight. The first thing you will notice is subtle changes in the interface:

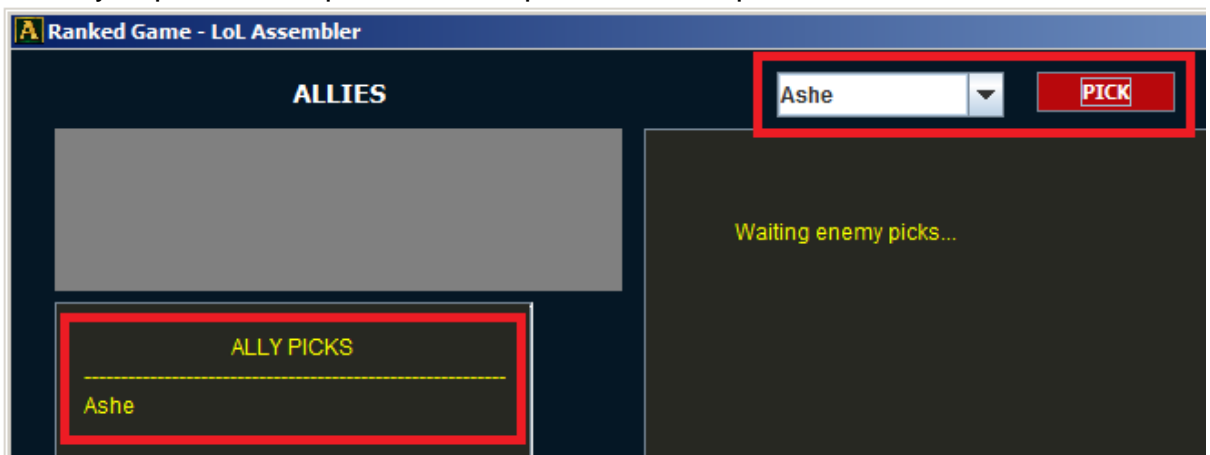
- The main button changed its title from “Ban” to “Pick”.



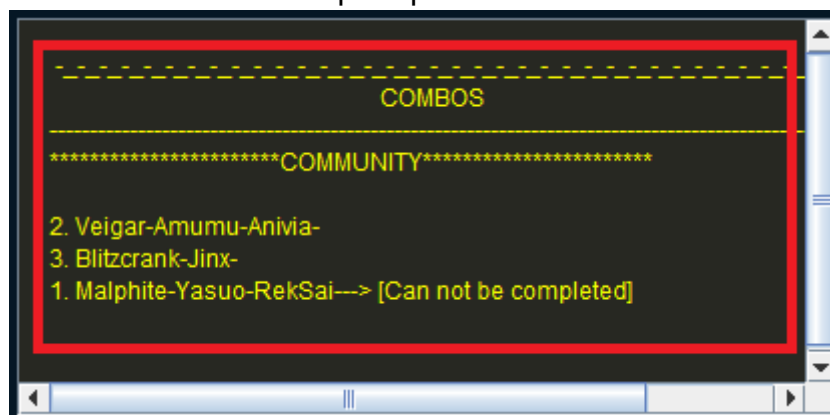
- The messages said now “Enemy/Ally PICK turn”, instead of “ban turn”.



- When you pick a champion, now the picks CLI will update their states.



- Now the combos CLI will start to prompt the available combos.



Other than that, there's nothing more to say. To pick a champion (either for you or for the enemy), just:

- Select the champion in the combo box.
- Press “Pick”.

The tool now will give you recommendations for pick champions based on:

- Hot and loved ones.
- Champions who are components of your personal combos.
- Champions who are strong against the enemy picks and enemy possible picks.
- Champions who aren't weak against the enemy picks and possible picks.
- Champions who works well with your actual team.

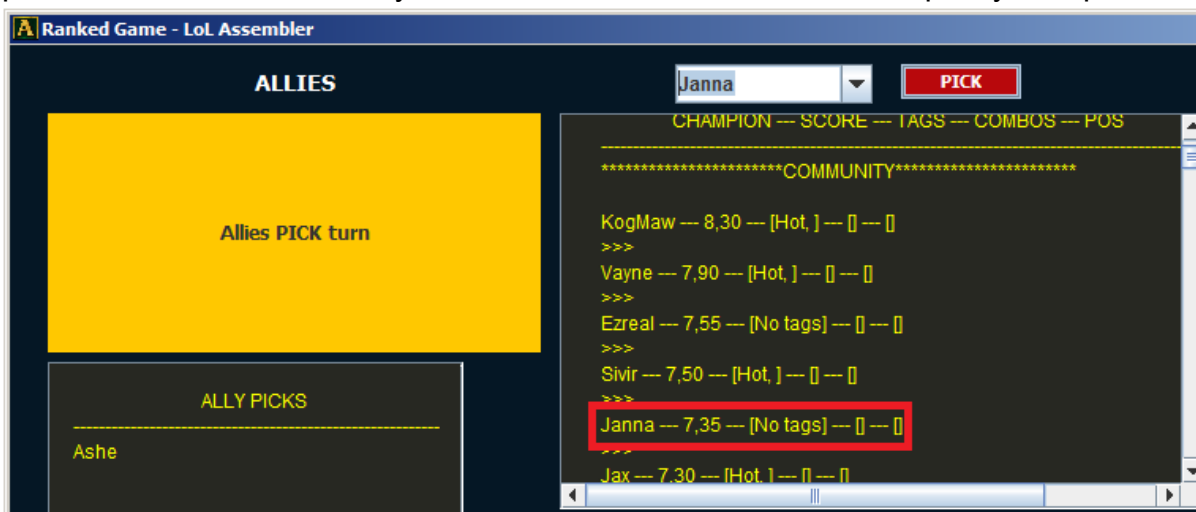
As you can see, the recommendations are more complex, because the tool considers not only the current selected champions (both yours and enemy ones), but those who can be. For example, imagine that the enemy picks Malphite:

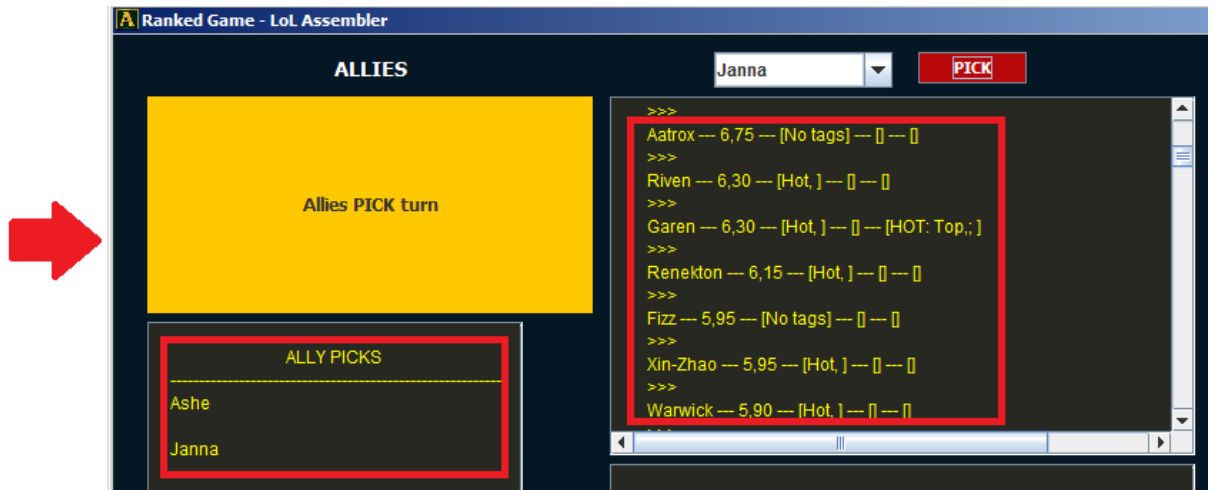
- Malphite is strong against Garen.
- Malphite works well with Yasuo (and Yasuo is strong against Ashe, but not against Vayne).
- Malphite is weak against Vayne and Ashe.

Using this information, the tool will tell you: "Vayne and Ashe are good choices, but considering Yasuo will be a possible pick, and Yasuo counters Ashe, it's better to pick Vayne. Get away from Garen". That is, the tool will seek for the best options always: powerful champions with good synergies and less possible weak points.

VERY IMPORTANT THING!!: As you now, in the pick phase every turn you and the enemy pick 2 champions but first and last turns. The tool considers this too, so:

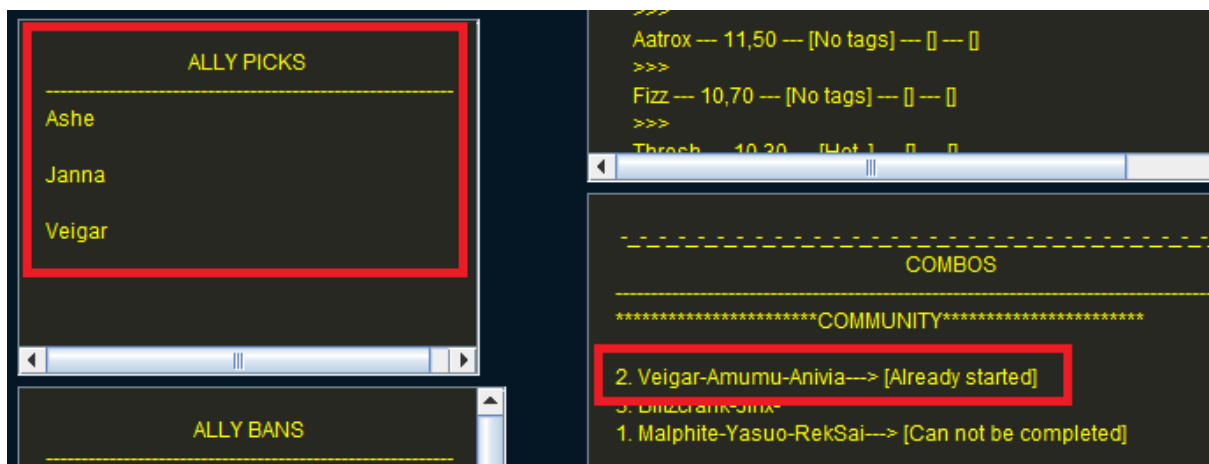
- In your turn -ally turn- you pick first one of the champions, press "Pick", obtain new recommendations using this new add, and then select the other one and press "Pick". That is, you obtain recommendations step by step.



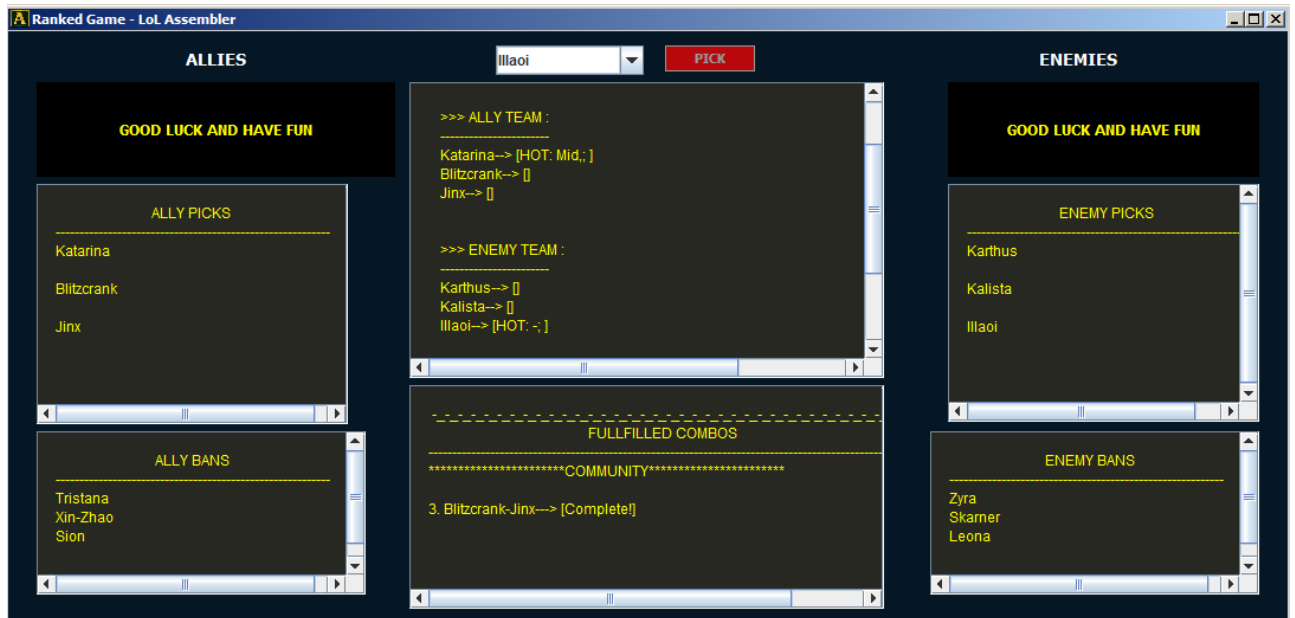


- In the enemy turn, you do the same, but won't receive recommendations until it's your turn again.

The flux of the mode is completely similar to the game's one, so there's little chance of misunderstood. I didn't say until now, but, during this picks, the combos CLI works normally, as we saw in the "Normal game" mode, prompting the available combos, the started ones, and those already completed.



Finally, after 10 or 6 champions has been picked (depends on the game), the main CLI will prompt a final screen with the summary of both teams –showing in each case the tags and relevant positions-, as well as a list of the completed combos.



In this point, the tool left it position, and comes the time of Q-W-E-R fast typing and planning ambushes. Good luck and have fun!

4.8. About LoL Assembler

“About” button will show general information about (duh) *LoL Assembler*, similar to which can be found either in the blog or section 1 of this manual.

About

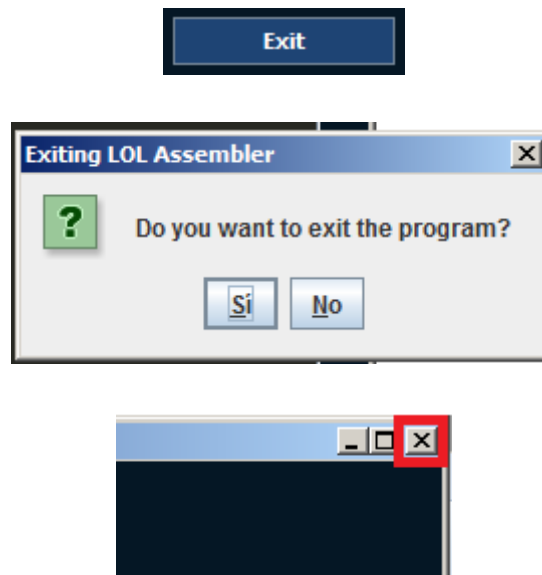


4.9. LoL Assembler license

“License” button will show the license (double-duh) under which *LoL Assembler* is released. Same license can be found either in the blog, in this manual, and in GNU official webpage (more information in section 1.2)

4.10. Exit tool

To close *LoL Assembler* and exit the tool, just press “Exit” button at the bottom of the main interface. To avoid miss clicks, a confirmation window will appear. To close directly the tool, just press the “X” of the header bar.



NOTE: While *LoL Assembler* has “exit” buttons in certain windows, other ones doesn’t. To close those, just press “X”, like any other normal program. The existence of “exit” buttons just obey to design patterns (closing the windows and/or the program with this buttons or clicking in the “X” will not affect in any way the data of the program or it future performance).

5. HOW IT WORKS

In this section I will explain the logic behind the game: where the data come from, how the tool interacts with your computer and how you can manually work with it (by manually, I mean without even executing the program), the algorithms which calculate the recommendations, so you can know exactly what are you obtaining during the games modes and why, and finally, an explanation about why work with both community and custom/personal data.

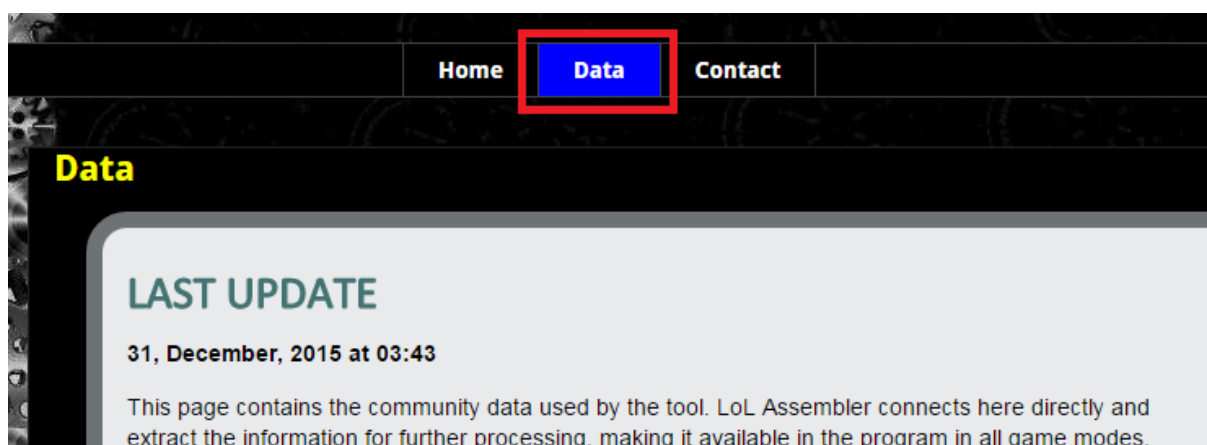
5.1. Data scraping


One of the cores of the tool is the data it uses to do all the operations:

- Calculate ban and pick recommendations.
- Sort champions by positions or roles.
- Print general counterpick information and so on.

Aside the custom/personal data -it came from you- the community data came from various web pages, blogs and forums about League Of Legends which talks about counterpick information: who is strong against who, the best team compositions, tips to control a certain character...

This data is gathered - **NO PERSONAL INFORMATION IS SCRAPED** - , cleaned and transformed in a form that the tool can obtain and work with it. The “final form” of the community data can be found in the official blog, in the “Data” section (<http://glimpse-23.blogspot.com.es/p/data.html>):





Varus:110	
Vayne:111	
Veigar:112	
VelKoz:113	
Vi:114	
Viktor:115	
Vladimir:116	
Volibear:117	
Warwick:118	
Wukong:119	
Xerath:120	
Xin-Zhao:121	
Yasuo:122	
Yorick:123	
Zac:124	
Zed:125	
Ziggs:126	
Zilean:127	
Zyra:128	
STRONG AGAINST	
Aatrox:Darius&&Yasuo&&Zed&&Master-Yi&&Katarina&&Akali&&Hecarim&&Ryze&&Garen&&Riven&&Jinx&&Renekton	
Ahri:Xerath&&Orianna&&Karthus&&Katarina&&Twisted-Fate&&Gragas&&Azir&&Lux&&VelKoz&&Syndra&&Teemo&&Brand	
Akali:Fizz&&Yasuo&&Teemo&&Ahri&&Karthus&&Nidalee&&Ezreal&&Twisted-Fate&&Ziggs&&Brand&&Yasuo&&VelKoz	
Alistar:Blitzcrank&&Leona&&Thresh&&Katarina&&Braum&&Fiddlesticks&&Yasuo&&Bard&&Sion&&Jinx&&Nami&&Caitlyn	
Amumu:Blitzcrank&&Graves&&Yasuo&&Jax&&Renekton&&Katarina&&Akali&&Blitzcrank&&Aatrox&&Lulu&&Zilean&&Wukong	
Anivia:Darius&&Yasuo&&Blitzcrank&&Yorick&&Akali&&Teemo&&Master-Yi&&Katarina&&Lux&&Yasuo&&Urgot&&Blitzcrank	

As you can see, the data is structured in a way hard to read for humans, but perfect for the tool to handle it. When you update your tool, you are connecting directly to this page, downloading this information in the “shape” you see, and letting the internal algorithms to process it.

This is important in many ways:

- You are accessing to a safe place (no virus or malware in a blog. I don’t have any intention of sneak in your files or private life)
- You are accessing to a single page, making the download process really fast.
- You are accessing to “standardized” information. Even when the counterpick information may change in the future (champion reworks or important metagame changes), the tool will find always the same data structure. So you don’t need to worry about new tool versions or incompatibilities.

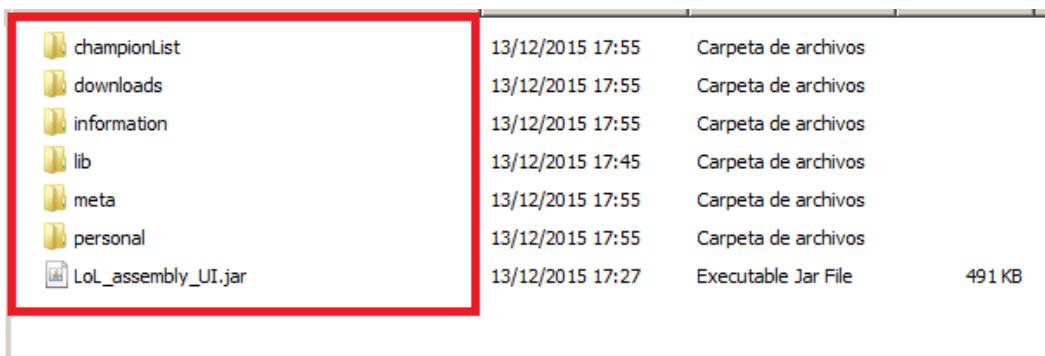
And, a very important point: considering that I have access to this insane pool of data for free, I couldn’t do nothing but give you this tool for free, too. From the community, for the community.

The data is updated once a week, and tested to ensure everything is ready for you. Of course, any relevant change or announcements will be properly promoted to the front page.

5.2. Folder and files

LoL Assembler second core is the directory and file hierarchy it uses to load, save and work with the data. As we saw in section 2.3, the program works with the following structure:

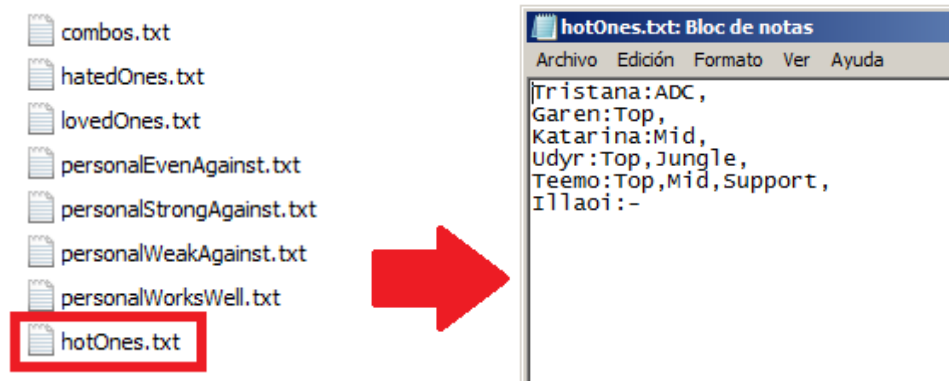
- “championList”: contains the list of champions.
- “downloads”: contains the gathered data from the official blog (this will be covered later).
- “information”: contains the processed data from the official blog, which leads to the main information of the tool, like “strong against” data and so on (covered later too)
- “meta”: contains information useful for the tool to maintain status and perform certain operations
- “personal”: contains files which can be modified by the user, leading to what it’s called “personal/custom information” (explained later)



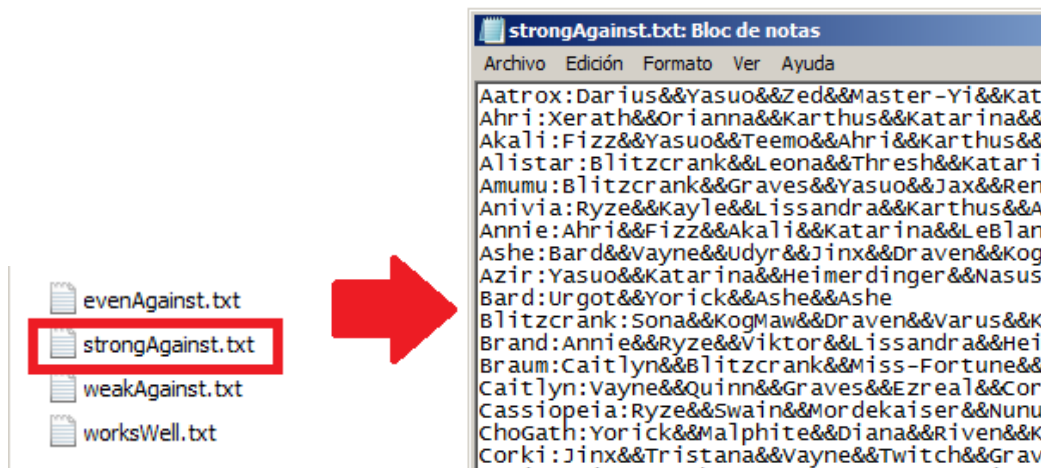
championList	13/12/2015 17:55	Carpeta de archivos	
downloads	13/12/2015 17:55	Carpeta de archivos	
information	13/12/2015 17:55	Carpeta de archivos	
lib	13/12/2015 17:45	Carpeta de archivos	
meta	13/12/2015 17:55	Carpeta de archivos	
personal	13/12/2015 17:55	Carpeta de archivos	
LoL_assembly_UI.jar	13/12/2015 17:27	Executable Jar File	491 KB

Except the jar file (a java execution program), everything is compound of simply text files and folders, with the following content (you can check it too without any problem):

- For example, the “HotOnes.txt” file inside “personal” directory:



- And now, the “StrongAgainst.txt” file inside “information” directory:



All of them are just text files with a certain file name, and a straightforward data structure. This is important because:

- There's no fragile installation or operations. No strange configuration files or third party libraries. As any “My Documents” or “Tomorrow Homework” construction, everything is well limited and doesn't interact in dangerous ways with your computer.
- Due the previous point -all is based in simply files- the program is fast and light. It loads and performs all its operations very quickly. And at the same time, it doesn't need a super-computer to work properly. The LoL itself takes thousand times more resources than *LoL Assembler*.
- Due to the first point too, you can manipulate -with certain order- all the files and documents. Copy and paste them wherever you want: the tool will continue working. Replace the files with other one's with the same name, and nothing bad will happen. Even more, write inside them with a text editor, and (if you don't mess the things up) the tool will recognize instantly.

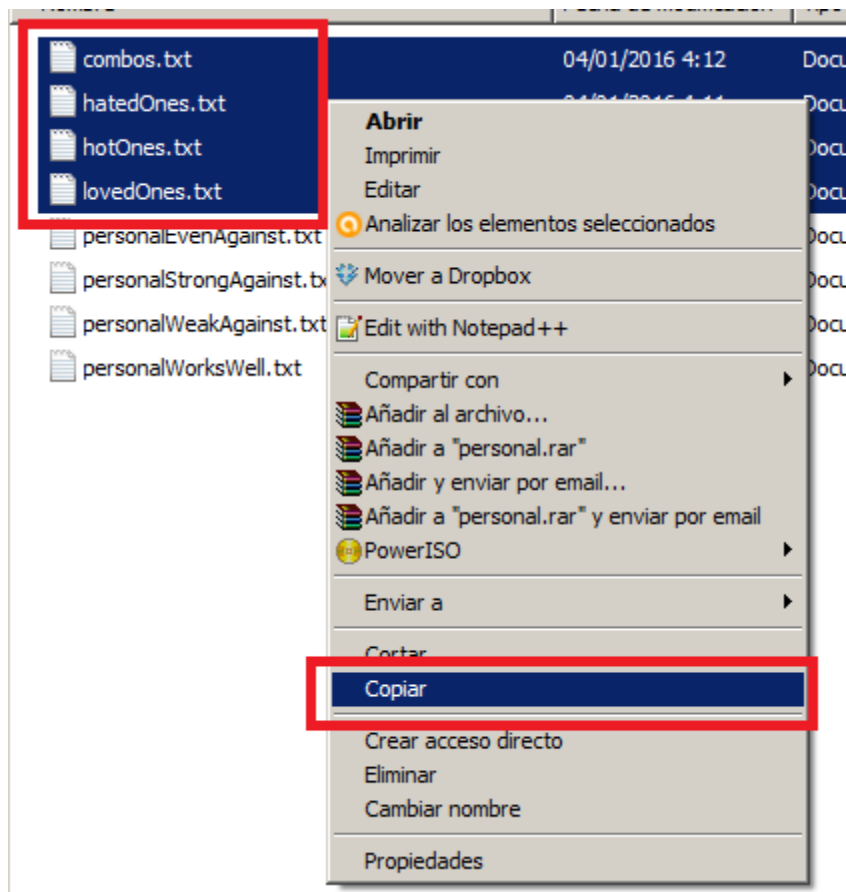
The fact the program is based in normal files you can work with, allows you to perform a bunch of cool operations (and there's probably more that I didn't think about). For example:

NOTE: Here I only described the content and the structure of the files and their data. For a full explanation of the meaning of both things, go to section 5.3.

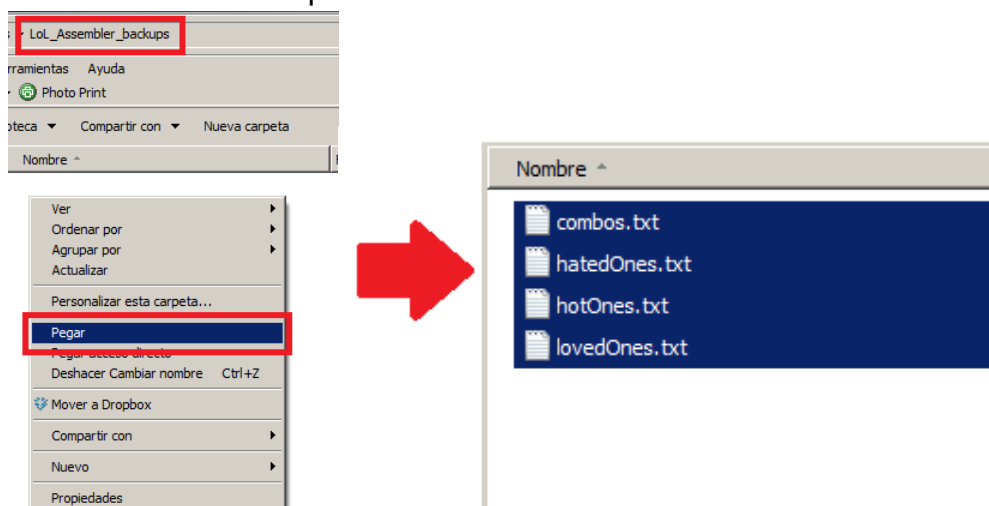
Backups

Afraid of lost your custom/personal files? Don't worry! Make backups of your data is simply as replicate the files or directories you want to protect against unintentional deletes. And to do that, just work with *LoL Assembler* like any other program:

- Copy the files you want to backup.



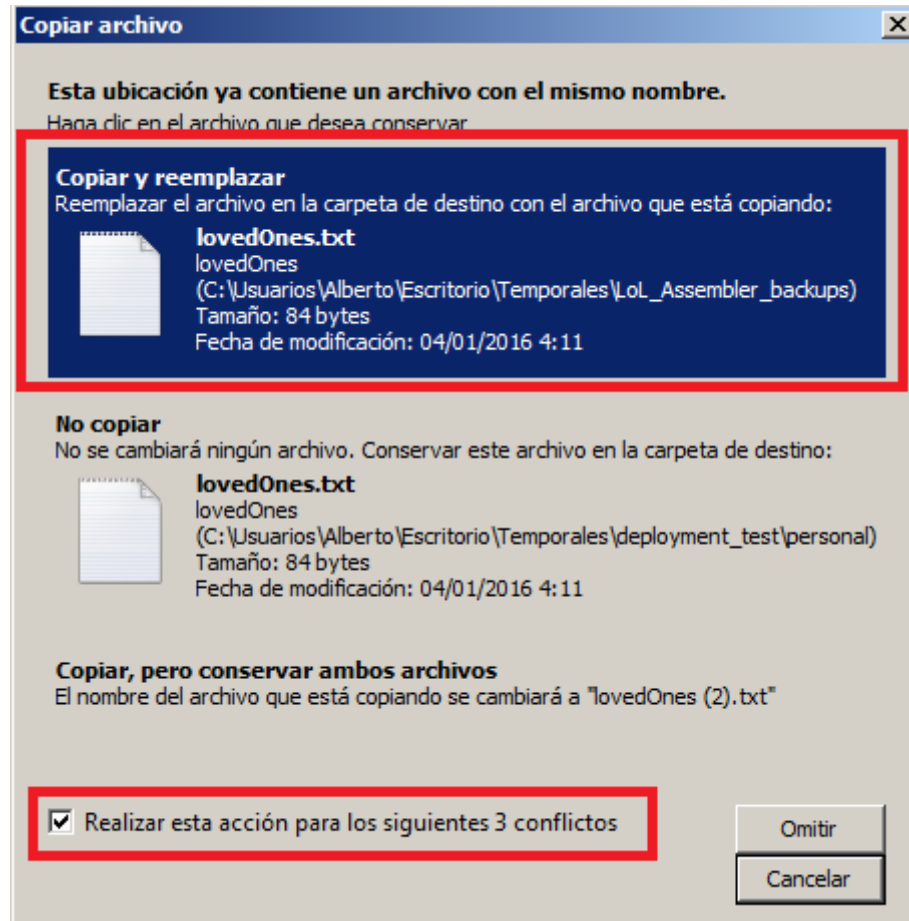
- Paste them in a safe place.



- Backup done!

In case you lost your data, to recover it you only need to copy them back to their original place (in case you modified their name -for example, adding it a date tag- return it to their original one). That is:

- Restore *LoL Assembler* (as we saw in section 2.5)
- Paste your backup files in the correct directory (select “copy and replace” when the system ask for it).



- You restored your data!

The program will detect the new files with no problem. An easy and safe way to protect your work (maybe hours of brain-storming...).

But there's more! Instead of make backups, you can use this feature to create a history of versions (version 1.0 with Ryze nerfed; version 1.2 with the new item added...), or even different custom/data bundles:

- Custom/personal data focused on being a monster in Top Lane.
- Custom/personal data focused on avoid assassin champions.
- Custom/personal data focused on complete skin-team combos (why not).
- Custom/personal data focused on feature game modes (Poro King, Dominion, One for All...)

LoL_Assembler_data_best_picks_ARAM	06/01/2016 3:31	Carpeta de archivos
LoL_Assembler_data_patch_5.10	06/01/2016 3:31	Carpeta de archivos
LoL_Assembler_data_patch_5.12	06/01/2016 3:31	Carpeta de archivos
LoL_Assembler_data_skin_combos	06/01/2016 3:31	Carpeta de archivos

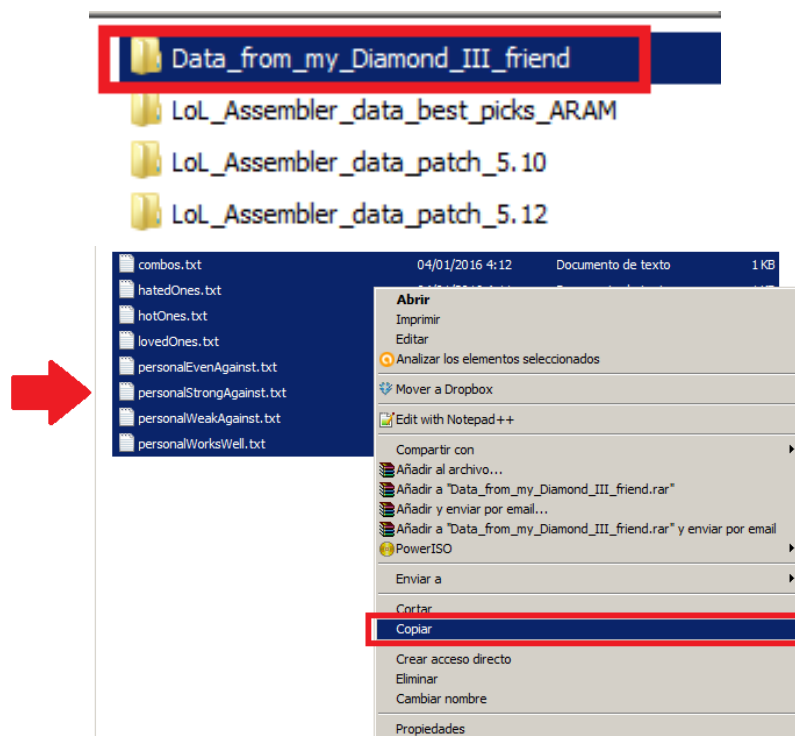
The possibilities are unlimited. Just let your mind fly, and remember: everything is based on normal files.

Data interchange

You are stuck in Silver III. And you have a friend in Diamond IV. You are using community data because you are lazy to create your own strategies... but your friend has created a whole custom database, and he already uses it in every ranked game. And it seems to work so nice he's now been promoting to Diamond III!

Simply solution: gift him with a new skin, and ask (please dude) for their custom strategy data, and start the road to gold!

As we saw in the previous point, you can copy and paste the files like any other normal file. Why don't use this to interchange data? If you created a very well done personal data, and want to share it, you can do it! Simply as copy and paste the files or directory in the correct position, and you will have almost instantly the knowledge of the ancient Gods, AKA "the-friend-who-will-carry-us-out-of-bronze".

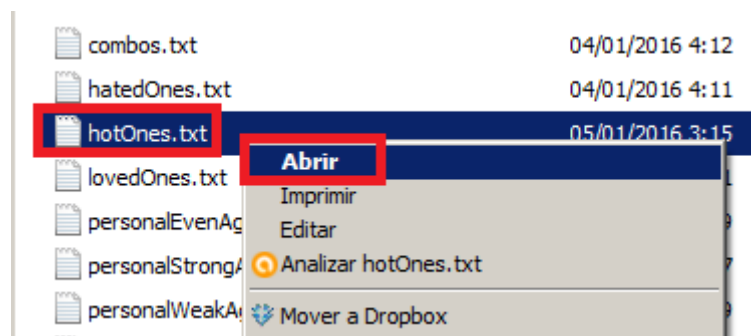


Again, this opens a lot of possibilities, for example, a blog where you share your custom/data files and strategies, and in which situations they fit. Up to you!

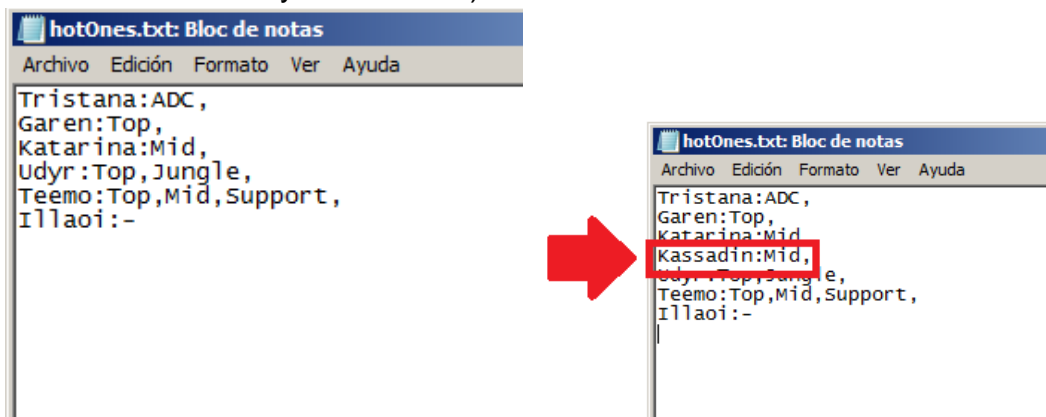
Manual fulfilling

Last but not least, there is the “manual fulfilling” ability. In theory, you’re supposed to interact with the files through the tool, but once again, as any other plain text file, you can open them and modify them manually. While you don’t “break” the style and structure of the data – VERY IMPORTANT. NOTICE THAT EVEN A SEMICOLON IN A WRONG PLACE CAN CAUSE A MALFUNCTION- , you can, for example, adding hot champions, or weak champions against... Kassadin (yeah, I think I never mentioned Kassadin before, right?):

- Open the file.

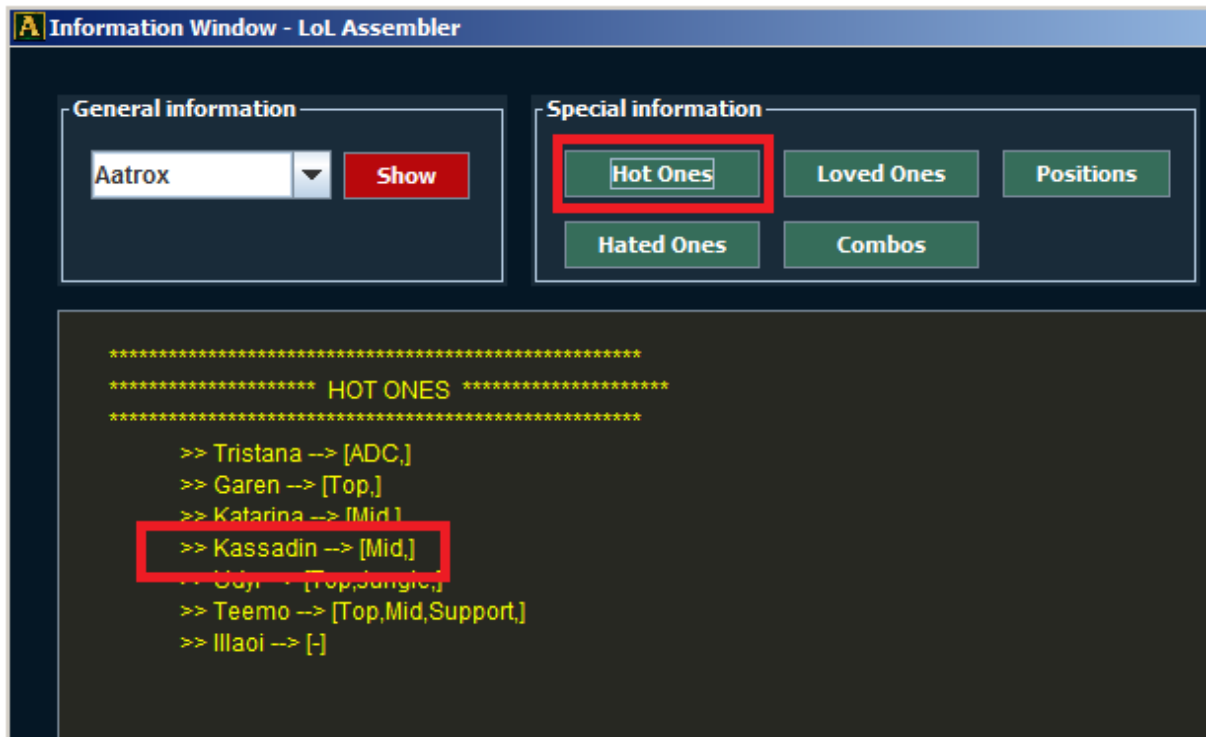


- Write (here, I’m adding Hot champions to the “Hot Ones” file. So I put Kassadin, a colon, and then “Mid,” because Kassadin is a beast there. You can use Katarina entry as a model.)



- Save the changes.

And voilà! The tool will now recognize the new added information.



You can use this feature to copy and paste another's data. Yeah: instead of copy and paste the file or directory, you can:

- Open the file with the intended data.
- Copy it.
- Open the file when you will paste the data.
- Paste (aha! Sure you didn't see that coming uh?).
- Save

The result will be the same, but wasting a couple more of minutes. But hey, this is a free Rift... I mean, world.

Besides that, I can't think about more cool uses... but, what the heck. This is just to remind you that you shouldn't be afraid of play with the files.

5.3. LoL Assembler Algorithms

LoL Assembler's final core is the algorithms that calculate the recommendations using the available data. This section and the following one explain the operations they perform, in order to give you a complete insight of what are they doing and why.

We saw the structure of the data files, but not their meaning. As you can see, in the "Strong Against", "Weak Against", and so on (idem for the personal ones), the champions are arranged in a certain order. That is, an entry like that (in Strong Against, for example) *Darius:Fiora&&Garen&&Aatrox...* has Fiora before Garen, and

Garen before Aatrox, and Aatrox before whoever for one reason. And this reason is the notion of order or priority: in strong against, even against and so on, the champions are sorted by relevance; An example: in “Strong Against” file, a line this way: *Darius:Fiora&&Riven&&Garen*, means that Darius is REALLY strong against Fiora, is strong (in a normal way) against Riven, and is “strong” (not enough evidence) against Garen.

Other way to say this is:

- Darius is 80%-90% strong against Fiora.
- Darius is 50% strong against Riven.
- Darius is 20%-35% strong against Garen.



This order is established by the community in the “information” files, and must be established manually in the “personal” files: “Personal Strong against”, “Weak Strong Against...”

From this, we can understand the underlying generic operations that are being performed both in a “Normal Game” and “Ranked game” mode. The main concept is this: when calculating recommendations, the champions are evaluated, receiving a score that depicts the suitability of that champion in the current situation. The higher the score is, the best the champion is for the game being developed.

The score is the addition of what I called “bonuses”: specific values for specific situations. The bonuses are in decimal format... because they look better (?). The bonuses are these:

- For being a Hot champion: +0.15 points.
- For being a Loved champion: +0.15 points.
- For being a Hated champion: +0.15 points (in certain situations).
- For being positive strong/weak/even/well against a champion: start in 0.20, then sort-defined.

- For being negative strong/weak/even/well against a champion: -0.08.

Before put an example of how a champion receives a score, I'm going to explain what is the "sort-defined" thing (latter you will understand the "positive" and "negative" thing too). As we saw, and I remained a couple of lines earlier, the order of the data matters (both in personal and community information). In "weak against" file, a line like this: *Zilean:Leblanc&&Diana&&Ziggs*, are telling us that Zilean is very (veeeeery) weak against Leblanc, is weak against Diana, and is "probably" weak against Ziggs. So if we want to counter Zilean, the first option should be LeBlanc. When calculating counters for LeBlanc, the program will do this:

- LeBlanc is the most powerful pick against Zilean? +0.20 to LeBlanc score.
- Diana is the second most powerful pick? Umm, I need to clear that she is a good pick too, but not as good as LeBlanc. Diana's score must be lower, so I'm going to give her less punctuation... +0.18! (-0.02).
- Ziggs? +0.16 to the score (same reason).



See? The score is decreasing by 0.02 with each champion. In this way, the recommendations calculated are taking in consideration the fact that, even when a group of champions can be effective in the same situations, a couple of them are MORE effective, and should be prioritized.

In the explanation I used the "weak" against, but this applies to all the data: strong against, even against and works well; both in community and personal data. To understand it better, let's put our hands in a simple but realistic example.

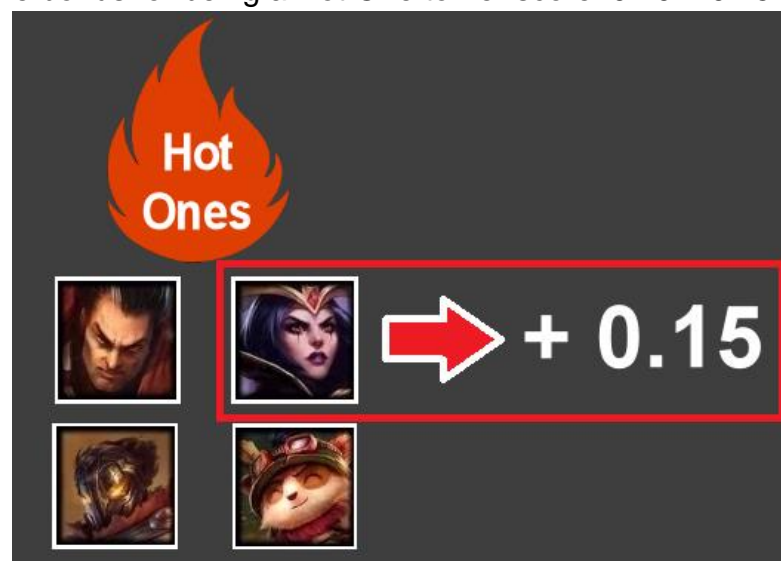
Example

Taking the “weak against” file and the line with *Zilean:Leblanc&&Diana&&Ziggs*, imagine the program is calculating now which champion is the best counter for Zilean in the current game, taking in consideration not only the 1vs1 data but the whole game: already picked (or banned) champions in both teams, possible combos, etc.

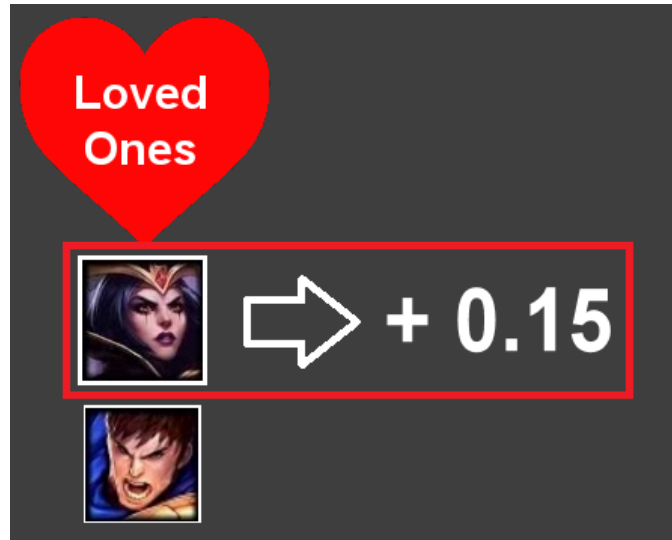
- LeBlanc is the first best counter to Zilean: LeBlanc receives 0.20 score (if LeBlanc would have been the second best counter, she would receive 0.18; if third, 0.16 and so on, until 0.10, the minimal value.)



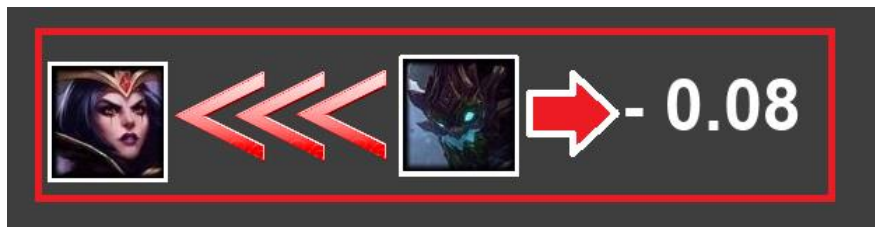
- LeBlanc is a Hot One. That means that she's actually an OP champion, so the tool adds the bonus for being a Hot One to her score: $0.20 + 0.15 = 0.35$.



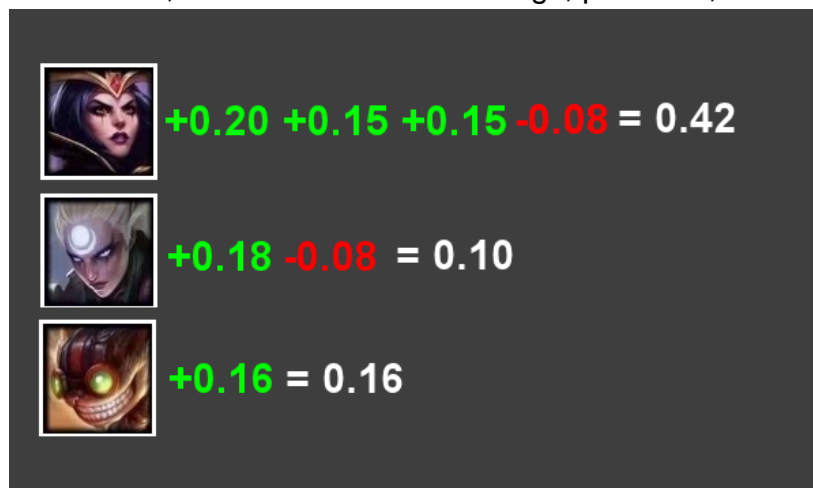
- LeBlanc is a Loved One (she's your favorite champion!), add another bonus: $0.35 + 0.15 = 0.50$.



- LeBlanc is weak against Maokai, and Maokai is already picked by the enemy team. This means we are giving them a chance to counter us. Their score must be decreased to reflect this. $0.50 - 0.08$ (the bonus for being "negative") = 0.42.



- This would be the score for LeBlanc, in the studied situation: 0.42%. The same operation would be applied to Diana, Ziggs, and the other possible picks, taking from the "strong against", "even against", etc, obtaining the final recommendations list, with all the extra data: tags, positions, combos, etc.



So this is basically how the scores are generated: adding (positive) or subtracting (negative) punctuation depends on the characteristics of the champion in the current situation. Of course, the considered data differs from the game modes and game phases (picks and bans), but that will be covered in much more depth in the next sections.

5.3.1. Normal game algorithms

The algorithm for a normal game is focused on:

- Pick hot champions.
- Pick loved champions.
- Pick champions with good synergies between them.
- Advice about possible combos.

In summary, the algorithm calculates recommendations following champions you master, with overpowered statistics or abilities and supported by other members of the team. At the same time, it warns you about the possible combos you can fulfill with specific picks.

Because that, the main sources of information will be:

- Hot ones file.
- Loved ones file.
- Works well file (community or personal).
- Combos.

Every time you press “Assemble” button in the “Normal game” interface, the algorithm triggers and starts the processing of the data, performing the following operations (to make it easier to understand, I will follow the logic flow with an example):

When you press “Assemble”, and there aren’t selected champions yet

When there aren’t selected champions, the program can’t calculate synergies (for obvious reasons), so they give you recommendations of:

- Hot champions.
- Loved champions.
- Both (hot and loved).

Example: If you have Darius in “Hot Ones” file, Cassiopea in “Loved Ones”, and Mordekaiser in both of them, the recommendations will be:

RECOMMENDED PICKS				
CHAMPION	SCORE	TAGS	COMBOS	POS
*****COMMUNITY*****				
Mordekaiser	0,30	[Hot, Loved,]	[]	[HOT: Top, Mid, ; LOVED: Top, ADC,]
>>>				
Cassiopeia	0,15	[Loved,]	[]	[LOVED: Mid,]
>>>				
Darius	0,15	[Hot,]	[]	[HOT: Top, ;]
>>>				

As you can see, alongside with the tags, positions and so on, the score is calculated following the principles we saw before (bonus for being hot is 0.15, bonus for being loved is 0.15).

Regarding the combos, the recommendations you receive are those combos that contain one or more of the recommendations (that is, combos with Darius, Mordekaiser and/or Cassiopea).

When you press “Assemble” and you already picked some champs

If you (your team) have selected champs, then the process is more complex. We will call from now on “added” to those champions already selected for your team (and remember, selected doesn’t mean locked in the real game, just with the intention to do it).

So, for each added champion:

- If the champion hasn’t “works well” information (no synergies data), is ignored (the tool can’t establish connections between this champion and the others).
- If the champion has “works well” information, that data is retrieved. We will call this list “wells”. So, for each “wells”:
 - If the champion is already an “added”, is ignored (if a champion is already part of the team, why recommend it again?)
 - If not, it’s processed:
 - If the champion is new in the recommendations, it goes through the hole process:
 - Is Loved? Add bonus
 - Is Hot? Add bonus
 - Add bonus according to its relevance in the “works well” data.
 - Finally, add the champion to the recommendations.
 - If the champion is already a recommendation, it receives the bonus it deserves according to its relevance in the “works well” data(0.20, 0.18, 0.16...), but nothing more (the hot and loved

bonus are given only one time, because a champion is hot or loved always; however, a champion relevance can vary depends on the situation it is compared).

After processing the added champions, the hot ones and loved ones that aren't already in the recommendation list, and aren't selected yet, are added too with their proper score (hot ones and loved ones are always considered).

Finally, with the recommendation list complete, the tool calculates the possible combos –and warns about the already complete ones-:

- Combos available from the recommended picks (combos that contain at least one of the members of the recommendation list).
- Combos available from the current selected picks (combos that contain at least one of the selected champions.).

Both list, recommendations and combos, are now complete, and will be printed in the “Normal game” UI, together with the list of positions, tags and so on, for each combo and champion. This data (flags, positions) is not processed at all, but retrieved from the existing files during the calculations, so there's no need to explain it.

Good to remember now that this process works both in community and personal data.

5.3.2. Ranked game algorithms

Ranked game calculations are far more complex than normal game ones, due to the increase amount of data available to process. From a general perspective, knowing the movements of the enemy (picks and bans), ranked game algorithms has two main objectives:

- Prevent enemy strategies, cutting down their possible picks and combos.
- Take advantage over them, “stealing” their possible picks, and countering their current selected champions.

The algorithms used in ranked games works in different ways, depends on the game phase and the available data. All of them are explained in order next.

NOTE: ranked algorithms and normal algorithms share the same “sorted value” or “relevance value” principle. So if you didn't read the previous section, maybe you will find hard to understand some aspects of the following points.

Ban recommendations

The algorithm for bans in a ranked game is focused on:

- Ban hated champions.
- Ban hot champions, if you will not take them (to prevent being picked by the enemy).
- Ban possible enemy picks, cutting down their strategies.

The algorithm works as follows:

- If the allies starts, and there's no current banned champions, the recommendations you obtain are hot and hated champions from your personal data (or both tags at the same time). Hot champions if you want to ban overpowered characters, and hated champions if you want to avoid fight them (they are "hated" for some reason).
- However, in the rest of the turns, or if allies don't start, the calculations change, because now the tool has new data: the bans from the enemy team.

We will call from now "bans" to the banned champions from the enemy team. So:

- For each of the "bans":
 - The tool obtains the "strong against" champions of that ban. Reason? If the enemy banned it, probably is because one of their future picks is countered by that ban, and they want to avoid that disadvantage. So, for each one of that possible enemy picks -that is, for each "strong against":
 - If it's already banned (from enemy or ally), it's ignored
 - If still available:
 - If is a new recommendation, goes through the full process:
 - Is hot? Add bonus
 - Is hated? Add bonus
 - Add score due to its relevance (the position it occupies in the data)
 - And finally, add to the recommendation list
 - If it's a current recommendation, add the score due to its relevance.

Finally, add to the recommendation list the hot and hated champions that remain available (not banned), and aren't recommendations yet. Hot and hated champions (or both), are always considered, for obvious reasons.

In this way, we aren't only covering our team from undesirable enemy picks, but not letting them picking their champions. Double-effect, unique sensation!

Pick recommendations

The algorithm for picks in a ranked game is focused on:

- Pick hot and loved champions.
- Pick champions with good synergies between them.
- Pick champions who are strong against the enemy, and aren't weak against them.

The pick recommendations are calculated using the most complex algorithm of the entire tool, because this time, the used data in the operations includes everything: bans (enemy ones and ally ones), picks (both again) and personal/custom data. The examples in this section will be largest to help you understand the algorithms.

The algorithm can be divided in phases:

- First phase: Using the enemy bans, calculate the possible enemy picks.
- Second phase: Calculate the champions who are strong against their possible picks, cutting down their strategies (add these to the recommendations list)
- Third phase: Calculate the best champions for the current team, that is, champions strong against their current picks (or not weak against), and with good synergies between them (works well).

The first phase is similar to the "ban" algorithm:

- For each of the enemy bans:
 - Obtain the "strong against" list of that champ. Now for each of that list:
 - If is not a recommendation, and it's not banned, goes through the full process:
 - Hot? Add bonus.
 - Hated? Add bonus.
 - Add relevance points.
 - Add to the recommendation list.
 - If it's a recommendation, add the relevance score.

So after the first phase, the tool has a list with the possible enemy picks. Using this list, which we going to call "possible ones", the tool will calculate the champions who counter that picks.

The second phase works like this:

- For each "possible ones":
 - Obtain "weak against" champions data. That is, the champions who counter their possible pick. Now, for each component of that list:
 - If it's not a recommendation, and stills available (banned nor picked), goes through the full process:
 - Hot? Add bonus.

- Loved? Add bonus. Now we are using “loved” data again, because we want the loved champions in our team.
- Add relevance score.
- Add to the recommendation list.
- If it’s already a recommendation, add the relevance score.

After the second phase, we have the half of the true recommendations: the champions who are strong against their possible picks.

Now, it’s time to calculate the champions for the current situation, that is, calculate recommendations not for “possible” picks, but for the completed picks. So, the third and last phase works as follows:

- If the enemy hasn’t pick already (because allies starts), add to recommendations the hot and loved champions (again, data that is always considered)
- However, if the enemy has picks, for each of that picks:
 - Obtain “weak against” data of that champion (we want to counter their picks). For each champion of that list:
 - If it’s not a recommendation, and stills available (banned nor picked), goes through the full process, now more complex than the others:
 - Hot? Add bonus.
 - Loved? Add bonus.
 - Weak against some of the enemy champions? Lose score (if a champion is strong against certain enemies, but at the same time, is weak against others, the punctuation must reflect this).
 - Works well with some of the current ally picks? Add bonus.
 - Add relevance score.
 - Finally, add it to the recommendation list.
 - If it’s a recommendation, add the relevance score.

So at the end of the third phase, the recommendation list will have the intended data: champions strong against their current picks and their possible picks, who work well between them, hot and loved, and not weak against the enemy.

Combo recommendations

Finally, the combo recommendations algorithm for ranked games works in the same way the normal game one, telling you what combos you can achieve considering:

- Pick recommendations
- Current picked champions (from both teams)
- Banned champions (from both teams)

The algorithm just iterates over this data, and checks if the component belongs to a combo or not. The results are sorted as follows:

- Completed combos (all the components are picked)
- Already started combos (at least one of the components is picked)
- Possible combos (all the components are recommendations)
- Combos that cannot be completed (that is, combos which one or more components already banned, or picked by the enemy team)

5.4. Custom data and community data

This point will be a bit different, since I'm going to explain how "have two sources of data" works, instead of covered algorithms or programming logics.

Community data gives you a common reference point between all the players. As you will read in section 6, if you and your team members are using the tool at the same time, community data ensures that the recommendations you will receive (based on that info), are the same that theirs. On the other hand, custom data gives you the opportunity of create your own database of knowledge, your own secrets and stunning movements, picks and ban options.

Community data is aimed to give you the basic knowledge, created by thousands of players agree with it. Basic knowledge that you don't need to create, so it's available from the beginning. You can start using *LoL Assembler* without adding hot ones, loved ones or other personal data.

Custom/personal data, however, is aimed to allow you be "unpredictable". You can amaze with your personal data, obtain specific recommendations based on your experience, and avoid been predicted by others... or just increase the quality of the community data, feeding the tool with more details about the current game status (overpowered champions, your favorite ones, and so on).

Have two sources of data give you total freedom on how to use and "exploit" the tool: using full-tested data, applying your own thoughts, or mixing both for "personal flavor" strategies.

6. TIPS AND TRICKS

In this section I will highlight just a couple of ideas about how to maximize the utility of the tool. Some of them has been covered through the document (if you reached this point, you deserve a Poro cookie), and others are new. In any case, don't limit yourself to these ones: sure you can find many more. These are nothing but a start!

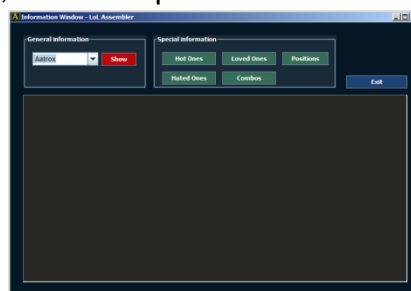
6.1. Interchanging custom/personal files

We saw this in section 5, but it's a good idea to remember it again. You have a good custom /personal database? Share it with your team members or the community. In the same way there are build reviews spread over internet, about item buying list and abilities upgrade order, you can share -if you want- your personal or custom files: combos, hot and loved ones, strong against... Let the world see your playbook and the movements you use to wreck everyone in SoloQ.

6.2. Multiple window

I call this tip "Intergalactic Spaceship Interface" (yes, I'm a NASA-Neil DeGrasse Tyson-Pathfinder fan). Really: you want to feel like controlling a spaceship, but instead of landing the shuttle, assembling an awesome team in League of Legends to achieve fun levels out of this world (no pun intended)? Then, open all the windows you need, obtaining a deep look on the situation. For example:

- Open "Information mode", so you can check all available information in an individual way (hot ones, this champion works well with...).



- Open "Ranked/normal game" mode, to obtain recommendations based on the current game.

Open the windows you need, in the order you need, in the way you need. See? Like controlling a Mecha-Malphite!

NOTE: I should have talked about this earlier, but *LoL Assembler* can hold many opened windows at a time without problems, and the perfect example is the previous one, with a “game mode” interface running while “information mode” window is still active.

NOTE 2: Use “Astro-Nautilus” and “UFO Corki” skins to increase the futuristic atmosphere. For granted.

6.3. Cooperative thinking

When you are playing in SoloQ, you can easily manage everything like we saw in the previous point. But, what if you are playing in DuoQ, or with a whole buddy team? In those situations, you can really act as a “high command” group. Everyone in the team can focus on one task:

- One of the members following the actual development of the game (bans and picks).
- One of the members calling out the recommendations.
- One of the members with the “Information mode”, checking hot ones, combos, and so on...

In this way (maybe combined with the multiple window hint), your team is able to “brainstorming” in real time, unifying all your thoughts and preparing a really powerful strategy together. Even more: everyone can use his own custom/personal data, and put it in common. Why not? Everyone has the same community data, so you have a common reference point (a data checkpoint, if you want to call it that), but then, everyone can propose a certain pick, a certain combo... As I said in the beginning of this document: 5 brains thinking can solve problems faster and better than only one. Let's the Team-Play do the work!!

6.4. Human vs Machine

And for the final showdown...

LoL Assembler is a decision support system. A tool with an objective: help you to make choices. However, the influence the tool inflicts on you is under your control. You can follow blindfolded the recommendations it calculates, or just use them as a guide for your own ideas. Or maybe a half-way between both options.

Maybe it's something obvious, but don't forget it: **you're the one behind the keyboard and mouse, so you should do the real picks and bans.** Maybe the recommendations are jackpot and give you a precious win in a promotion game.

Maybe the recommendations are crazy and you prefer a more “classical” approach, or are too “boring” and you need meta-change picks. It’s up to you. Don’t think in *LoL Assembler* as dictatorial software, but as coach whit good ideas. You’ll decide later to apply them or not.

If you chose to trust entirely in the algorithms, or only want a slight push to drive your own strategies, *LoL Assembler* will fit in your games. Just run it and enjoy.