Installation of Ligplot+ on Ubuntu

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Ligplot$^+$ is a bioinformatics software to visually analyze the protein-ligand interactions in 2D [1]. It requires a Java interface to run and can be executed on Ubuntu, Windows, and macOS. In this tutorial, we will install Ligplot$^+$ on Ubuntu.

Preparing

At first, update and upgrade your system using the following commands:

```
$ sudo apt-get update
$ sudo apt-get upgrade
```

Also, Ligplot$^+$ requires the latest version of the Java SE Runtime Environment (JRE) which can be found here.

Downloading Ligplot$^+$

The latest version of Ligplot [2] can be downloaded from here. You have to register yourself first which will be valid for a year. It can be easily downloaded again.

Installing

Open a terminal and change to the directory where you have downloaded the software. Let's say here it is '*Downloads*'.

```
$ cd Downloads
```

```
$ unzip ligplus.zip
```

Executing Ligplot+

Open a terminal and type the following command:

$ java -cp /path/ -jar ligplus.jar

here /path/ is the path to the directory where the Ligplus.jar file is located.

It will open the ligplot+.

You can also create an alias.

Open the terminal and type the following commands:

$ sudo gedit ~/.bashrc

It will open the bashrc file, go to the end of the file and add the following command:

export ligplus='java -cp /usr/bin/ligplus/ -jar /usr/bin/ligplus/ligplus.jar'

Save the file, go back to the terminal and type:

$ source ~/.bashrc

For c-shell, use the following command:

alias ligplus='java -cp /usr/bin/ligplus/ -jar /usr/bin/ligplus/ligplus.jar'

To start, Ligplot+, type $ ligplus in a terminal.

References

1. Laskowski, R. A., & Swindells, M. B. (2011). LigPlot+: multiple ligand-protein interaction diagrams for drug discovery.
2. Wallace, A. C., Laskowski, R. A., & Thornton, J. M. (1995). LIGPLOT: a program to generate schematic diagrams of protein-ligand interactions. *Protein engineering, design and selection*, *8*(2), 127-134.

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