

# GNU MP installation instructions

The GNU MP (GMP for short) C library provides arbitrary precision arithmetic on integers, rational numbers and floating-point numbers. Moreover, other useful functions such as pseudo-random generators are included. The official GMP website is <http://gmplib.org/>.

For installation of GMP on a **Ubuntu** system, please follow the instructions below (you have to adjust the commands if you are using some other Linux derivative):

1. Execute *sudo apt-get install libgmp3-dev m4* , it is not important, that this will not install the newest version of GMP.

**OR**

1. Download GMP 4.3.2 at <http://gmplib.org/#DOWNLOAD>.
2. Decompress the archive into a directory of your choice and change to that directory.
3. *./configure*
4. *make*
5. *make check*
6. *make install*
7. If not already present, install m4 with *sudo apt-get install m4*.

For installation of GMP on a **Windows** system you need first of all a Unix-like interpreter like Cygwin <http://www.cygwin.com/>.

1. Download and execute the setup file.
2. Choose packages gcc, gmp and libgmp-devel during the setup.

To check if the installation of GMP was successful, please try to compile the template *exp.c* provided via blackboard with *gcc exp.c -O3 -Wall -lgmp -o exp*. Now execute the result with *./exp* and you should see various lines on your console, stating that the algorithms have TO BE IMPLEMENTED.