# Building Boost.Python

The Scripting Extension uses boost.python. The boost.python library must be compiled. This description is from <http://www.mantidproject.org/Building_Boost_Python>

## Prerequisites

Download and install Python. See [www.python.org](http://www.python.org) for installer and instructions. Be sure to select the installer options to include the debugging version and debugging symbols.

Create environment variables for the boost libraries (BOOSTDIR), Python version number (PYTHONVERSION), and Python directory (PYTHONDIR). Take special note of the double \\ in the PYTHONDIR variable – this is needed by the automated build bat file.

Graphical user interface, text, application

Description automatically generated

## Manual Procedure

1. Using the command prompt, set the current directory to boost  
   C:\> cd f:\boost\_1\_71\_0
2. Run the bootstrap.bat file to create the boost build system
3. Use the following command for Release x64  
   F:\boost\_1\_71\_0>.\b2 --with-python python-debugging=off threading=multi variant=release link=shared address-model=64 stage
4. Build the user-config-debugging-python.jam file using notepad. See below for the contents
5. Use the following command for Debug x64  
   F:\boost\_1\_71\_0>.\b2 --user-config=user-config-debugging-python.jam --with-python python-debugging=on threading=multi variant=debug link=shared address-model=64 stage

user-config-debugging-python.jam is a file that you create in the boost folder. The contents of the file are

using python

: 3.7 # Version

: F:\\Python\\Python37\\python\_d.exe # Python Path

: F:\\Python\\Python37\\include # include path

: F:\\Python\\Python37\\libs #lib path

: <python-debugging>on

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A copy of this file is in the git repository under Supporting Documents

Build issues

If there are build issues with MSVC, such as not being able to find header files, delete the F:\boost\_1\_71\_0\bin.v2\msvc folder. This folder holds bat files with the build environment. They may be messed up. Run .\b2 and it should re-generate the files.