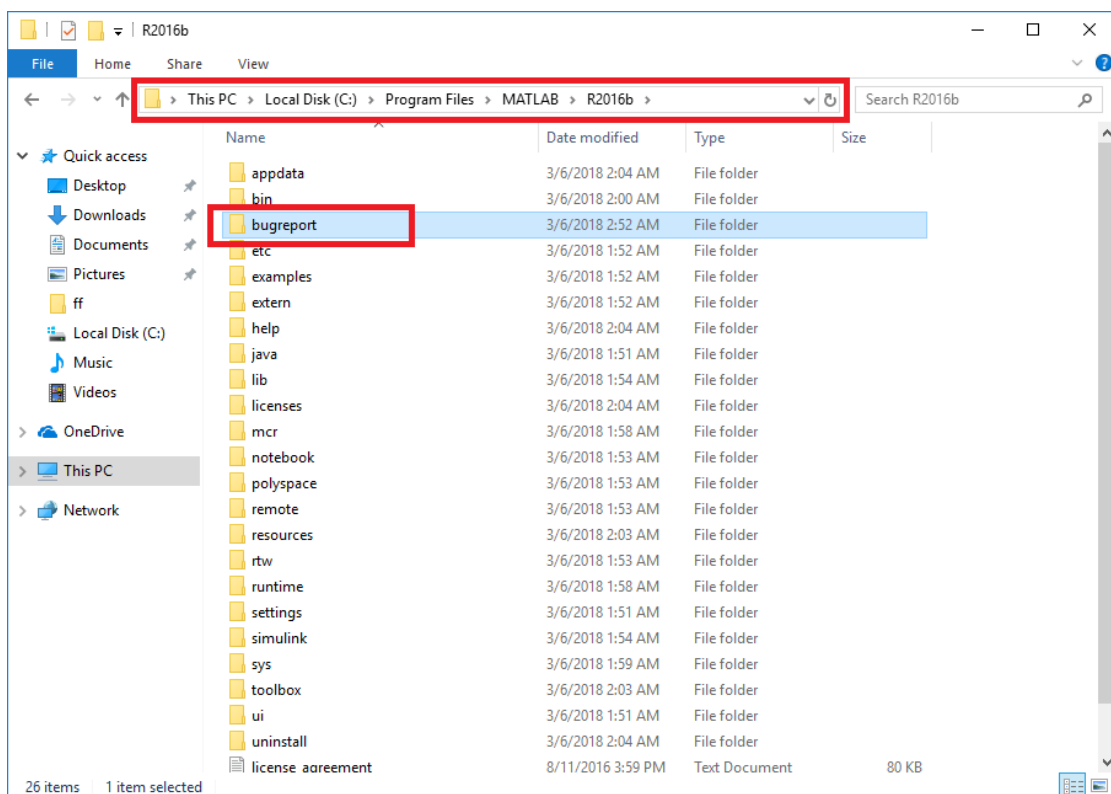


# Guide for Installing C/C++ MEX Compiler for MATLAB

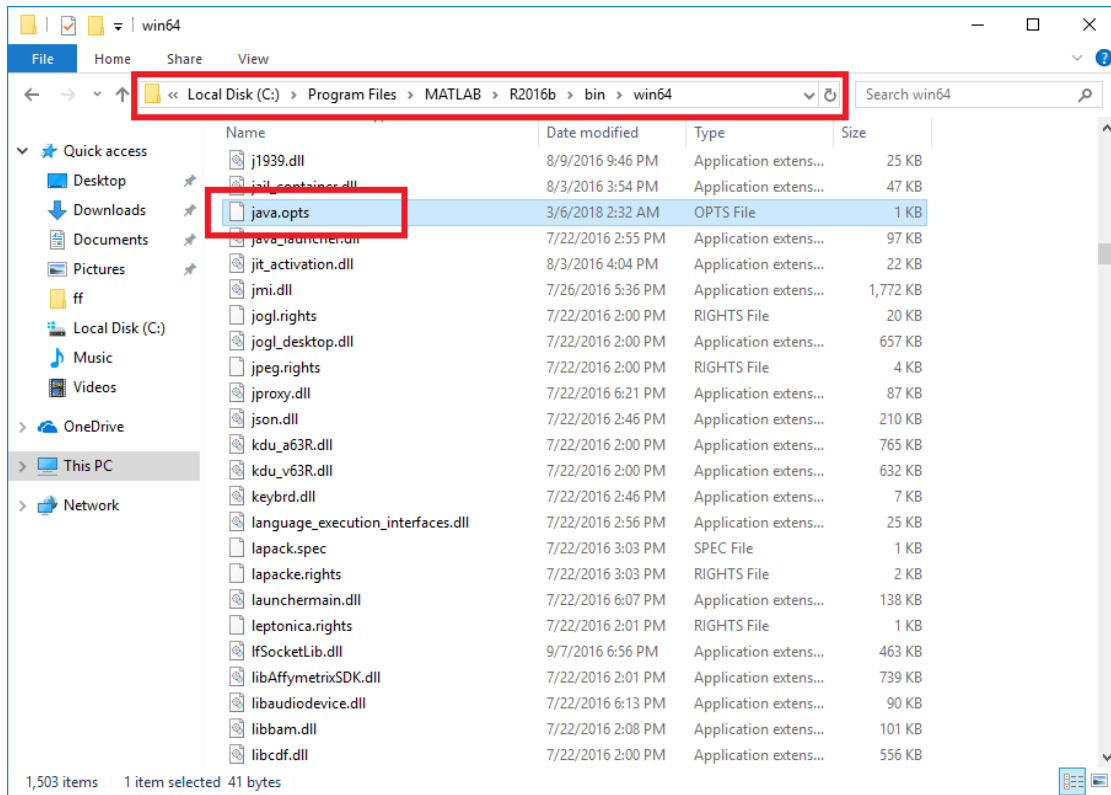
Bashar Tahir (bashar.tahir@nt.tuwien.ac.at)

Please follow these steps in order to enable C/C++ MEX files compilation for MATLAB. The guide uses MATLAB 2016b for demonstration. Nonetheless, it should be also applicable to other versions as well.

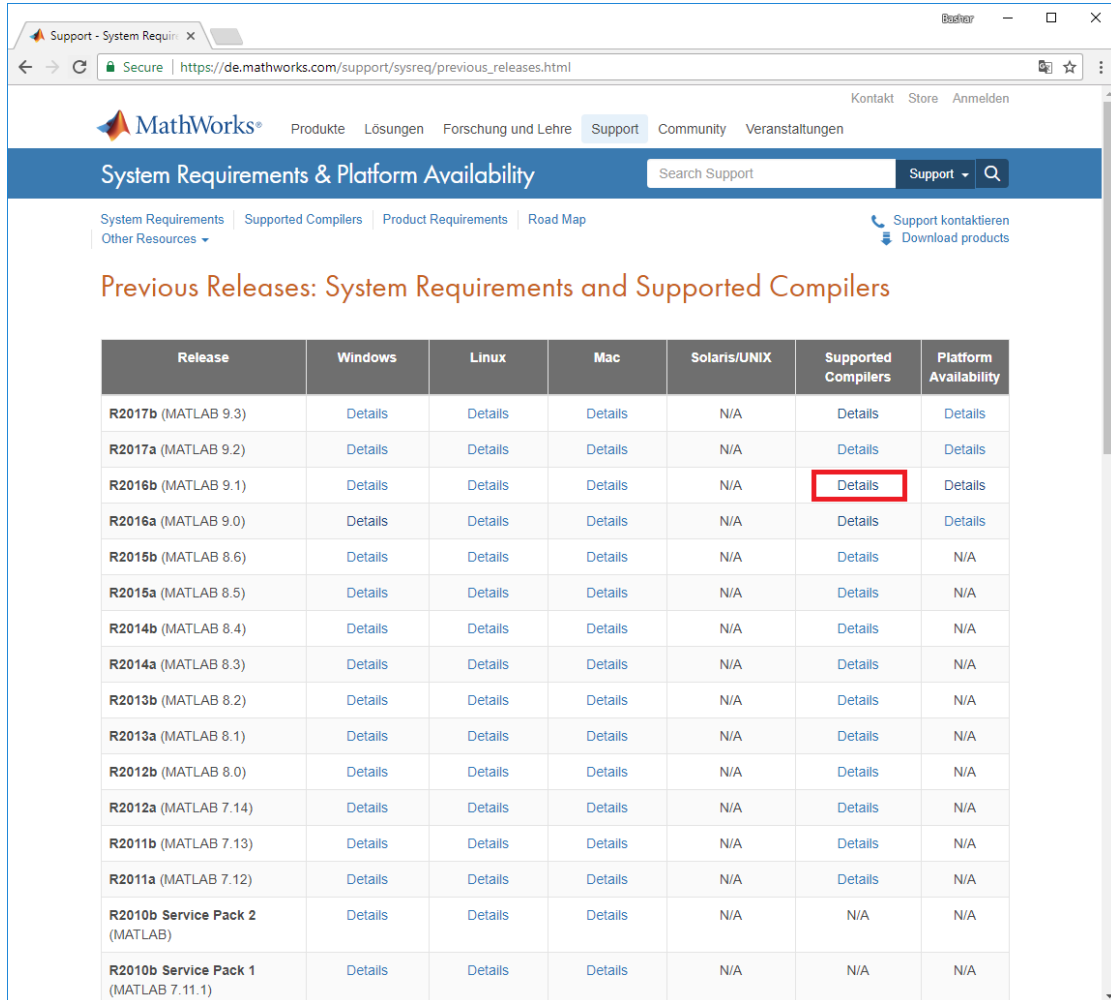
1. Before starting, make sure MATLAB is closed. For versions 2017a and earlier, we need to apply a hotfix first. Please download the following file: [Hotfix](#).
2. Inside the zip file you will find the folder 'bugreport' and the file 'java.opts'. Locate your MATLAB installation folder, usually C:\Program Files\MATLAB\R2016b\ and then copy the folder **bugreport** to the main folder like this



and then copy the file `java.opts` to the subfolder `\bin\win64` like this




3. Having the hotfix inplace, we can now install the compiler. Open the following link of [supported compilers](#). Select the compiler that matches your MATLAB version i.e.



The screenshot shows the MathWorks website page titled "System Requirements & Platform Availability". The main heading is "Previous Releases: System Requirements and Supported Compilers". Below this is a table with the following columns: Release, Windows, Linux, Mac, Solaris/UNIX, Supported Compilers, and Platform Availability. The table lists various MATLAB releases from R2010b to R2017b. The "Supported Compilers" column for R2016b (MATLAB 9.1) is highlighted with a red box.

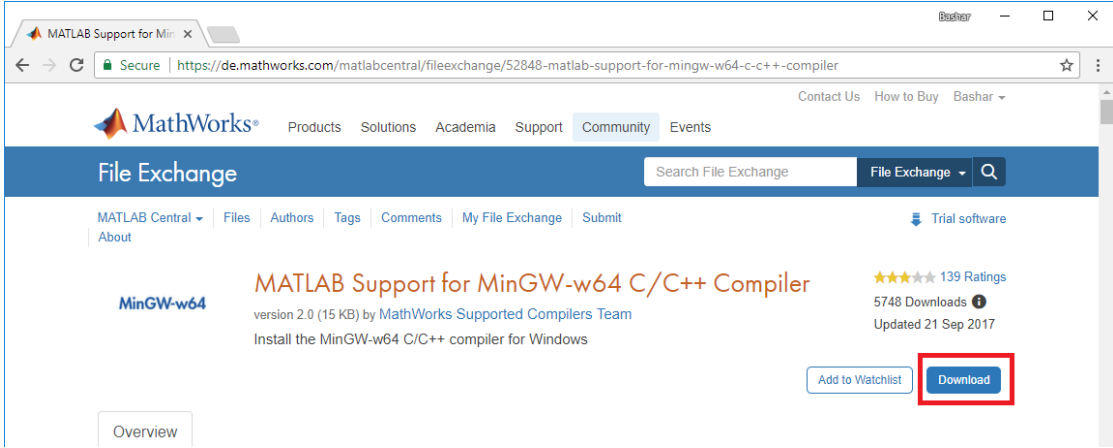
Release	Windows	Linux	Mac	Solaris/UNIX	Supported Compilers	Platform Availability
R2017b (MATLAB 9.3)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	<a href="#">Details</a>
R2017a (MATLAB 9.2)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	<a href="#">Details</a>
R2016b (MATLAB 9.1)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	<a href="#">Details</a>
R2016a (MATLAB 9.0)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	<a href="#">Details</a>
R2015b (MATLAB 8.6)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2015a (MATLAB 8.5)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2014b (MATLAB 8.4)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2014a (MATLAB 8.3)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2013b (MATLAB 8.2)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2013a (MATLAB 8.1)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2012b (MATLAB 8.0)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2012a (MATLAB 7.14)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2011b (MATLAB 7.13)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2011a (MATLAB 7.12)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	<a href="#">Details</a>	N/A
R2010b Service Pack 2 (MATLAB)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	N/A	N/A
R2010b Service Pack 1 (MATLAB 7.11.1)	<a href="#">Details</a>	<a href="#">Details</a>	<a href="#">Details</a>	N/A	N/A	N/A

- A pdf file will be opened. Scroll down until you find the list of compilers, click on the link of MinGW compiler



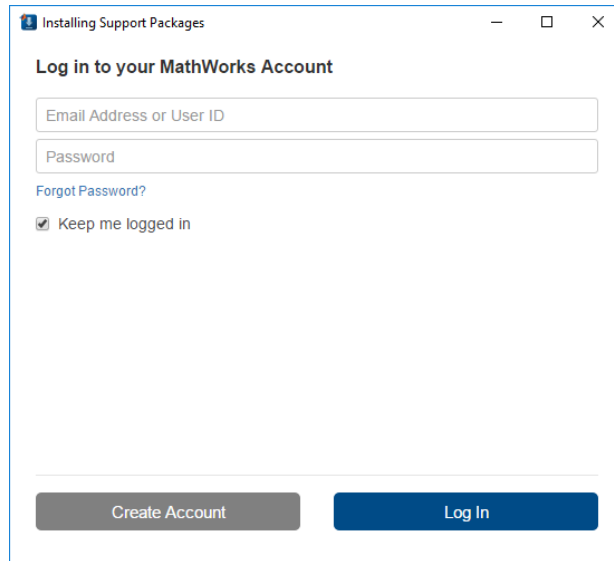
MATLAB Product Family – Release 2016b										
Compiler	MATLAB	MATLAB Compiler	MATLAB Compiler SDK			MATLAB Coder	SimBiology	Fixed Point Designer	HDL Coder	HDL Verifier
	<i>For MEX-file compilation, <b>loadlibrary</b> and external usage of MATLAB Engine and MAT-file APIs</i>	<i>Excel add-in for desktop</i>	<i>C/C++ &amp; COM</i>	<i>.NET</i>	<i>Java</i>	<i>Excel add-in for MPS</i>	<i>For all features</i>	<i>For accelerated computation</i>	<i>For accelerated computation</i>	<i>For accelerated testbench simulation</i>
<b>MinGW 4.9.2</b> C/C++ (Distributor: IDM-GCC) Available at no charge	✓					✓ <sup>6</sup>	✓	✓	✓	✓
Microsoft Visual C++ 2017 Family <sup>12</sup> (Patch required)	✓	✓	✓	✓						
Microsoft Visual C++ 2015 Professional <sup>11</sup>	✓	✓	✓	✓ <sup>4</sup>		✓	✓	✓	✓	✓
Microsoft Visual C++ 2013 Professional	✓	✓	✓	✓ <sup>4</sup>		✓	✓	✓	✓	✓
Microsoft Visual C++ 2012 Professional	✓	✓	✓	✓ <sup>4</sup>		✓	✓	✓	✓	✓
Microsoft Windows SDK 7.1	✓	✓	✓			✓ <sup>6</sup>	✓	✓	✓	✓

- You will be directed to the download page of the compiler, click download (you need to login first)

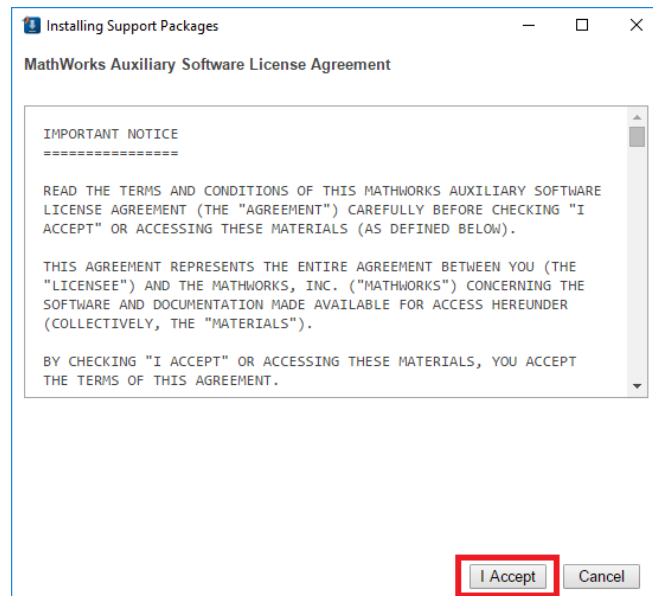


The screenshot shows a web browser window displaying the MathWorks File Exchange page for the "MATLAB Support for MinGW-w64 C/C++ Compiler". The page includes a search bar, navigation links, and a "Download" button highlighted with a red box. The download button is labeled "Download" and is located in the bottom right corner of the main content area.

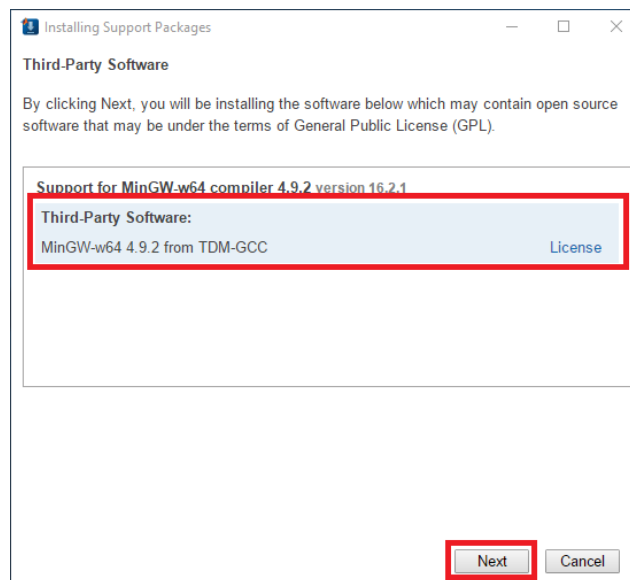
6. Run the downloaded file. First MATLAB will start and then the package installation will run. You will be asked to login



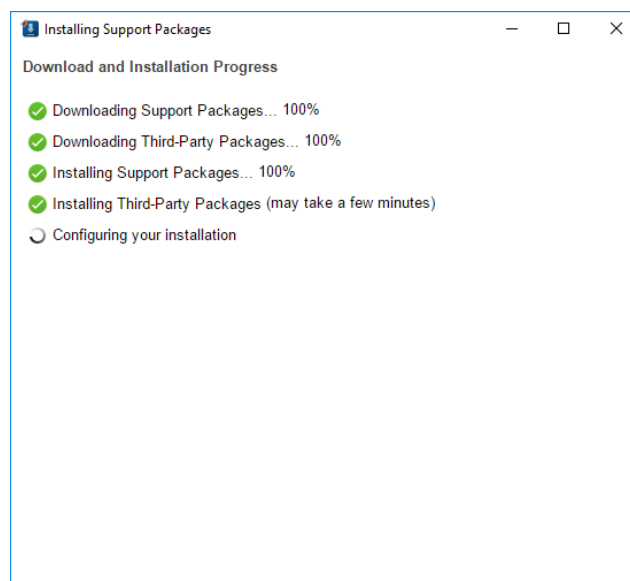
7. After logging in, you need to accept the Auxiliary software agreement



8. The following screen will show up, select the compiler and hit next



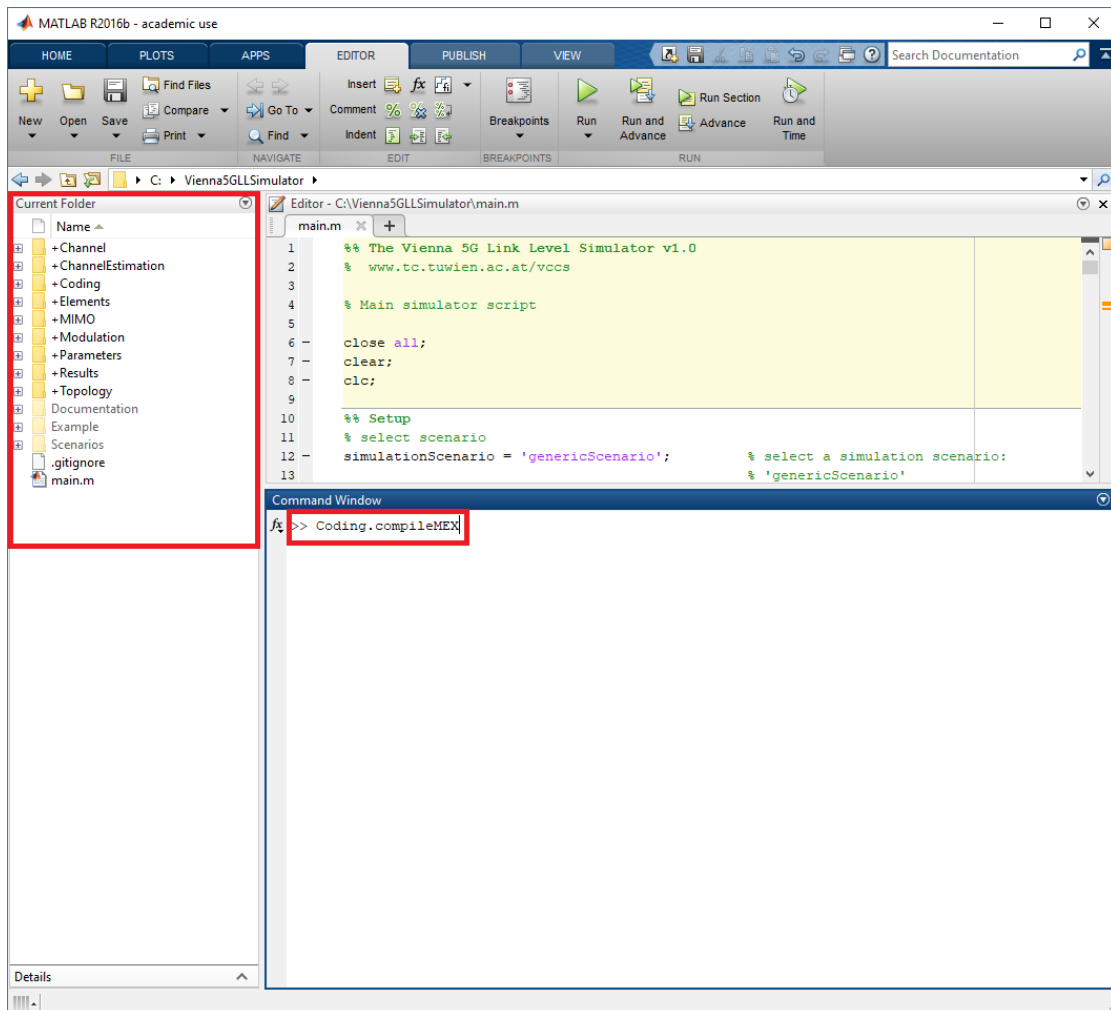
9. It will start installing and you should get a screen similar to this



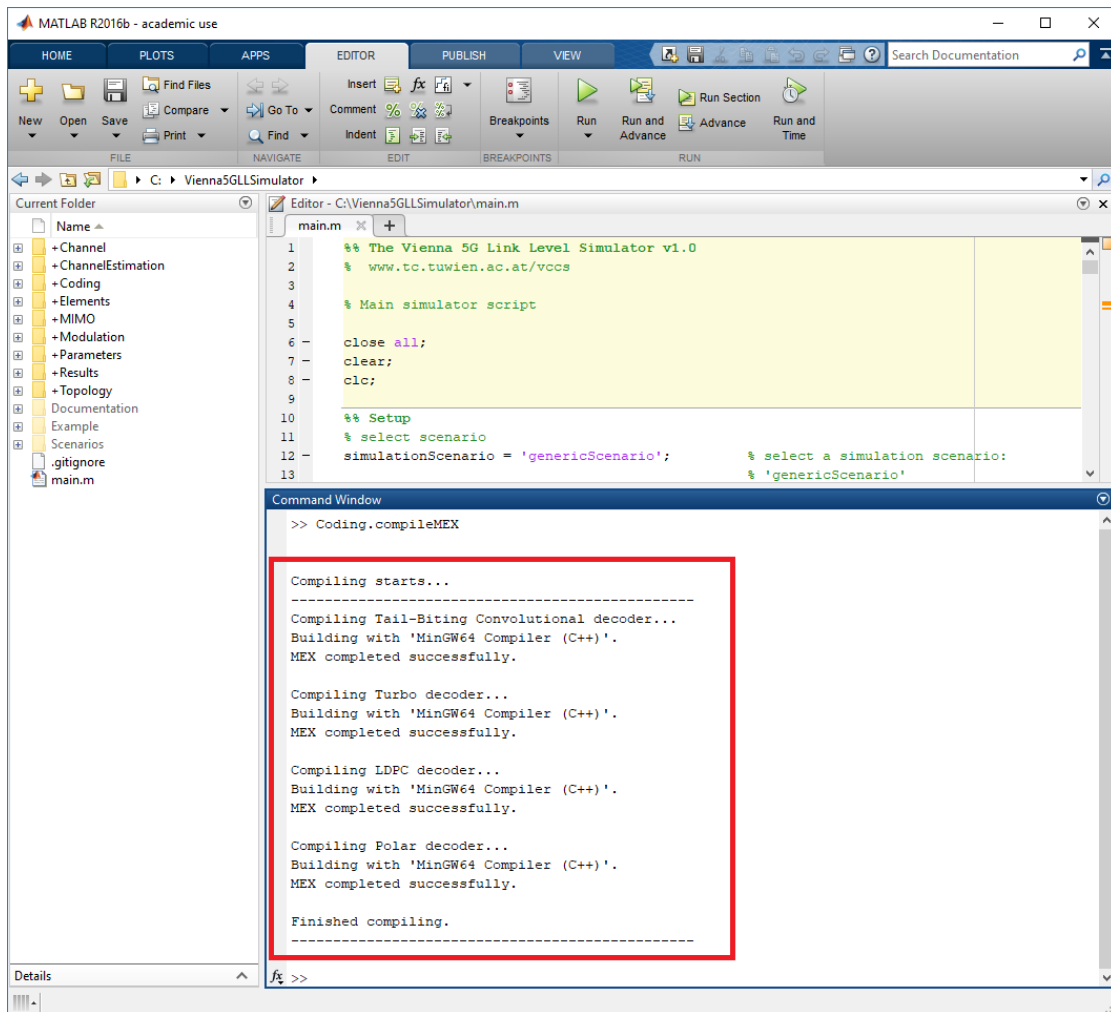
10. After it completes the installation, hit finish and then restart your MATLAB. That is it! You can now compile C/C++ MEX files for MATLAB.

For the compilation of the Channel Coding MEX files, we have a script that does that automatically for you.

1. After restarting MATLAB, change the current working folder to the main folder of the Vienna 5G Link Level Simulator and type in the command line:  
Coding.compileMEX



2. Run the command and you should get the following message



3. The channel coding MEX files should be working normally now.

If you need any help, feel free to contact me (contact info at first page).