Using The MATLAB Compiler Windows Version

This document shows you how you can convert your MATLAB code into a standalone executable. It assumes that the code you are going to produce is to be run on a computer that has MATLAB and the the MATLAB compiler installed. These instructions are not suitable for producing programs to be transferred to computers that don't have the MATLAB complier installed. To do that, refer to the examples in the MATLAB Compiler documentation.

C Compiler

You need to install a comparable C compiler. I used Visual Studio Professional 2010, available through the Microsoft Campus Agreement. See

> http://www.mathworks.co.uk/support/compilers/R2013b/index.html
> http://www.oucs.ox.ac.uk/sls/mscampus.xml

Mbuild

Next you need to inform MATLAB about the location of your C Compiler. Run MATLAB and enter the command :-

```
mbuild -setup
```

It will automatically search your system for comparable compilers. All you have to do is select which compiler you are going to use.

You only have to do this once.

Compiling A Mathworks Example

Make a work directory, and copy in the example Matlab program

```
C:\Program Files\MATLAB\R2013b\extern\examples\compiler\magicsquare.m
```

Obviously, if you have a different version of MATLAB or a different installation path, you will have to modify the path above.

Run MATLAB and change directory to the work directory you created above.
Then enter the command

```
mcc -m -v magicsquare.m
```

Then **WAIT**. This process takes time.

mcc	The MATLAB compiler.
-m	Standalone application.
-v	Verbose

This produces the executable file magicsquare.exe. To run this program, open a command prompt on your computer.

Start
Run
cmd

Change directory to your work directory and enter

magicsquare.exe 5

Which displays a 5 by 5 magic square.

The example above is a very cut down version of an example in the MALAB documentation.
To see the full documentation, go to

Help
MATLAB Compiler
Standalone Application

Another Example

This example shows how you would typically use the compiler to run code outside of MATLAB and save the data so that it can be imported into MATLAB.

```
function MyExample()

% Find sets of 4 numbers that add up to 64.

OUTPUT = [];   % Start of with an empty set

for A = 0:64
    for B = 0:64
        for C = 0:64
            for D = 0:64
                V = [ A B C D ];
                if sum(V) == 64
                    OUTPUT = [OUTPUT ; V];  %append V to OUTPUT
                end
            end
        end
    end
end

% Save the file for later inspection in MATLAB.
save output OUTPUT
```

Notice that the data produced by the program is saved to a file called output.mat at the bottom of the program. Compile the program.

```
mcc -mv -R -nojvm  MyExample.m
```

The option **-R** says the next option is for the runtime program. The runtime option **-nojvm** says **No Java**. We are not using graphics so we don't need it. The choice is yours.

As there are no input arguments this time, you can run the program from windows explorer by just double clicking on the program **MyExample.exe**.

Run MATLAB, change directory to your work directory and double click on **output.mat** to load the output data into MATLAB.