Practice 1

MATLAB is a useful tool in science and engineering. The following link contains instruction on how to download and install MATLAB on your computer `https://is.oregonstate.edu/service/software/matlab`. You can also use Matlab online through OSU's Citrix receiver (see course website for instruction). Let us start with some simple commands.

1. Start Matlab

2. Enter the following commands one by one. The symbol $>>$ indicates the start of command line you see in the command window of Matlab.

```
>> 1+2
>> x=1+2
>> x
>> x;
>> y=x^2+2*x+1/x;
>> y
```

   What do you think the semicolon is used for?

3. Now try

```
>> clear x y
>> x
>> y
```

   What does the command "clear" do? To erase the command window, type

```
>> clc
```

4. Entering commands in the command window of Matlab is sometimes inconvenient because Matlab will execute every command we type immediately. Sometimes we want to execute a number of commands at once. For this purpose, we will often work in a script file (format .m). To open a blank script file, click on Script (or New, depending on what version of Matlab you use) button on the far left of the menu. Now type the following:

```
% first test with script file
x = 1+2
y = x+3
```

   Then press F5, or click on the button Run on the menu, to execute the script file. What does the symbol "%" do?

5. The "For" loop is used to repeat some commands a specified number of times. For example, to compute the sum $1 + 2 + 3 + \ldots + 100$, one can write on a script file:

```
% sum of the first 100 positive integers
s = 0;
for k = 1:100
s = s+k;
end
s
```

6. To learn how to use any command, simply type 'help' on the command window, followed by the name of the command you want to look for. For example,

```
>> help for
>> help while
>> help plot
```