

# Day 1

---

- Administrative details
- Matlab as a calculator
- Setting the working directory
- Basic printing
- Printing to a file
- Exercises

ME123 Computer Programming

## Administrative details

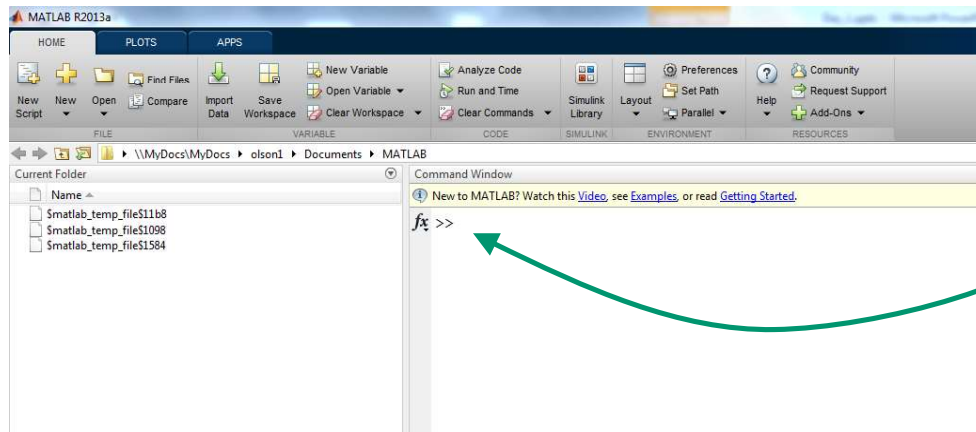
---

- Handout

ME123 Computer Programming

# Matlab as a calculator

- Run Matlab (ask for help if needed)
- Type in Command Window



ME123 Computer Programming

# Matlab as a calculator


- Simple formulas:  

```
>> 27*5+6
```
- You get an answer back

```
ans =  
141
```

ME123 Computer Programming

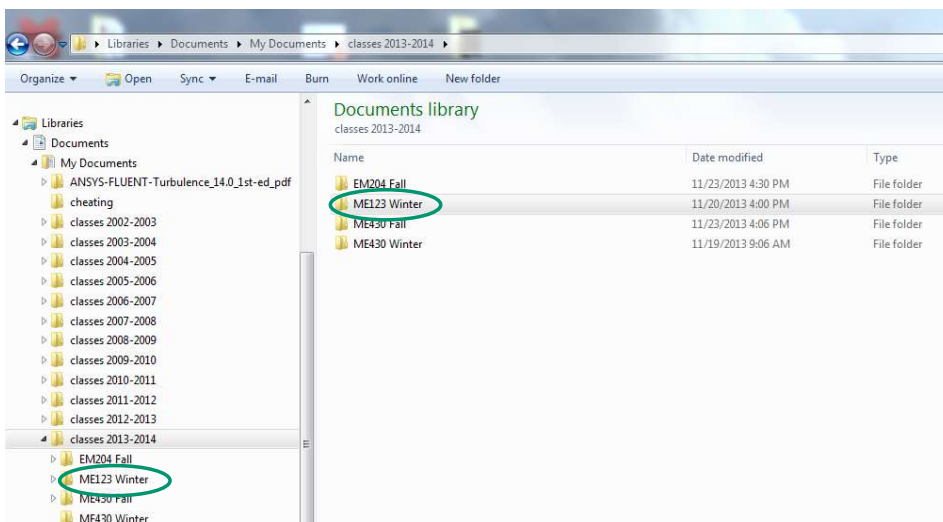
# Matlab as a calculator

- Use the up arrow  on your keyboard to bring back a line with a mistake for editing at the >> prompt
- You CANNOT click on previous lines to edit them
- Completely sequential– just like a calculator – executes in exactly the order you typed the instructions

ME123 Computer Programming

## Setting the working directory

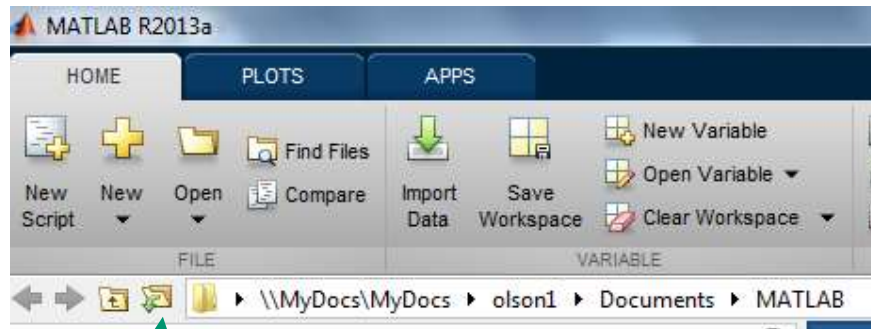
In Windows, create a folder to hold all your work for class. (Any folder name will work.)



ME123 Computer Programming

# Setting the working directory

From inside Matlab, change directories (browse) over to the new folder



ME123 Computer Programming

# Setting the working directory

- In the command window, type the magic incantation (you only do this once):

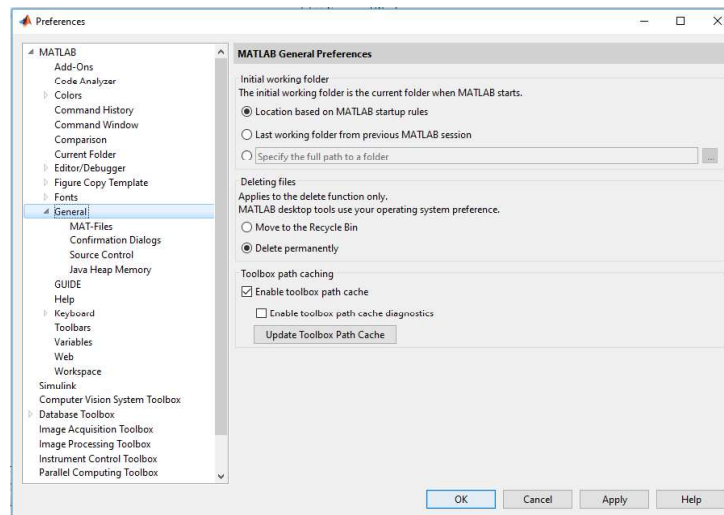
```
>> userpath(pwd)
```

- Close Matlab and reopen it
- You should be in the directory you just picked. It will start in this folder from now on.

ME123 Computer Programming

# Setting the working directory

- Alternatively, you can go to preferences -> general -> and then set the “Initial working folder”



ME123 Computer Programming

## Basic printing

- You type:

```
>> fprintf('Hello World \n')
```

- In the command window you see:

```
Hello World
```


ME123 Computer Programming

# Basic printing

---

- The `\n` means make a new line. You type

```
>> fprintf('Hello World \n Hello World \n')
```



- In the command window you see:

```
Hello World
Hello World
```

ME123 Computer Programming

# Printing to a file

---

3 steps to print to a file

1. Open the file
2. Print to the file
3. Close the file

ME123 Computer Programming

# Printing to a file

## 1. Open the file:

```
>> file_number=fopen('TryIt.txt','w')  
file_number =
```

3 Ignore these numbers

File name

Write to the file.  
Discard anything  
already in the file.

This is how Matlab will  
identify the file

ME123 Computer Programming

# Printing to a file

## 2. Print to the file

```
>> fprintf(file_number,'Hello World \n')
```

```
ans =
```

13 Ignore these numbers

Don't forget this!

## 3. Close the file

```
>> fclose(file_number)
```

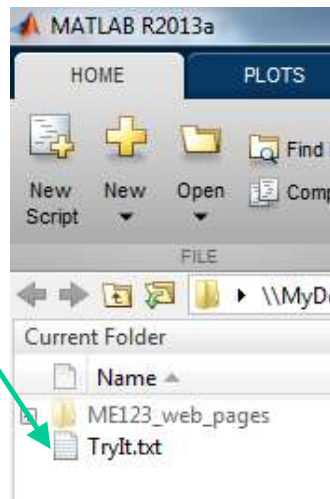
```
ans =
```

0 Ignore these numbers

ME123 Computer Programming

# Printing to a file

- The file appears in your folder

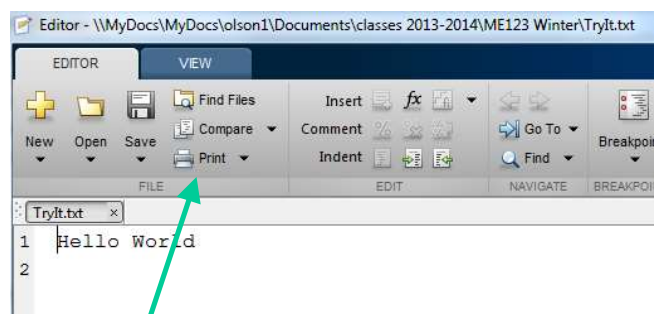


- Double-click on the file to open it in Matlab

ME123 Computer Programming

# Printing to a file

- The file looks like this when it is open:



- You can print it on paper now if you want

ME123 Computer Programming



# Exercises

---

- Work through the steps in these slides
- Start the exercises on the paper handout
- Complete the exercises and turn them in by 5 PM tomorrow – they are the homework. Don't forget the cover sheet!