Introduction to MATLAB bootcamp

Week 2 Lecture 4

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Functions in MATLAB

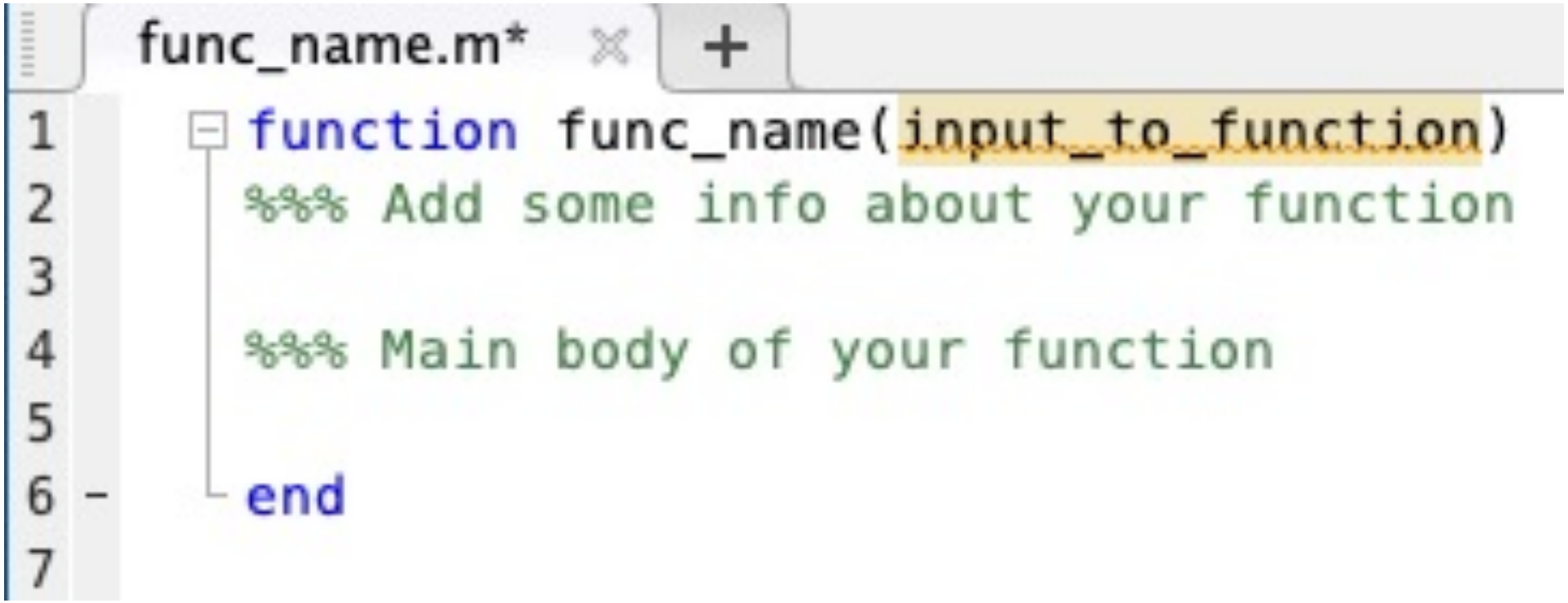
- You have already used many in-built MATLAB functions such as:
- sort
- max
- min
- mean
- unique
- disp

Fahrenheit to Celsius conversion

$$\mathrm{C} = \frac{5}{9}(\mathrm{F} - 32)$$

You are given three liquids with temp $80°\mathrm{F}$, $110°\mathrm{F}$, and $210°\mathrm{F}$. What is the average temperature of the three liquids in Celsius?

Syntax for function



Important:

1) Rules for naming a function is same as rules for naming a variable
2) Name of the function and the name of the function file must be SAME

Example: basic_average

basic_avg.m

```
1   function basic_avg(array)
2 -     avg=mean(array)
3 - end
```

Drawback: The output of this function is not stored as a separate variable

Store output of the function as a variable

better_avg.m

```
1   function avg=better_avg(array)
2 -     avg=mean(array);
3 - end
```

Generate multiple outputs

min_max.m

```
1   function [min_num,max_num]=min_max(array)
2 -     min_num=min(array);
3 -     max_num=max(array);
4 -   end
```