

# SGN-84007 Introduction to Matlab

*Exercise Set 4: September 19–23, 2016*

Exercises/pages refer to Hahn&Valentine: Essential Matlab for Engineers and Scientists (5th Edition)

1. Enter the following commands. Explain, what happened.

```
clear all
X = randi(10,2,3,2);
save randiX X;
whos
clear all
whos
disp(X)
load randiX
whos
disp(X)
```

2. Create the following csv-file with a text editor (*e.g.*, notepad):

```
A,B,C,D,E
4,1.25,-7,1771,6
-1,0.2,4,1,55
```

Load the csv-file to Matlab without the header row using `textscan` command. Display the data in Matlabs command window as a numerical matrix.

3. Create with Matlab an Excel file containing the three rows of data of Problem 2.
4. Repeat Problem 3 but instead of an Excel file create a csv-file with Matlab (without the header row). Look at the file contents with a text editor.
5. Using Matlab's Documentation, study how to create HDF5 format files.
  - a) Find the groups that are on the top level of Matlab sample file `example.h5`. You can find the general info with `h5info('example.h5')`, and that contains also the group names.
  - b) Use the function `h5disp` to see the contents of group `'/g4'`.
  - c) There are four datasets within the group `'/g4'`. Load all these into Matlab variables.