ENG-220 Class Assignment 3: Matlab Data Scanning

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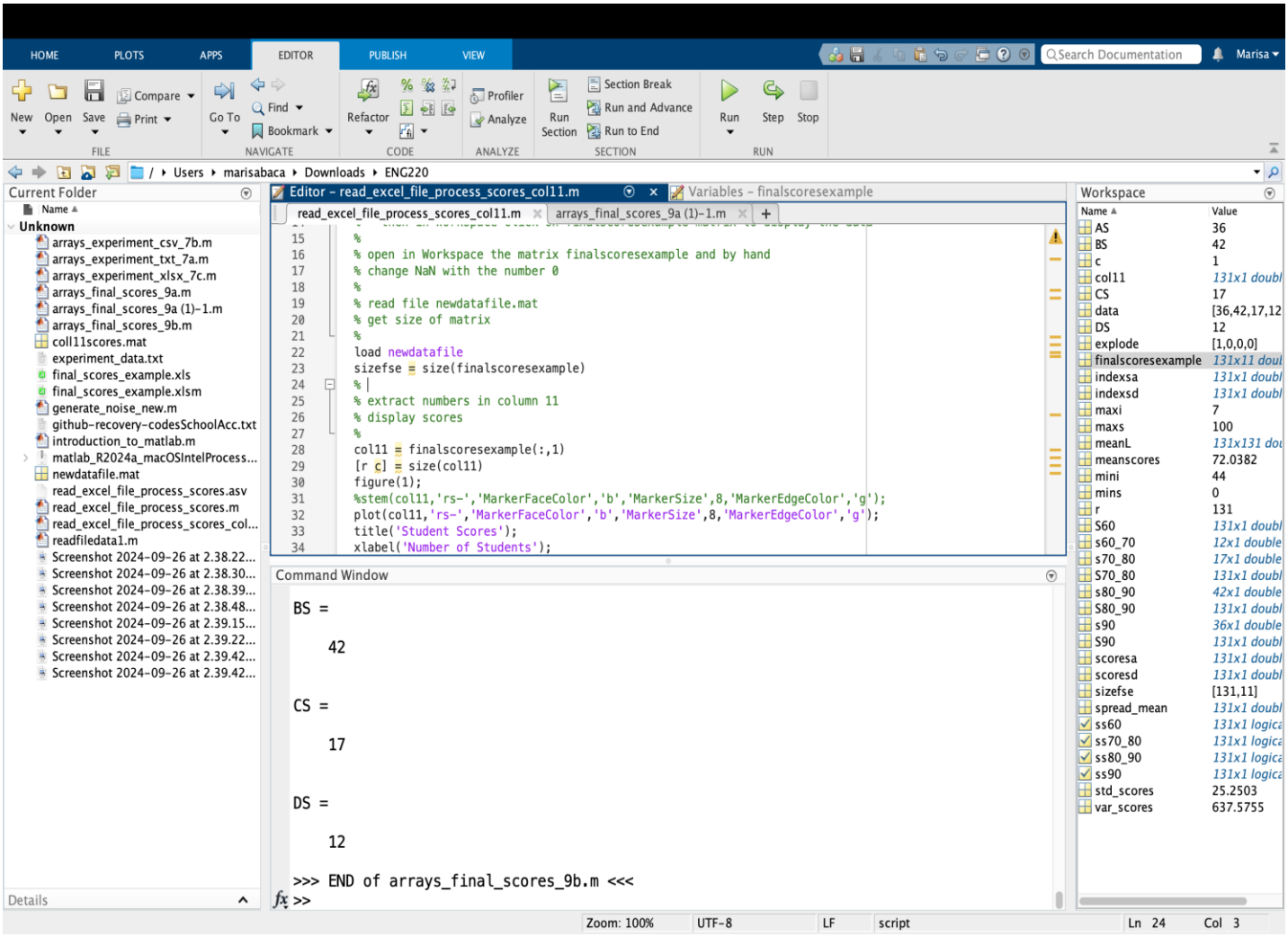
Figure 1
File Edit View Insert Tools Desktop Window Help
Student Scores
Scores
Number of Students
Figure 2
File Edit View Insert Tools Desktop Window Help
Figure 3
Edit View Insert Tools Desktop Window Help
Student Scores - Ascending order
Scores
Number of Students
Figure 4
File Edit View Insert Tools Desktop Window Help
Student Scores - Student Number
Scores
Student Number
Figure 5
Edit View Insert Tools Desktop Window Help
Student Scores - Student Number
Scores from the Mean
Student Number
Figure 6
File Edit View Insert Tools Desktop Window Help
Print Figure
Final Grades
As
Bs
Cs
Ds
11%
34%
16%
39%


HOME
PLOTS
APPS
EDITOR
PUBLISH
VIEW
Search Documentation
Marisa
New
Open
Save
Compare
Print
Go To
Find
Bookmark
Refactor
Profiler
Analyze
Run Section
Section Break
Run and Advance
Run to End
Run
Step
Stop
FILE
NAVIGATE
CODE
ANALYZE
SECTION
RUN
/ ▸ Users ▸ marisabaca ▸ Downloads ▸ ENG220
Current Folder
Name
Unknown
arrays_experiment_csv_7b.m
arrays_experiment_txt_7a.m
arrays_experiment_xlsx_7c.m
arrays_final_scores_9a.m
arrays_final_scores_9a (1)-1.m
arrays_final_scores_9b.m
coll1scores.mat
experiment_data.txt
final_scores_example.xls
final_scores_example.xlsm
generate_noise_new.m
github-recovery-codesSchoolAcc.txt
introduction_to_matlab.m
matlab_R2024a_macOSIntelProcess...
newdatafile.mat
read_excel_file_process_scores.asv
read_excel_file_process_scores.m
read_excel_file_process_scores_col...
readfiledata1.m
Screenshot 2024-09-26 at 2.38.22...
Screenshot 2024-09-26 at 2.38.30...
Screenshot 2024-09-26 at 2.38.39...
Screenshot 2024-09-26 at 2.38.48...
Screenshot 2024-09-26 at 2.39.15...
Screenshot 2024-09-26 at 2.39.22...
Screenshot 2024-09-26 at 2.39.42...
Screenshot 2024-09-26 at 2.39.42...
Details
Editor - read_excel_file_process_scores_col11.m
Variables - finalscoresexample
read_excel_file_process_scores_col11.m
arrays_final_scores_9a (1)-1.m
15 %
16 % open in Workspace the matrix finalscoresexample and by hand
17 % change NaN with the number 0
18 %
19 % read file newdatafile.mat
20 % get size of matrix
21 %
22 load newdatafile
23 sizefse = size(finalscoresexample)
24 %
25 % extract numbers in column 11
26 % display scores
27 %
28 col11 = finalscoresexample(:,1)
29 [r c] = size(col11)
30 figure(1);
31 %stem(col11,'rs-','MarkerFaceColor','b','MarkerSize',8,'MarkerEdgeColor','g');
32 plot(col11,'rs-','MarkerFaceColor','b','MarkerSize',8,'MarkerEdgeColor','g');
33 title('Student Scores');
34 xlabel('Number of Students');
Command Window
BS =
42
CS =
17
DS =
12
>>> END of arrays_final_scores_9b.m <<<
>>
Workspace
Name
Value
AS 36
BS 42
c 1
col11 131x1 doubl
CS 17
data [36,42,17,12
DS 12
explode [1,0,0,0]
finalscoresexample 131x11 doul
indexsa 131x1 doubl
indexsd 131x1 doubl
maxi 7
maxs 100
meanL 131x131 dou
meanscores 72.0382
mini 44
mins 0
r 131
S60 131x1 doubl
s60_70 12x1 double
s70_80 17x1 double
S70_80 131x1 doubl
s80_90 42x1 double
S80_90 131x1 doubl
s90 36x1 double
S90 131x1 doubl
scoresa 131x1 doubl
scoresd 131x1 doubl
sizefse [131,11]
spread_mean 131x1 doubl
ss60 131x1 logica
ss70_80 131x1 logica
ss80_90 131x1 logica
ss90 131x1 logica
std_scores 25.2503
var_scores 637.5755
Zoom: 100%
UTF-8
LF
script
Ln 24
Col 3

Results:

In Matlab we modified the code in the student scores excel file to scan that data of column 11 that we imported via the excel sheet, read_excel_file_process_scores_col11. Once imported, we modified the column 11 code as shown in the picture above to match the new, current column which is now column 1.

Before: col11 = finalscoresexample(:,11)

After: col11 = finalscoresexample(:,1)

This change reads the column that we selected for the previous excel file which contained all the student scores, and we only wanted column 11 scores. Running the code, we get the graphs and pie charts of the scores for column 11, as well as all the data contained within it. They are displayed in the Command Window as seen in the picture above. After everything was complete, we uploaded our work to GitHub as a group.