VIDEO: "USING CELLS" (3:22)

(0:00)
If you are writing a scientific analysis you would format it and organize it with the title and section such as abstract, introduction, methods and results. In the same way a paper document is a scientific study, a script documents your analysis process. We are now going to organize the script into sections or cells to make the report look a little better. Our script had three major sections, we make a section by creating an empty line that has two percent signs allowed by a blank. Usually we put a title to indicate what the section does. In this first section we are loading the data, we can also use the insert section break icon to create a new section.

(00:40)
The second part of the script creates a figure again I create a new section and use a title to indicate what the section does. A title will appear on the report. The third part of the script creates a figure this one is fully labeled. You should put some effort into creating these titles to be informative. You can always reedit the script and then run it again.

(1:03)
Now are we going to show another advantage of using sections. We can execute each section of the code separately. This allows you to work on one piece of code at a time and get it to work before moving on to the next section. I click on the first section to select it then I execute the code in the section by hitting on the execute cell icons. Here I am using the evaluate cell in advance which executes the cell and moves the cursor to the next cell. By continuing this fashion, I am executing the entire script one section at a time. Organizing each cell into sections makes it much easier to debug. Six months from now when you return to the analysis you will know exactly what you did.

(1:49)
MATLAB also allows you to publish unfinished documentation- I can demonstrate that now. Go to the publish section on the banner and click the publish icon. MATLAN executes your script but also produces a final report by default the report is in HTML so you can look at it in a web browser. You can also publish in word or PDF. Now that each section or cell appears as a separate section in the report and we have a table of contents. If we put a comment section at the top it will appear as an introduction section to the script. Getting back to the editor I put a new section at the top that only contains comments.

(3:12)
I publish again- finally we have a report with all the code and documentation in a single document and a nice table of content and introduction.