Slide 1

MATLAB

Fundamental Data Types: more

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Slide 3
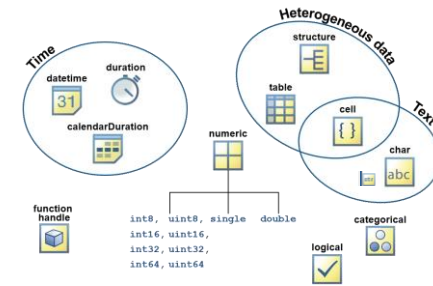
Taken from MATLABacademy

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Slide 4

table

Class Name	Documentation	Intended Use
table	Tables	• Rectangular container for mixed-type, column-oriented data. • Row and variable names identify contents. • Manipulation of elements similar to numeric or logical arrays. • Access data by numeric or named index.

https://nl.mathworks.com/help/matlab/tables.html?
http://www.datatool.com/downloads/MATLAB%20Table%20Programming.pdf

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Slide 5

table

- Yet another datatype, in between a cell and a structure.
  - Arrays in tabular form whose named columns can have different types. Each variable in a table can have a different data type and a different size with the one restriction that each variable must have the same number of rows.
  - A container to hold data and metadata such as variable names, row names, descriptions, and variable units, together.
- Suitable for holding heterogeneous data.
  - Tables are useful for mixed-type tabular data that are often stored as columns in a text file or in a spreadsheet.
  - Tables consist of rows and **column-oriented variables**.
- Since R2013b

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table: creation

- *File: demo_tables.mlx*
- Create a table from:
  - Existing workspace variables using `table` function
  - Import from a file into a table using:
    - Import Tool
    - `readtable` function.
- Get some information about a table:
  - `summary` function
  - `properties` function

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table: selecting elements

- Selecting elements from a table
  - works the same way as with cell arrays
  - use () to select the container, {} to select the content
  - *Named* selection is also possible
    - Use the dot operator to select a variable (column)
- Row can also be named
  - `.Properties.RowNames`

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Matlab date and time

- https://nl.mathworks.com/help/matlab/date-and-time-operations.html
- `help timefun`
- The date and time data types are:
  - `datetime`
  - `duration`
  - `calendarDuration`

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datetime arrays

- *File: demo_datetime.mlx*
- support arithmetic, sorting, comparisons, plotting, and formatted display
- Creation: `datetime` function
  - Relative day
  - Date strings
    - Character string
    - Cell array
    - string

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