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| **1.1** |
| **Interupt command line** |
| Control + c |
| **Exit Octave** |
| Type quit or exit at Octave command line |
| **1.2** |
| **Marked Lines, and respond answer** |
| ‘*octave:13>*’ are lines you type  Octave will respond with answer/display graph if line end with semicolon, else it will not |
| **Calculations** |
| +, -, \*, /, ^ log, exp, sin, cos, tan  Octave calculations work on real / imaginary numbers (i,j).  Mathmatical Constant: e, pi  Example:  evaluate to -1 |
| **Creating Matrices** |
| Comma separate entry in a row, carriage separate rows   |  |  |  | | --- | --- | --- | | 1 | 1 | 2 | | 3 | 5 | 8 | | 13 | 21 | 34 |     Create 3\*2 matrix, and set each element between 0 and 1 |
| **Display value of a variable** |
| (without semicolon) |
| **Matrix Arithmetic** |
| **Matrix Scaling** |
|  |
| **Matrix Multiplication** |
|  |
| **Matrix Transpose** |
|  |
| **Solve System of Linear Equations** |
| To solve A(x) = b, use ‘\’ operator.  X = A \ b  **Example:** |
| **Integrating Differential Equations** |
| Initial Condition    Output H(x): Column Vector    Integrate set of differential equation |
| **Produce Graphic Output** |
|  |
| **Save Graphic Output** |
|  |
| **More Documentation about print** |
|  |
| **Edit What You Have Typed** |
| Control + p; **Bring back the previous line of input.**  Control + n; **bring up next line of input**  Control + b; **Move cursor backward on the line**  Control + f; **move cursor forward on the line** |
| **1.3** |
| **Evaluation Notation** |
| **Sqr(2) evauates to 1.4142**    **Matrix value display**    **Identity matrix**    **Express identical results that help describe 1 expression** |
| **Printing Notation** |
| Printing result indicate by ‘- |’, Value indicate by ‘🡪’ |
| **Format of description** |
| In a function description, the name of the function being described appears first, followed by a list of parameters.    Subtract x from y, and add the following parameters to the result    Diary – record a session in a file in current working directory |
| 2.1 |
| **Startup Files: contain valid Octave commands, and function definitions** |
| Changes to Octave environment can be made globally for all users of the site.    Changes to Octave environment can be made globally for all users of a particular version of Octave    Make personal changes to Octave Environment    Make personal changes to default Octave environment. Executed for MATLAB compatibility. |
| **2.2** |
| **Exit Octave** |
| Print message “Bye bye” When exit |
| **Help** |
|  |
| **Command Line Editing** |
| **Cursor** |
|  |
| **Killing and Yanking** |
|  |
| **Smart type** |
|  |
| **History** |
| If invoke with no arguments, will display a list pf commands that have been excuted |
| **Executable Octave Programs** |
| The line beginning with ‘*#!*’ lists the full path and filename of an interpreter to be run. |
| **Comments** |
| **Single line**  #  **Block**  ‘#{‘ and ‘#}’ or  ‘%{‘ and ‘%}’  **Example** |
| **Data Types** |
|  |
| Matrix / Object Size |
| ndims (a); #dimension of a  columns (a); #columns  rows (a): #rows  numel (a); #elements  numel (a, idx1, idx2…); #elements of index1    length (a); #length of object, 0 for empth, 1 for scalars, #elements for vector, or #elements along largest dimension for matrix |
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