— University of Mosul —
College of Petroleum & Mining Engineering

"Computer Programing II /Theoretical"

Second class

Lecture …(1)….

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- Introduction to MATLAB
- Starting MATLAB

INTRODUCTION TO MATLAB

The name MATLAB stands for MATrix LABoratory. MATLAB was written originally to provide easy access to matrix software developed by the LINPACK (linear system package) and EISPACK (Eigen system package) projects.

MATLAB [1] is a high-performance language for technical computing. It integrates *computation*, *visualization*, and *programming* environment. Furthermore, MATLAB is a modern programming language environment: it has sophisticated *data structures*, contains built-in editing and *debugging tools*, and supports *object-oriented programming*. These factors make MATLAB an excellent tool for teaching and research.

MATLAB has many advantages compared to conventional computer languages (e.g., C, FORTRAN) for solving technical problems. MATLAB is an interactive system whose basic data element is an *array* that does not require dimensioning. The software package has been commercially available since 1984 and is now considered as a standard tool at most universities and industries worldwide.

Starting MATLAB

When you start MATLAB, a special window called the MATLAB desktop appears. The desktop is a window that contains other windows. The major tools within or accessible from the desktop are:

1- The Command Window

2- The Command History

3- The Workspace

4- The Current Directory

5- The Help Browser

6- The Start button

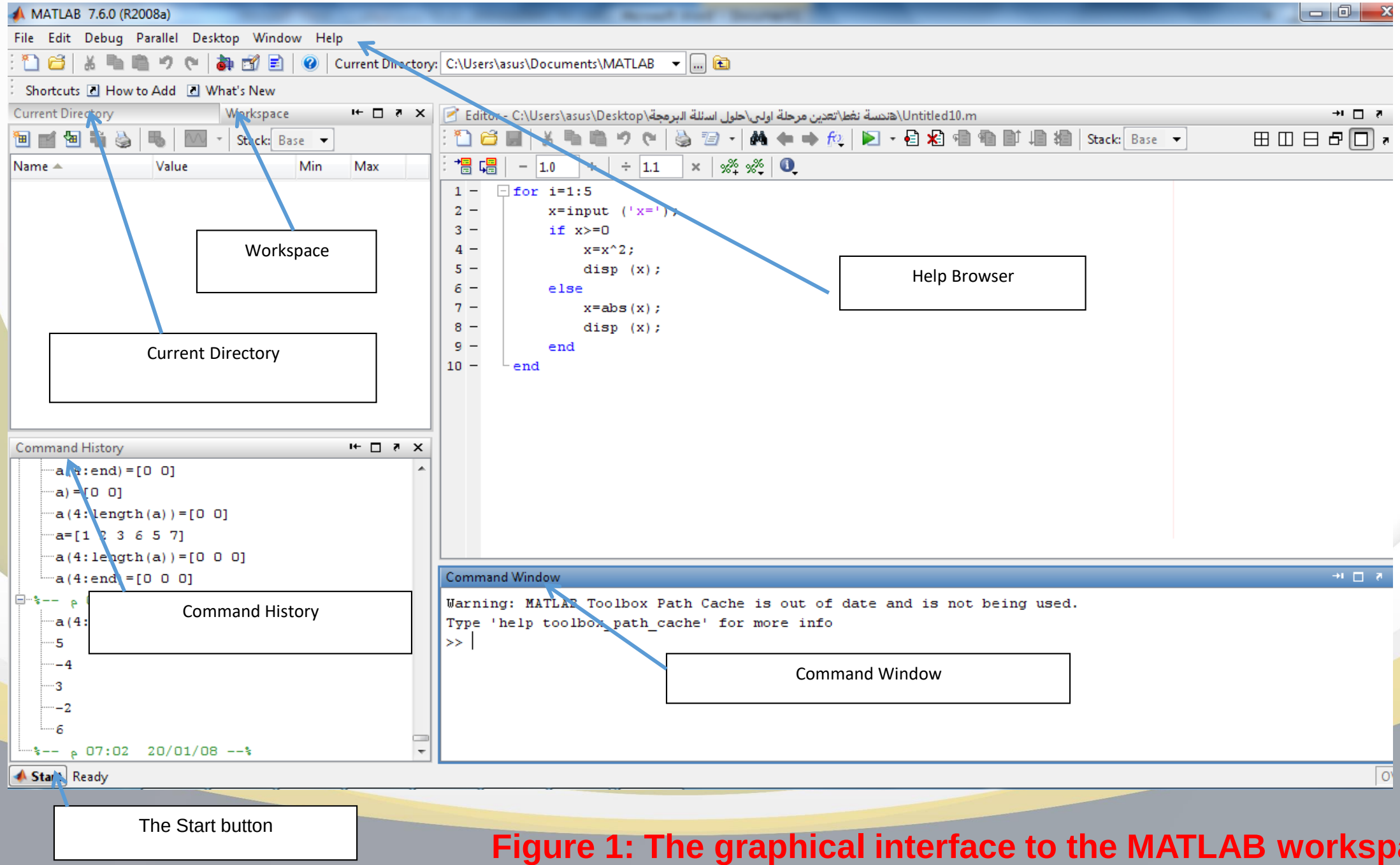

Figure 1: The graphical interface to the MATLAB workspace