Department of Electronics and Communication Central University of Rajasthan, Ajmer

Subject ..........................S..i..g...n...a...l..a...n...d....S...y...s..t..e...m...................................

Subject Code ...............................E...C...E..............................................................

Experiment No. ...................................1....................................................

Name:- Vishwajeet

Roll no:- 2022BTECE023

Date:- 25-01-2024

**Title: -** Introduction to MATLAB(part1).

**Apparatus required:** - Downloaded MATLAB .

**Introduction:**- A MATLAB is an advanced software that can help in performing various tasks very easily and conveniently as compared from other programming languages. The interface of MATLAB is easy to understand and easily learnable. It can help in various domains like; image processing, communication, signal tracing, to

process large amounts of data, etc., the interface of MATLAB is divided into three parts which are as follows; 1. Command window 2. Workspace 3. Command history.

* **Command window :-**interface is used to write all the commands.
* **Workspace** interface represents all the variables that represent all the variables which are write in command window.
* **Command history** interface is used to show all the history from the beginning when the user has started using the MATLAB programming.
* **Current folder** interface is used to show all the saved folders in the MATLAB.

**Theory:-** Using MATLAB we can perform various basic and advance operations

like; addition, subtraction, multiplication, division, floor, ceil,(for example 5.2 ,floor = 5 , ceil = 6) we can also plot various graphs according to our experiment requirements.

There are various commands that we can use to make a MATLAB program and do various operations which are as follows.

# Operational commands:-

 **+** :- to add two variables (a+b)

* + **-** :- to subtract two variables (a-b)
  + **\*** :- to multiply two variables (a\*b)
  + **/** :- to divide two variables (a/b)
  + **sqrt** :- to take a square root of variable
  + **^** :- to perform power operations (a^b)

|  |  |  |
| --- | --- | --- |
| * **round** | :- | to take a roundoff of a floating variable |
| * **ceil** | :- | to take a ceiling no of floating variable |
| * **floor** | :- | to take a flooring no of floating variable |
| * **real** | :- | to take a real part of complex number |
| * **imag** | :- | to take a imaginary part of complex number (a +ib) |
| * **abs** | :- | to find the absolute value of complex number |
| * **conj** | :- | to find the conjugate value of complex number(a-ib) |
| * **angle** | :- | to find the argument of complex number |

# clc

* + **clear all**

:- to clear the command from the command window .

:- to clear all the variables from the workspace history.

* + **save name of folder** :- to save the file of the given name and use in further future.
  + **help operation** :- to give help with various operations if we got stuck.
  + **load name** :- to open the save file of given name
  + **lookfor name** :- to find the command of given name

# diary name

* + **doc plot**

:- to make a diary of given commands

:- it gives the description to plot in various ways

* + **plot(var a,var b)**:- it gives the plot between a and b

We have observed many commands and other then these commands some other commands are like

* + Inf :- represents that the number is infinity
  + pi :- used to represent letter (π).
  + A[var1,var2,…,varn] :- used to represent an array. a[n] ={a,b,c,d,. }

**Result:-** We have observed various commands and learned to used command with example and the basics of MATLAB programming.