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S.No.	Experiment	Description
1.	Creating Arrays	Creates one and two-dimensional arrays, row/column vectors, and matrices of a given size. Performs arithmetic operations like addition, subtraction, multiplication, and exponentiation. Performs matrix operations like inverse, transpose, rank, and plots.
2.	Matrix Manipulations	Concatenates, indexes, sorts, shifts, reshapes, resizes, and flips about a vertical/horizontal axis.
3.	Relational and Logical Operations	Creates arrays X and Y of a given size (1 x N) and performs relational and logical operations like >, <, ==, <=, >=, ~=, ~, &,
4.	Random Sequences and Plots	Generates random sequences using rand() and randn() functions and plots them.
5.	Evaluating Expressions and Plots	Evaluates a given expression and rounds it to the nearest integer value using Round, Floor, Ceil, and Fix functions. Generates and plots trigonometric functions like sin(t), cos(t), tan(t), sec(t), cosec(t), and cot(t) for a given duration 't'. Generates and plots logarithmic and other functions like log(A), log10(A), square root of A, and real nth root of A. Creates a vector X with elements, $X_n = (-1)n+1/(2n-1)$ and adds up 100 elements of the vector X. Plots the functions x, x^3, ex, and exp(x^2) over the interval $0 < x < 4$.
6.	Generating Sinusoidal Signals	Generates a sinusoidal signal of a given frequency with titling, labeling, adding text, adding legends, and printing text in Greek letters. Plots as multiple and subplot. Time scales the generated signal for different values like 2X, 4X, 0.25X, and 0.0625X.
7.	Solving Differential Equations	Solves first, second, and third-order ordinary differential equations using built-in functions and plots.
8.	Input Scripts	Writes brief scripts starting each script with a request for input (using input) to evaluate the function h(T) using if-else statements, where h(T) = (T – 10) for $0 < T < 100$ and h(T) = (0.45 T + 900) for $T > 100$.
9.	Generating Square Waves	Generates a square wave from the sum of sine waves of certain amplitude and frequencies.
10.	Basic 2D and 3D Plots	Generates parametric space curves, polygons with vertices, 3D contour lines, pie charts, and bar charts.