Objective: This lab exercise will help you practice essential MATLAB concepts, including creating and manipulating numeric arrays, performing matrix concatenation, and using the .repmat function

:Instructions

Part 1: Creating Numeric Arrays

.Open MATLAB on your computer

:Create a 3x3 matrix named matrixA with the following values
3 2 1
6 5 4
9 8 7

:Create a 3x3 matrix named matrixB with the following values

12 11 10
15 14 13
18 17 16
.Calculate the sum of matrixA and matrixB and store it in a variable called matrixSum

.Display the contents of matrixSum

Part 2: Matrix Concatenation

.Create a row vector named rowVector with values from 1 to 5

.Create a column vector named columnVector with values from 6 to 10

Concatenate rowVector and columnVector horizontally and store the result in a variable .called horizontalConcat

.Display the contents of horizontalConcat

Part 3: Using repmat Function

.Create a 2x2 matrix named originalMatrix with any values you like

Use the repmat function to replicate originalMatrix into a 4x4 pattern and store it in a variable .called repeatedMatrix

Display the contents of repeatedMatrix
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Part 4: Challenge

:Challenge yourself by performing the following tasks

Create a 3x3 identity matrix (a matrix with diagonal elements as 1 and others as 0) and store .it in a variable called identityMatrix
Perform matrix multiplication between identityMatrix and matrixA. Store the result in a .variable called matrixProduct

.Display the contents of matrixProduct

Conclusion: This lab exercise covers fundamental MATLAB concepts, such as creating and manipulating numeric arrays, performing matrix concatenation, and using the repmat function. It also includes a challenge to test your understanding of matrix multiplication. .Practice these skills to become more proficient in MATLAB