



كلية تكنولوجيا الصناعة والطاقة



Information Technology Department  
2<sup>nd</sup> Year



جامعة برج العرب التكنولوجية

Course: Semester:1 <sup>st</sup> term 2025/2026	Lecturers: Dr. Nehal El Azaly Dr. Ghada Fathy
Programming Essentials in C++ Tutorial 6 <b>Sheet (6)-2 D Array</b>	

1) Write a C++ program to:

- Declare a 2D array of size  $3 \times 3$ .
- Initialize it with numbers from 1 to 9.
- Print the array elements in matrix form.

2) Write a C++ program to find the **sum of all elements** in a  $3 \times 3$  matrix entered by the user.

3) Write a program that:

- Reads elements of a  $3 \times 3$  matrix.
- Calculates and prints the **sum of each row** and **each column** separately.

4) Write a program that:

- Reads a square matrix  $3 \times 3$ .
- Finds the **sum of the main diagonal** elements.

(*Hint: Main diagonal  $\rightarrow$  elements where row index = column index*)

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Good Luck