

## Assignment 20 – Multi-Dimensional Arrays

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1. Write a program to calculate the sum of two matrices, each of order  $3 \times 3$ .
2. Write a program to calculate the product of two matrices, each of order  $3 \times 3$ .
3. Write a program to print the transpose of a given matrix.
4. Four players are playing a tournament of Chess using the Round Robin method (each player plays with every other player). Each win awards 2 points, draw 1 point, and loss 0 points.  
Declare a `score_board` two-dimensional array to store the scores of players against each player.
5. For Question 4, define a function to **update the score\_board** after each match result.
6. For Question 4, define a function to **display the score\_board** in tabular format.
7. For Question 4, define a function that returns the **total score of a specific player**.
8. For Question 4, define a function to **find the winner** of the tournament.
9. For Question 4, define a function to **display the rank** of all players in descending order of their score.
10. For Question 4, define a function to **run the full tournament** in which the user is prompted to enter the result of each game. Update the `score_board` using the earlier defined function.