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#include <stdio.h>

#define MAX 100

// Function to perform matrix multiplication
void matrixMultiply(int mat1[][MAX], int mat2[][MAX], int result[][MAX], int r1, int c1, int c2) {
    for (int i = 0; i < r1; i++) {
        for (int j = 0; j < c2; j++) {
            result[i][j] = 0;
            for (int k = 0; k < c1; k++) {
                result[i][j] += mat1[i][k] * mat2[k][j];
            }
        }
    }
}

// Function to print a matrix
void printMatrix(int mat[][MAX], int r, int c) {
    for (int i = 0; i < r; i++) {
        for (int j = 0; j < c; j++) {
            printf("%d ", mat[i][j]);
        }
        printf("\n");
    }
}

int main() {
    int r1, c1, r2, c2;

    // Get the dimensions of the first matrix
    printf("Enter the number of rows for the first matrix: ");
    scanf("%d", &r1);
    printf("Enter the number of columns for the first matrix: ");
    scanf("%d", &c1);

    // Get the dimensions of the second matrix
    printf("Enter the number of rows for the second matrix: ");
    scanf("%d", &r2);
    printf("Enter the number of columns for the second matrix: ");
    scanf("%d", &c2);

    // Check if matrix multiplication is possible
    if (c1 != r2) {
        printf("Matrix multiplication is not possible\n");
        return 0;
    }

    int mat1[MAX][MAX], mat2[MAX][MAX], result[MAX][MAX];

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// Get the elements of the first matrix
printf("Enter elements of the first matrix:\n");
for (int i = 0; i < r1; i++) {
    for (int j = 0; j < c1; j++) {
        scanf("%d", &mat1[i][j]);
    }
}

// Get the elements of the second matrix
printf("Enter elements of the second matrix:\n");
for (int i = 0; i < r2; i++) {
    for (int j = 0; j < c2; j++) {
        scanf("%d", &mat2[i][j]);
    }
}

// Perform matrix multiplication
matrixMultiply(mat1, mat2, result, r1, c1, c2);

// Display the result
printf("Result of matrix multiplication:\n");
printMatrix(result, r1, c2);

return 0;
}

```