#include <stdio.h>

int main() {

int m, n, p, q;

int A[10][10], B[10][10], C[10][10];

// Input dimensions

printf("Enter rows and columns of Matrix A (m n): ");

scanf("%d %d", &m, &n);

printf("Enter rows and columns of Matrix B (p q): ");

scanf("%d %d", &p, &q);

// Check if multiplication is possible

if (n != p) {

printf("Matrix multiplication not possible. Columns of A must equal rows of B.\n");

return 1;

}

// Input Matrix A

printf("Enter elements of Matrix A:\n");

for (int i = 0; i < m; i++)

for (int j = 0; j < n; j++)

scanf("%d", &A[i][j]);

// Input Matrix B

printf("Enter elements of Matrix B:\n");

for (int i = 0; i < p; i++)

for (int j = 0; j < q; j++)

scanf("%d", &B[i][j]);

// Matrix Multiplication

for (int i = 0; i < m; i++) {

for (int j = 0; j < q; j++) {

C[i][j] = 0;

for (int k = 0; k < n; k++) {

C[i][j] += A[i][k] \* B[k][j];

}

}

}

// Output Result

printf("Resultant Matrix C (A x B):\n");

for (int i = 0; i < m; i++) {

for (int j = 0; j < q; j++) {

printf("%d ", C[i][j]);

}

printf("\n");

}

return 0;

}