1. Write a C program to perform Matrix Multiplication

**CODE:**

#include <stdio.h>

int main() {

int a[10][10], b[10][10], result[10][10];

int r1, c1, r2, c2;

printf("Enter rows and columns for first matrix: ");

scanf("%d %d", &r1, &c1);

printf("Enter rows and columns for second matrix: ");

scanf("%d %d", &r2, &c2);

if (c1 != r2) {

printf("Matrix multiplication not possible! Columns of first matrix must equal rows of second matrix.\n");

return 0;

}

printf("Enter elements of first matrix:\n");

for (int i = 0; i < r1; i++)

for (int j = 0; j < c1; j++)

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

printf("Enter elements of second matrix:\n");

for (int i = 0; i < r2; i++)

for (int j = 0; j < c2; j++)

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

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] += a[i][k] \* b[k][j];

}

}

}

printf("Resultant matrix:\n");

for (int i = 0; i < r1; i++) {

for (int j = 0; j < c2; j++) {

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

}

printf("\n");

}

return 0;

}

OUTPUT:

A screenshot of a computer

AI-generated content may be incorrect.