```c
#include <stdio.h>

int main() {
    int a[10][10], b[10][10], result[10][10];
    int r1, c1, r2, c2;

    // Input size of matrices
    printf("Enter rows and columns of first matrix: ");
    scanf("%d %d", &r1, &c1);
    printf("Enter rows and columns of second matrix: ");
    scanf("%d %d", &r2, &c2);

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

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

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

    // Initialize result matrix to 0
    for (int i = 0; i < r1; i++) {
        for (int j = 0; j < c2; j++) {
            result[i][j] = 0;
        }
    }

    // Matrix multiplication logic
    for (int i = 0; i < r1; i++) {
        for (int j = 0; j < c2; j++) {
            for (int k = 0; k < c1; k++) {
                result[i][j] += a[i][k] * b[k][j];
            }
        }
    }

    // Display result
```

```c
}

// Matrix multiplication logic
for (int i = 0; i < r1; i++) {
    for (int j = 0; j < c2; j++) {
        for (int k = 0; k < c1; k++) {
            result[i][j] += a[i][k] * b[k][j];
        }
    }
}

// Display result
printf("\nResultant Matrix (Multiplication):\n");
for (int i = 0; i < r1; i++) {
    for (int j = 0; j < c2; j++) {
        printf("%d\t", result[i][j]);
    }
    printf("\n");
}

return 0;
```

```
Enter rows and columns of first matrix: 3
3
Enter rows and columns of second matrix: 3
3

Enter elements of first matrix:
a[0][0] = 1
a[0][1] = 2
a[0][2] = 2
a[1][0] = 3
a[1][1] = 4
a[1][2] = 5
a[2][0] = 5
a[2][1] = 6
a[2][2] = 10

Enter elements of second matrix:
b[0][0] = 15
b[0][1] = 16
b[0][2] = 7
b[1][0] = 8
b[1][1] = 9
b[1][2] = 10
b[2][0] = 11
b[2][1] = 12
b[2][2] = 13
```

```
Enter elements of second matrix:
b[0][0] = 15
b[0][1] = 16
b[0][2] = 7
b[1][0] = 8
b[1][1] = 9
b[1][2] = 10
b[2][0] = 11
b[2][1] = 12
b[2][2] = 13

Resultant Matrix (Multiplication):
53  58  53
132 144 126
233 254 225
```