

5.4 #include < stdio.h >

int main() {

int m, n, p, q, i, j, k;

printf ("Enter rows & columns of Matrix A:");  
scanf ("%d %d", &m, &n);

int A[m][n];

printf ("Enter elements of Matrix A:\n");  
for (i = 0; i < m; i++)

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

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

printf ("Enter rows & columns of matrix B:");

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

int B[p][q];

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

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

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

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

if (n != p) {

printf ("In Matrix multiplication not possible:\n");

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```
    return 0;
}

int C[m][q];
for (i=0; i<m; i++) {
    for (j=0; j<q; j++) {
        C[i][j] = 0;
    }
}
for (k=0; k<n; k++) {
    C[i][j] += A[i][k] * B[k][j];
}

printf("In Matrix A:\n");
for (i=0; i<m; i++) {
    for (j=0; j<n; j++) printf("%d",
        A[i][j]);
    printf("\n");
}

printf("In Matrix B:\n");
for (i=0; i<p; i++) {
    for (j=0; j<q; j++) printf("%d",
        B[i][j]);
}

printf("In Product:\n");
```

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Date:

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Date: / /

```
Printf ("In Resultant Matrix(A * B) : \n");
for (i = 0; i < m; i++) {
    for (j = 0; j < n; j++) printf ("%d",
        c[i][j]);
}
```

?  
return 0;

Selection View Go Run Terminal Window Help

main.c

C

main.c M X

```
main.c > main()
1 #include <stdio.h>
2
3 int main() {
4     int m, n, p, q, i, j, k;
5
6     // Input order of Matrix A
7     printf("Enter rows and columns of Matrix A: ");
8     scanf("%d %d", &m, &n);
9     int A[m][n];
10    printf("Enter elements of Matrix A:\n");
11    for(i=0;i<m;i++)
12        for(j=0;j<n;j++)
13            scanf("%d", &A[i][j]);
14
15    // Input order of Matrix B
16    printf("Enter rows and columns of Matrix B: ");
17    scanf("%d %d", &p, &q);
18    int B[p][q];
19    printf("Enter elements of Matrix B:\n");
20    for(i=0;i<p;i++)
21        for(j=0;j<q;j++)
22            scanf("%d", &B[i][j]);
23
24    // Check multiplication rule
25    if(n != p) {
26        printf("\nMatrix multiplication not possible!\n");
27        return 0;
}
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

Matrix A:

2 3  
4 5

Matrix B:

5 4  
3 2

Resultant Matrix (A x B):

19 14  
35 26

abhaygupta@Abhay-MacBook-Air main.c %



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