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4)
```
#include <stdio.h>
int main() {
  int m, n, p, q
  printf("Enter rows and columns of Matrix A (m n):");
  scanf("%d %d", &m, &n);
  int A[m][n];
  printf("enter elements of matrix A: \n");
  for(int i=0; i<m; i++) {
  for(int j=0; j<n; j++){
   printf("A[%d][%d]:", i+1, j+1);
   scanf("%d", &A[i][j]);
   }
}
  printf("\n enter rows and columns of matrix B: \n");
  scanf("%d %d", &p, &q);
 int B[p][q];
   printf("B [%d][%d]:", i+1, j+1);
   scanf("%d", &B[i][j]; }
if (n != p) {
     printf("\n Matrix multiplication not possible! \n");
     printf("columns of A (%d) != Rows of B (%d)
          \n", n, p);
  return 0; }
     printf("columns of A (%d) != Rows of B (%d)
          \n", n, p);
return 0; }
  int C[m][q];
```

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```
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];
    }
}
}
printf("\n Matrix A (%d X %d): \n", m,n);
for (int i=0; i<m; i++){
for (int j=0; j<q; j++)
  printf("%5d", C[i][j]);
  printf("%n printf("\n"); }
  return 0; }
```

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```c
#include <stdio.h>
int main() {
    int m, n, p, q;
      printf("enter rows and columns of matrix A (m n): ");
      scanf("%d %d", &m, &n);
    int A[m][n];
       printf("enter elements of matrix A:\n");
    for (int i = 0; i < m; i++) {
    for (int j = 0; j < n; j++) {
        printf("A[%d][%d]:",i + 1, j + 1);
        scanf("%d", &A[i][j]);
       }
    }
        printf("\n enter rows and columns of matrix B: ");
        scanf("%d %d", &p, &q);
    int B[p][q];
        printf("enter elements of matrix B:\n");
    for (int i = 0; i < p; i++)
    for (int j = 0; j < q; j++){
        printf("B[%d][%d]: ",i + 1, j + 1);
        scanf("%d", &B[i][j]);}
    if (n != p){
        printf("\nMatrix multiplication not possible!\n");
        printf("columns of A (%d) != Rows of B (%d)\n", n, p);
        return 0; }
    int C[m][q];
```

```
enter rows and columns of matrix A (m n): 2 2
enter elements of matrix A:
A[1][1]:7
A[1][2]:0
A[2][1]:3
A[2][2]:1

 enter rows and columns of matrix B:
9
0
enter elements of matrix B:

Matrix multiplication not possible!
columns of A (2) != Rows of B (9)


=== Code Execution Successful ===
```

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main.c

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```c
    printf("enter elements of matrix B:\n");
for (int i = 0; i < p; i++)
for (int j = 0; j < q; j++){
    printf("B[%d][%d]: ",i + 1, j + 1);
    scanf("%d", &B[i][j]);}
if (n != p){
    printf("\nMatrix multiplication not possible!\n");
    printf("columns of A (%d) != Rows of B (%d)\n", n, p);
    return 0; }
int C[m][q];
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];
  }
}
}
    printf("\nMatrix A (%d x %d) : \n" , m,n);
for (int i = 0; i < m; i++){
for (int j = 0; j < q; j++)
    printf("%5d", C[i][j]);
    printf("\n");}
    return 0;}
```

```
enter rows and columns of matrix A (m n): 2 2
enter elements of matrix A:
A[1][1]:7
A[1][2]:0
A[2][1]:3
A[2][2]:1

 enter rows and columns of matrix B:
9
0
enter elements of matrix B:

Matrix multiplication not possible!
columns of A (2) != Rows of B (9)


=== Code Execution Successful ===
```

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