1.Write a C program to perform Matrix Multiplication.

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

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