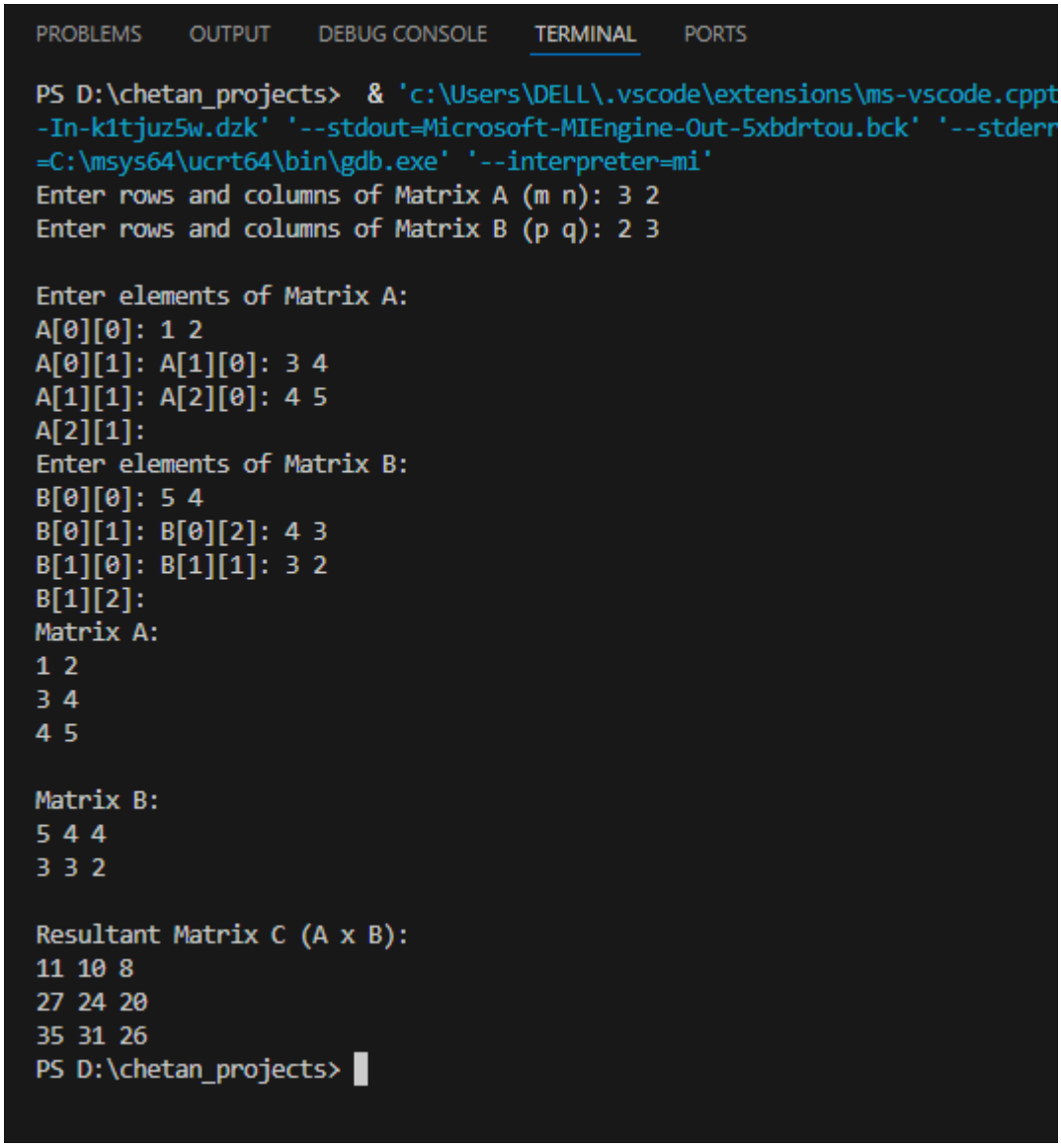
chetan_projects > C_experiments > exp5 > C 4_matrixmulti.c > main()

```c
#include <stdio.h>

int main() {
    int m, n, p, q;
    int A[10][10], B[10][10], C[10][10];
    int i, j, k;
    int sum;

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

    printf("Enter rows and columns of Matrix B (p q): ");
    scanf("%d %d", &p, &q);

    if (n != p) {
        printf("\nMatrix multiplication not possible!\n");
        printf("Columns of A must equal rows of B\n");
        return 0;
    }

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

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

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

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

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

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

    return 0;
}
```


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
PS D:\chetan_projects> & 'c:\Users\DELL\.vscode\extensions\ms-vscode.cppt
-In-k1tjuz5w.dzk' '--stdout=Microsoft-MIEngine-Out-5xbdrtou.bck' '--stderr
=C:\msys64\ucrt64\bin\gdb.exe' '--interpreter=mi'
Enter rows and columns of Matrix A (m n): 3 2
Enter rows and columns of Matrix B (p q): 2 3
Enter elements of Matrix A:
A[0][0]: 1 2
A[0][1]: A[1][0]: 3 4
A[1][1]: A[2][0]: 4 5
A[2][1]:
Enter elements of Matrix B:
B[0][0]: 5 4
B[0][1]: B[0][2]: 4 3
B[1][0]: B[1][1]: 3 2
B[1][2]:
Matrix A:
1 2
3 4
4 5
Matrix B:
5 4 4
3 3 2
Resultant Matrix C (A x B):
11 10 8
27 24 20
35 31 26
PS D:\chetan_projects>