

1.MATRIX MULTIPLICATION :-

```
#include<stdio.h>
```

```
int main() {
```

```
    int a[10][10], b[10][10], c[10][10], n, i, j, k;
```

```
    printf("Enter the value of N ");
```

```
    scanf("%d", &n);
```

```
    printf("Enter the elements of Matrix-A ");
```

```
    for (i = 0; i < n; i++) {
```

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

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

```
        }
```

```
    }
```

```
    printf("Enter the elements of Matrix-B ");
```

```
    for (i = 0; i < n; i++) {
```

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

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

```
        }
```

```
    }
```

```
    for (i = 0; i < n; i++) {
```

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

```
            c[i][j] = 0;
```

```
            for (k = 0; k < n; k++) {
```

```
                c[i][j] += a[i][k] * b[k][j];
```

```
            }
```

```
        }
```

```
    }
```

```

printf("The product of the two matrices is ");

for (i = 0; i < n; i++) {
    for (j = 0; j < n; j++) {
        printf("%d\t", c[i][j]);
    }
    printf("\n");
}

return 0;
}

```

OUTPUT :-

The screenshot shows a Dev-C++ IDE window titled "C:\Users\Naga Narendra B\OneDrive\Documents\1.cpp - [Executing] - Dev-C++ 5.11". The main editor displays a C++ program. A console window is open, showing the program's execution. The program prompts for the value of N (3), then the elements of Matrix-A and Matrix-B. It calculates and displays the product of the two matrices. The output shows the product matrix as a 3x3 grid of values: 30, 24, 18; 84, 69, 54; 138, 114, 90. The IDE also shows the compilation results at the bottom.

```

1 #include<stdio.h>
2 int main()
3 {
4     int n;
5     printf("Enter the value of N ");
6     scanf("%d", &n);
7     printf("Enter the elements of Matrix-A ");
8     int a[3][3];
9     for (int i = 0; i < n; i++)
10     {
11         for (int j = 0; j < n; j++)
12         {
13             scanf("%d", &a[i][j]);
14         }
15     }
16     printf("Enter the elements of Matrix-B ");
17     int b[3][3];
18     for (int i = 0; i < n; i++)
19     {
20         for (int j = 0; j < n; j++)
21         {
22             scanf("%d", &b[i][j]);
23         }
24     }
25     int c[3][3];
26     for (int i = 0; i < n; i++)
27     {
28         for (int j = 0; j < n; j++)
29         {
30             c[i][j] = 0;
31             for (int k = 0; k < n; k++)
32             {
33                 c[i][j] += a[i][k] * b[k][j];
34             }
35         }
36     }
37     printf("The product of the two matrices is ");
38     for (int i = 0; i < n; i++)
39     {
40         for (int j = 0; j < n; j++)
41         {
42             printf("%d\t", c[i][j]);
43         }
44         printf("\n");
45     }
46     return 0;
47 }

```

Enter the value of N 3
Enter the elements of Matrix-A 1 2 3
4 5 6
7 8 9
Enter the elements of Matrix-B 9 8 7
6 5 4
3 2 1
The product of the two matrices is 30 24 18
84 69 54
138 114 90
.....
Process exited after 46.27 seconds with return value 0
Press any key to continue . . .

Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Naga Narendra B\OneDrive\Documents\1.exe
- Output Size: 129.7734375 KiB
- Compilation Time: 0.27s