

## Assessment -1

1. Write a program to make multiplication of 2-D Matrix

### Code:

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

```
int main() {
    int arr1[2][2], arr2[2][2], multi[2][2], i, j;

    printf("Enter values for arr1:\n");
    for (i = 0; i < 2; i++) {
        for (j = 0; j < 2; j++) {
            printf("Enter the value [%d][%d]: ", i, j);
            scanf("%d", &arr1[i][j]);
        }
    }
    printf("\n----- Matrix 1 ----- \n");
    for (i = 0; i < 2; i++) {
        for (j = 0; j < 2; j++) {
            printf("%d ", arr1[i][j]);
        }
        printf("\n");
    }

    printf("Enter values for arr2:\n");
    for (i = 0; i < 2; i++) {
        for (j = 0; j < 2; j++) {
            printf("Enter the value [%d][%d]: ", i, j);
            scanf("%d", &arr2[i][j]);
        }
    }
    printf("\n----- Matrix 2 ----- \n");
    for (i = 0; i < 2; i++) {
        for (j = 0; j < 2; j++) {
            printf("%d ", arr2[i][j]);
        }
        printf("\n");
    }
}
```

```


for (i = 0; i < 2; i++) {
    for (j = 0; j < 2; j++) {
        multi[i][j] = arr1[i][j] * arr2[i][j];
    }
}

printf("Matrix multiplication:\n");
for (i = 0; i < 2; i++) {
    for (j = 0; j < 2; j++) {
        printf("%d ", multi[i][j]);
    }
    printf("\n");
}

return 0;
}

```

## Output:



The screenshot shows a Windows command prompt window with the title bar "C:\Users\user\OneDrive\Documents\C programming\multiply.exe". The program prompts the user to enter values for two 2x2 matrices, arr1 and arr2. For arr1, the values entered are 2, 3, 7, and 4. For arr2, the values entered are 6, 8, 4, and 5. The program then displays the resulting matrix multiplication as a 2x2 matrix with values 12, 24, 28, and 20.

```

C:\Users\user\OneDrive\Documents\C programming\multiply.exe
Enter values for arr1:
Enter the value [0][0]: 2
Enter the value [0][1]: 3
Enter the value [1][0]: 7
Enter the value [1][1]: 4

----- Matrix 1 -----
2 3
7 4
Enter values for arr2:
Enter the value [0][0]: 6
Enter the value [0][1]: 8
Enter the value [1][0]: 4
Enter the value [1][1]: 5

----- Matrix 2 -----
6 8
4 5
Matrix multiplication:
12 24
28 20

```