

Assignment Title:

Create a C program to input and print a 3x3 matrix entered by the user.

What the program should do (Step-by-Step):

1. Declare a 3x3 matrix

You need to create a 2-dimensional array that has:

- 3 rows and
  - 3 columns
- This is done using:

```
int matrix[3][3];
```

2. Ask the user to enter 9 values

Since it is a 3x3 matrix, the user must enter 9 values (3 rows x 3 columns).

You will use two for loops:

- The outer loop for rows (i from 0 to 2)
- The inner loop for columns (j from 0 to 2)

Use scanf() to input each element:

```
for (i = 0; i < 3; i++) {  
    for (j = 0; j < 3; j++) {  
        printf("Enter element at position [%d][%d]: ", i, j);  
        scanf("%d", &matrix[i][j]);  
    }  
}
```

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Self-Made Assignment - C Language

Two dimensional Array in C Language

3. Print the matrix in a nice format

Again, use two for loops to display the matrix:

Each row should print on a new line:

```
for (i = 0; i < 3; i++) {  
    for (j = 0; j < 3; j++) {  
        printf("%d ", matrix[i][j]);  
    }  
    printf("\n");  
}
```

Output Screen:

Output

```
Enter 9 elements for a 3x3 matrix:  
Enter element at position [0][0]: 2  
Enter element at position [0][1]: 4  
Enter element at position [0][2]: 1  
Enter element at position [1][0]: 5  
Enter element at position [1][1]: 2  
Enter element at position [1][2]: 6  
Enter element at position [2][0]: 4  
Enter element at position [2][1]: 3  
Enter element at position [2][2]: 6
```

The matrix is:

```
2 4 1  
5 2 6  
4 3 6
```

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