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COURSE NAME: DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS

COURSE CODE: CSA0302

Experiment 2: 2D Matrix Mul

Code:

```
#include <stdio.h>
int main() {
    int a[3][3] = {
        {1, 2, 3},
        {4, 5, 6},
        {7, 8, 9}
    };
    int b[3][3] = {
        {9, 8, 7},
        {6, 5, 4},
        {3, 2, 1}
    };
    int mul[3][3];
    int i, j, k;
    for (i = 0; i < 3; i++) {
        for (j = 0; j < 3; j++) {
            mul[i][j] = 0;
            for (k = 0; k < 3; k++) {
                mul[i][j] += a[i][k] * b[k][j];
            }
        }
    }
    printf("The result of the matrix multiplication is:\n");
    for (i = 0; i < 3; i++) {
        for (j = 0; j < 3; j++) {
```

```
            printf("%d\t", mul[i][j]);
        }
        printf("\n");
    }
return 0;
}
```

Output:

```
The result of the matrix multiplication is:
30  24  18
84  69  54
138 114 90


=== Code Execution Successful ===
```