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**COURSE NAME : DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS**

**COURSE CODE : CSA0302**

## 2. WRITE A C PROGRAM TO PERFORM SUBTRACTION OF 3*3 MATRIX

## C PROGRAMMING CODE:

```
#include <stdio.h>

int main() {
int a[3][3], b[3][3], diff[3][3], i, j;

printf("Enter elements of first 3x3 matrix:\n");
for(i=0;i<3;i++)
for(j=0;j<3;j++)
scanf("%d",&a[i][j]);

printf("Enter elements of second 3x3 matrix:\n");
for(i=0;i<3;i++)
for(j=0;j<3;j++)
scanf("%d",&b[i][j]);

for(i=0;i<3;i++)
for(j=0;j<3;j++)
diff[i][j]=a[i][j]-b[i][j];

printf("Difference of matrices:\n");
for(i=0;i<3;i++){
for(j=0;j<3;j++)
printf("%d ",diff[i][j]);
printf("\n");
}
return 0;
}
```

## OUTPUT:

main.c

Share Run

```c
#include <stdio.h>
int main() {
    int a[3][3], b[3][3], diff[3][3], i, j;
    printf("Enter elements of first 3x3 matrix:\n");
    for(i=0;i<3;i++) for(j=0;j<3;j++) scanf("%d",&a[i][j]);
    printf("Enter elements of second 3x3 matrix:\n");
    for(i=0;i<3;i++) for(j=0;j<3;j++) scanf("%d",&b[i][j]);
    for(i=0;i<3;i++) for(j=0;j<3;j++) diff[i][j]=a[i][j]-b[i][j];
    printf("Difference of matrices:\n");
    for(i=0;i<3;i++){
        for(j=0;j<3;j++) printf("%d ",diff[i][j]);
        printf("\n");
    }
    return 0;
}
```

Output

```
Enter elements of first 3x3 matrix:
1 2 3 4 5 6 7 8 9
Enter elements of second 3x3 matrix:
9 8 7 6 5 4 3 2 1
Difference of matrices:
-8 -6 -4
-2 0 2
4 6 8


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