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COURSE NAME : DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS

COURSE CODE : CSA0302

1. WRITE A C PROGRAM TO PERFORM ADITTION OF 3*3 MATRIX

C PROGRAMMING CODE:

```c
#include <stdio.h>

int main() {
int a[3][3], b[3][3], sum[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++)
sum[i][j]=a[i][j]+b[i][j];

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

OUTPUT:

```c
#include <stdio.h>
int main() {
    int a[3][3], b[3][3], sum[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++) sum[i][j]=a[i][j]+b[i][j];
    printf("Sum of matrices:\n");
    for(i=0;i<3;i++){
        for(j=0;j<3;j++) printf("%d ",sum[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
Sum of matrices:
10 10 10
10 10 10
10 10 10

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