

Q. Write a program to perform matrix multiplication of two 2x2 matrices from the user.

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

```
int main(){
```

```
    int ary1[2][2], ary2[2][2], ary3[2][2];
```

```
    int n = 2;
```

```
    for (int i = 0; i < n; i++){
```

```
        for (int j = 0; j < n; j++){
```

```
            printf("Enter a %dx%d for matrix-1: ",i,j);
```

```
            scanf("%d", &ary1[i][j]);
```

```
        }
```

```
    }
```

```
    printf("\n");
```

```
    for (int i = 0; i < n; i++){
```

```
        for (int j = 0; j < n; j++){
```

```
            printf("Enter a %dx%d for matrix-2: ",i,j);
```

```
            scanf("%d", &ary2[i][j]);
```

```
        }
```

```
    }
```

```
    for (int i = 0; i < n; i++){
```

```
        for (int j = 0; j < n; j++){
```

```
            ary3[i][j] = (ary1[i][0] * ary2[0][j]) + (ary1[i][1] * ary2[1][j]);
```

```
        }
```

```
    }
```

```
//-----
```

```
for (int i = 0; i < n; i++){  
    printf(" |");  
    for (int j = 0; j < n; j++){  
        printf(" %d ", ary1[i][j]);  
    }  
    printf(" |");
```

```
    if (i == 0){  
        printf("x");  
    }else{  
        printf(" ");  
    }
```

```
    printf(" |");  
    for (int j = 0; j < n; j++){  
        printf(" %d ", ary2[i][j]);  
    }  
    printf(" |");
```

```
    if (i == 0){  
        printf("=");  
    }else{  
        printf(" ");  
    }
```

```
}
```

```
printf(" |");
```

```
for (int j = 0; j < n; j++){
```

```
    printf(" %d ", ary3[i][j]);
```

```
}
```

```
printf(" |");
```

```
printf("\n");
```

```
}
```

```
return 0;
```

```
}
```