

```
/*  
Program to Illustrate the Concept of Passing 2-D Array to Function  
Program to Find Sum of Diagonal Elements of a Matrix  
*/
```

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

```
#define ROW 10
```

```
#define COL 10
```

```
int diagonal_sum(int [][], int, int);
```

```
main()
```

```
{
```

```
    int a[ROW][COL], row, col, i, j, sum;
```

```
    printf("\nEnter no. of rows and columns of a matrix: ");
```

```
    scanf("%d %d", &row, &col);
```

```
    printf("\nEnter elements:\n");
```

```
    for (i=0; i<row; i++)
```

```
        for (j=0; j<col; j++)
```

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

```
    printf("\nMatrix is:\n\n");
```

```
    for (i=0; i<row; i++)
```

```
    {
```

```
        for (j=0; j<col; j++)
```

```
            printf("\t%d", a[i][j]);
```

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

```
    }
```

```
    sum = diagonal_sum(a, row, col);
```

```
    printf("\nSum: %d", sum);
```

```
    getch();
```

```
}
```

```
int diagonal_sum(int x[ROW][COL], int r, int c)
{
    int i, j, s=0;

    for (i=0; i<r; i++)
        for (j=0; j<c; j++)
            if (i == j)
                s = s + x[i][j];

    return s;
}
```