

```

1  #include<stdio.h>
2  void main()
3  {
4      int mat[12][12];
5      int i,j,row,col,sum=0;
6      printf("enter the number of rows and columns of matrix\n");
7      scanf("%d%d",&row,&col);
8      printf("enter the elements of the matrix\n");
9      for(i=0;i<row;i++)
10     {
11         for(j=0;j<col;j++)
12             scanf("%d",&mat[i][j]);
13     }
14     printf("the matrix\n");
15     for(i=0;i<row;i++)
16     {
17         for(j=0;j<col;j++)
18             printf("%d\t",mat[i][j]);
19         printf("\n");
20     }
21     for(i=0;i<row;i++)
22     {
23         for(j=0;j<col;j++)
24         {
25             if(i==j)
26                 sum = sum + mat[i][j];
27         }
28     }
29     printf("the sum of diagonal elements of square matrix is = %d"
30     )

```

enter the number of rows and columns of matrix

3

3

enter the elements of the matrix

1

2

3

4

5

6

7

8

9

the matrix

1 2 3

4 5 6

7 8 9

the sum of diagonal elements of square matrix is = 15

Program compiled after 36.93 seconds with return value 52