```
Copy
#include <stdio.h>
int main()
{
     int m,n;  //Row Column Declaration
     printf("Enter the number of rows and column\n");
     scanf("%d %d",&m,&n); //Row Column Initialization
     int arr[m][n]; //Matrix Declaration
     printf("Enter the elements of the matrix\n");
     for(int i=0;i<m;i++) //Matrix Initialization</pre>
         for(int j=0;j<n;j++)</pre>
             scanf("%d",&arr[i][j]);
     printf("\nElements in the matrix are \n");
    for(int i=0;i<m;i++) //Print Matrix</pre>
         for(int j=0;j<n;j++)</pre>
             printf("%d ",arr[i][j]);
         printf("\n");
Enter the number of rows and column 3 3
Enter the elements of the matrix 1 2 3 4 5 6 7 8 9
Elements in the matrix are
1 2 3
4 5 6
7 2 9
                                                         20
                     </>
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```
Row Sum....

Sum of all the elements in row 0 is 6

Sum of all the elements in row 1 is 15

Sum of all the elements in row 2 is 24

Column Sum....

Sum of all the elements in column 0 is 12

Sum of all the elements in column 1 is 15

Sum of all the elements in column 2 is 18
```

Program 2: Calculate the sum of each Row and Column

In this method, an M*N matrix is declared and the sum of each row and column is calculated by calling a function and the result is then displayed.

Algorithm

- 1. Start
- 2. Declare a 2-D array i.e., an M*N matrix.
- 3. Initialize the array using two for loops.
- 4. Declare two variables that will store the row and column sum.
- 5. Now to calculate the row sum call a function.



- 6. Keep the first index of the matrix constant and increment the second index to access each element of the row.
- 7. Keep on adding these elements and display the result after coming out of the inner loop.
- 8. Now to calculate the column sum call another function.
- 9. This time increment the first index of the matrix and keep the second index of the matrix constant to access each element of the column.
- 10. Keep on adding these elements and display the result after coming out of the nested loop.
- 11. Stop.

In this program, two functions are called to calculate the sum of each row and each column.

```
#include<stdio.h>
void rowSum(int arr[10][10], int m, int n);
void columnSum(int arr[10][10], int m, int n);
int main()
{
                                             //Matrix and its size Declarati
    int a[10][10], m,n;
    printf("\n Please Enter Number of rows and columns : ");
    scanf("%d %d", &m, &n);
                                             //Initialize matrix size
    printf("\n Please Enter the Matrix Elements \n");
    for(int i = 0; i < m; i++)
                                             //Initialize the matrix
        for(int j = 0; j < n; j++)
            scanf("%d", &a[i][j]);
        }
    printf("Matrix Elements are...");
    for(int i = 0; i < m; i++)</pre>
                                              //Print the matrix
        for(int i= 0: i < n: i++)</pre>
```

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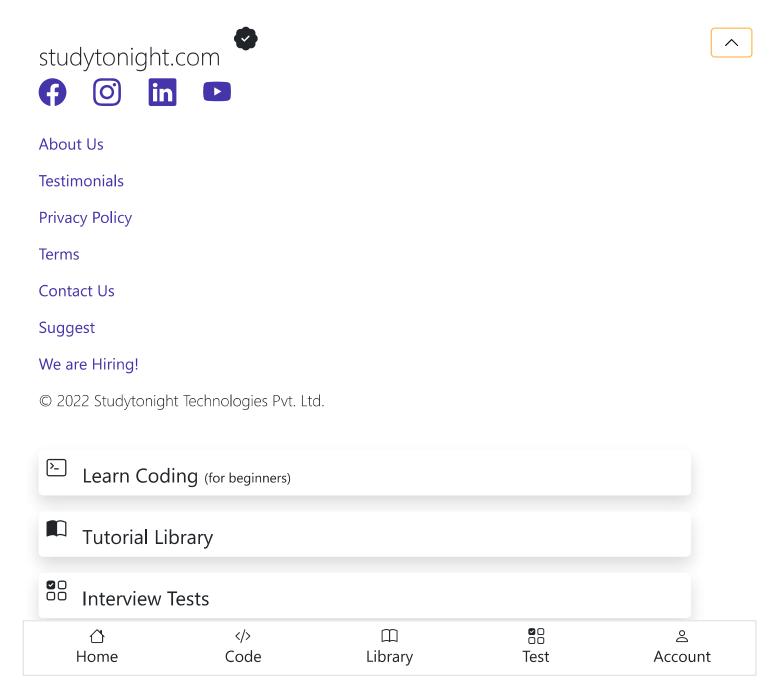
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```
Please Enter Number of rows and columns : 3 3
Please Enter the Matrix Elements : 1 2 3 4 5 6 7 8 9
Matrix Elements are...
1 2 3
4 5 6
7 8 9
Row Sum...
The Sum of Elements of row 1 is 6
The Sum of Elements of row 2 is 15
The Sum of Elements of row 3 is 24
Column Sum...
The Sum of Elements of Column 1 is 12
The Sum of Elements of Column 2 is 15
The Sum of Elements of Column 3 is 18
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