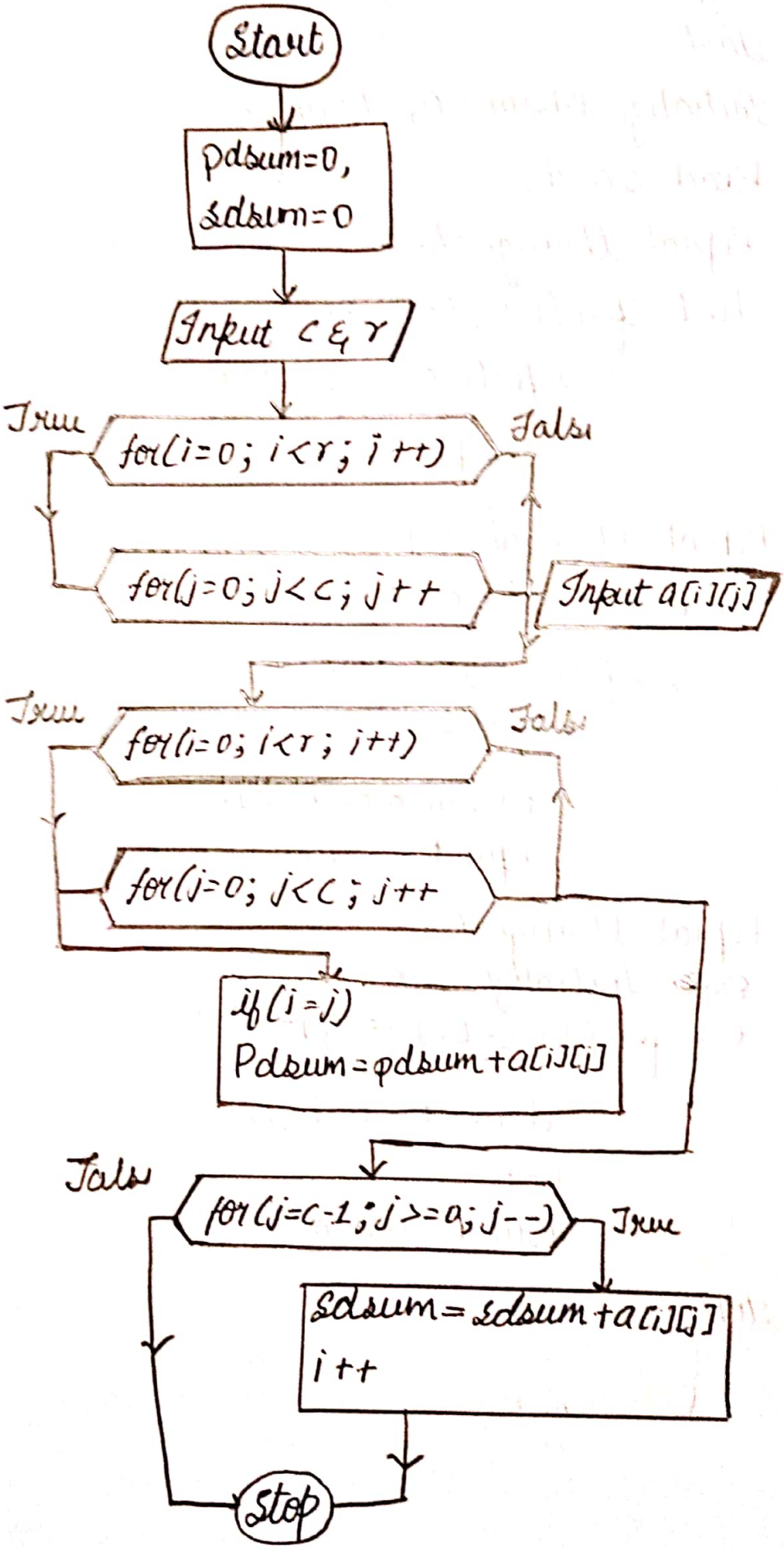
Algorithm

1. Start
2. Initialize Pdsum= 0, sdsum=0
3. Read c and r
4. Repeat through 4.1
   4.1 for(i=0; i<r; i++)
      4.2 for(j=0; j<c; j++)
         Input a[i][j]
5. Repeat through 5.1
   5.1 for(i=0; i<r; i++)
      5.2 for(j=0; j<c; j++)
         5.3 if(i=j)
            Pdsum += a[i][j]
            Print Pdsum.
6. Repeat through 6.1
   Initialize i=0
   6.1 for(j = c-1; j>=0; j--)
            Sdsum += a[i][j];
            i++
            Print sdsum
7. Stop.

Flowchart


Start
pdsum=0,
sdsum=0
Input r & c
True
for(i=0; i<r; i++)
False
for(j=0; j<c; j++
Input a[i][j]
True
for(i=0; i<r; i++)
False
for(j=0; j<c; j++
if(i=j)
Pdsum=pdsum+a[i][j]
False
for(j=c-1; j>=0; j--)
True
sdsum=sdsum+a[i][j]
i++
Stop

C (gcc 6.3) ▼ Code gets autosaved every second

```c
{
    int a[10][10],i,j,r,c;
    int pdsum=0,sdsum=0;
    printf("Enter the number of rows and column\n");
    scanf("%d%d", &c, &r);
    printf("Enter array element\n");
     for(i=0;i<r;i++)
    {
        for(j=0;j<c;j++)
        {
            scanf("%d", &a[i][j]);
        }
    }
     for(i=0;i<r;i++)
    {
        for(j=0;j<c;j++)
        {
            if(i=j)
            pdsum=pdsum+a[i][j];
        }
    }
    printf("Sum of all elements of principal diagonal is %d\n",pd
    i=0;
```

0.0

Open File ✓ Custom In

Custom Input

```
3 3
1 2 3 4 5 6 6 7 8
```

Status Successfully executed Date 2020-06-16 11:11:22 Time 0 sec Mem 9.424 kB

Input

```
3 3
1 2 3 4 5 6 6 7 8
```

Output

```
Enter the number of rows and column
Enter array element
Sum of all elements of principal diagonal is 13
Sum of all the elements of secondary diagonal is 14
```