* Primary and second diagnol sum *

• Algorithm •

Step1 : Start

Step2 : Read rows and columns.

Step3 : Initialise
$$pdsum = 0$$
$$sdsum = 0$$

Step4 : To enter elements
Repeat   for (i=0; i < rows ; i++)
           for (j=0 ; j < cols ; j++)
             Read a[i][j]

Step5 : Primary diagnol sum.
for (i=0; i < rows ; i++)
   for (j=0 ; j < cols ; j++)
     if (i == j)
        Pdsum = Pdsum + a[i][j]
Print   pdsum.

Step 6 : Secondary diagnol sum
         Rowi i = 0
         for (j = 0 • cols -1 ; j >= 0 ; j --)
            spdsum = sdsum + a[i][j]
            i ++
         Print   sdsum.

Step 7 : Stop

- Flowchart.

```
                    ┌─────────┐
                    │  Start  │
                    └─────────┘
                         │
                         ▼
               ╱ Read rows and cols ╱
                         │
                         ▼
          ⟨ for ( i = 0 ; i < rows ; i++ ) ⟩
                         │
                         ▼
          ⟨ for ( j = 0 ; j < cols ; j++ ) ⟩
                         │
                         ▼
               ╱ Read a[i][j] ╱
                         │
                         ▼
          ⟨ for ( i = 0 ; i < rows ; i++ ) ⟩
                         │
                         ▼
          ⟨ for ( j = 0 ; j < cols ; j++ ) ⟩
                         │
                         ▼
               ⟨ if ( i == j ) ⟩
                         │
                         ▼
          │ pdsum = pdsum + a[i][j] │
                         │
                         ▼
               ╱ Print pdsum ╱
                         │
                         ▼
                  │ i = 0. │
                         │
                         ▼
          ⟨ for ( j = cols -1 ; j >= 0 ; j++ ) ⟩
                         │
                         ▼
          │ sdsum = sdsum + a[i][j] │
                         │
                         ▼
                  │ i++ │
                         │
                         ▼
               ╱ Print sdsum ╱
                         │
                         ▼
                    ┌─────────┐
                    │  Stop   │
                    └─────────┘
```