* Matrix Addition and subtraction *

• Algorithm.

Step 1 : Start.

Step 2 : Read rows and cols.

Step 3 : Repeat for $i = 0$ to row-1 and
$j=0$ to col-1 $j=0$ to col-1
Read $a[i][j]$

Step 4 : Repeat for $i=0$ to row-1 and
$j=0$ to col-1
Read $b[i][j]$

Step 5 : For $i=0$ to row-1 and $j=0$ to col-1
$sum[i][j] = a[i][j] + b[i][j]$
Print $sum[i][j]$

Step 6 : For $i=0$ to row-1 and $j=0$ to col-1
$dif[i][j] = a[i][j] - b[i][j]$
Print $dif[i][j]$

Step 7 : Stop

° Plowchart.

```
                    ( Start )
                        |
                        v
        / Read rows and cols /
                        |
                        v
  +--< for (i=0; i < rows; i++ >---- False
  |          | True                    |
  |          v                         |
 False  < for(j=0; j <cols; j++ >      |
  |          | True          |         |
  |          v               |         |
  |    / Read a[i][j] /-------+         |
  +----------|                         |
             v <------------------------+
  +--< for(i =0; i < rows; i++ >---- False
  |          | True                    |
  |          v                         |
 False  < for(j=0; j<cols; j++ >       |
  |          | True          |         |
  |          v               |         |
  |    / Read b[i][j] /-------+         |
  +----------|                         |
             v <------------------------+
  +--< for(i=0; i< rows; i++) >---- False
  |          | True                    |
  |          v                         |
 False  < for(j=0; j<cols; j++) >      |
  |          | True          |         |
  |          v               |         |
  | |sum[i][j]=a[i][b] + b[i][j]|      |
  |          | TRUE          |         |
  |          v               |         |
  |    / print sum[i][j] /----+         |
  +----------|                         |
             v <------------------------+
  +--< for(i=0; i<rows; i++) >---- False
  |          | True                    |
  |          v                         |
 False  < for(j=0; j<cols; j++) >      |
  |          | True          |         |
  |          v               |         |
  | |dif[i][j] = a[i][j] + b[i][j]|    |
  |          |               |         |
  |          v               |         |
  |    / print dif[i][j] /----+         |
  +----------|                         |
             v <------------------------+
          ( Stop )
```