2-D Arrays

```
int a[3][4];

for(i = 0; i < 3; i++)
    for(j = 0; j < 4; j++)
        a[i][j] = 0;
```

```
     0   1   2   3
   +---+---+---+---+
 0 |   |   |   |   |
   +---+---+---+---+
 1 |   |   |   |   |
   +---+---+---+---+
 2 |   |   |   |   |
   +---+---+---+---+
```

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Rowwise Operations

```
int a[3][4];

for(i = 0; i < 3; i++)
    for(j = 0; j < 4; j++)
        cin >> a[i][j];
```

```
     0   1   2   3
   +---+---+---+---+
 0 |   |   |   |   |
   +---+---+---+---+
 1 |   |   |   |   |
   +---+---+---+---+
 2 |   |   |   |   |
   +---+---+---+---+
```

Note that rowwise input/output is the "natural" way to do it!

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Columnwise Operations

```
int a[3][4];

for(j = 0;  j < 4;  j++)
    for(i = 0;  i < 3;  i++)
        cin >> a[i][j];
```

```
    0   1   2   3
  +---+---+---+---+
0 |   |   |   |   |
  +---+---+---+---+
1 |   |   |   |   |
  +---+---+---+---+
2 |   |   |   |   |
  +---+---+---+---+
```

ARR2D030