

Exploring two-dimensional arrays

- Declare a 5 by 5 array, call it grid5 and fill the array with consecutive even integers beginning with 10.
 - Display the array placing two spaces between each value.
- Declare a 4x4 array, call it grid4 and fill the array with randomly generated integers between 10 and 99.
 - Display the contents of the array
- Declare a 3 by 3 array, call it grid3 and **initialize** it with magic square values.
 - Display the contents of the array

Magic Square divided up

1. Declare a 3x3 array of integers.
2. Use nested loops to:
 - Fill the array with randomly generated numbers 1-9 inclusive.
 - Display the contents of the array.
3. Using loops, calculate the sum of each row in the array.
4. Display the contents of the array along with the row number and the sum of the row (see sample output screen shot below).

```
9  1  7 Row 0 sum= 17
2  9  5 Row 1 sum= 16
3  4  7 Row 2 sum= 14
```

5. Display the contents of the array along with the column number and the sum of each column (see sample output screen shot below).

```
9  1  7
2  9  5
3  4  7
Column 0 sum= 14
Column 1 sum= 14
Column 2 sum= 19
```

6. Display the contents of the array along with the sum of the diagonals (see sample output screen shot below).

```
9  1  7
2  9  5
3  4  7
Diagonal down sum= 25
Diagonal up sum= 19
```

A separate button should be created to produce each of the above screen shots.