

Manipulating Arrays --

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1. Set up a random number generator
2. Declare a constant named MAX and set it equal to 1000
3. Declare an array variable of type int of size MAX named x
i.e.,

```
const int MAX = 1000;  
int x[MAX];
```

4. Add the following cout statement: "Populating array x..."
5. Use a for loop and random number generator to populate the array with random values between 1 and 10,000
6. Using the concepts we've learned during lecture, find the sum of all numbers in array x and print that sum to screen.

```
e.g., cout << the sum of all values in the x array is << sum << endl;
```

7. Using an if statement, print all numbers from the x array with a value of greater than 8,000.
8. Using an if statement, print all numbers from the x array with a value of less than 100.

Extra: Use arithmetic operators in conjunction with the x array and for loop to determine the standard deviation for all values contained in the array x.