Arrays in C

An array is a consecutive group of storage locations all known by the same name. Individual elements are identified by a subscript.

```c
int a[5];
```

```
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</table>
```

Some Array Examples

```c
int a[5];

int b[6] = {45, 23, 57, 11, 73, 56};

int c[] = {34, 75, 44, 27, 80};

c char ch[] = "This is a string";

a[0] = 5;
a[1+3] = 6;
i = 2;
a[i] = 14;
a[i+1] = 24;
```
Arrays and the for Loop

The perfect marriage!

```cpp
int a[3], i;

for(i=0; i < 5; i++)
    a[i] = 0;

for(i=0; i < 5; i++)
    a[i] = i*10;
```

Array Input and Output

```cpp
int quizzes[8], sum;
int i;

for(i = 0; i < 8; i++)
{
    cin >> quiz[i];
    sum += quiz[i];
    cout << quiz[i];
} // END for i
cout >> sum;
```
A New Organization for Programs

```cpp
int quizzes[8], sum;
int i;

for(i = 0; i < 8; i++)
    cin >> quiz[i];
for(i = 0; i < 8; i++)
    sum += quiz[i];
for(i = 0; i < 8; i++)
    cout << quiz[i];
cout >> sum;
```