

# CSC-210: Some Final Thoughts

# Additional concepts: *for-each* loop

```
int arr[] = {17,6,4,9};
```

```
// output all elements (standard way)
System.out.println("elements of array: ");
for (int i = 0; i < arr.length; i++) {
    System.out.println(arr[i]);
}
```

```
// for each method
System.out.println("elements of array: ");
for (int a : arr) {
    System.out.println(a);
}
```

Programming **concepts** apply in *most* languages

- Variable declaration and initialization
  - `int x = 4;`
  - `int [] arr = {1,2,3};`
- Flow of control
  - *if* statements, *switch* statements
  - Loops: *for* loops, *while* loops, *do..while* loops
- Methods (or functions)
- Comments

# Program: Add all numbers between 1 and 10 in **Java**

```
public class sumClass {
```

```
    public static void main(String[] args) {
```

```
        // this is a comment
```

```
        int sum = 0;
```

```
        for (int i = 1; i <= 10; i++) {
```

```
            sum = sum + i;
```

```
        }
```

```
        System.out.println("The sum is " + sum);
```

```
    }
```

```
}
```

## Algorithm:

Set the current sum equal to 0

For each integer 1, ...10,  
add the integer to the sum

Output the sum

# Program: Add all numbers between 1 and 10 in C++

```
#include <iostream>
using namespace std;
int main () {
    // this is a comment
    int sum = 0;
    for (int i = 1; i <= 10; i++) {
        sum = sum + i;
    }
    cout << "The sum is " << sum << endl;
    return 0;
}
```

## Algorithm:

Set the current sum equal to 0

For each integer 1, ...10,  
add the integer to the sum

Output the sum

## Program: Add all numbers between 1 and 10 in **Python**

```
# this is a comment
```

```
sum = 0;
```

```
for i in range(1,11) :
```

```
    sum = sum + i
```

```
print "The sum is", sum
```

### Algorithm:

Set the current sum equal to 0

For each integer 1, ...10,  
add the integer to the sum

Output the sum