Java/Processing

JavaScript

Variables

Fixed Type

```
int x = 5;
float x = 5.2;
String x = "Bob";
```

Dynamic Type!

```
var x = 5;
var x = 5.2;
var x = "Bob";
```

Array

```
int [] numbers = new int[4];
numbers[0] = 57;
numbers[1] = 22;
numbers[2] = 34;
numbers[3] = 72;

numbers.length // is 4
```

ArrayList

```
ArrayList<Integer> numbers = new ArrayList<Integer>();
numbers[0] = 57;
numbers[1] = 22;
numbers[2] = 34;
numbers[3] = 72;

numbers.size() // is 4
```

JavaScript Array

Like an ArrayList with the Syntax of an Array:

```
var numbers = [57 ,22, 34, 72];
```

```
var numbers = [];
numbers[0] = 57;
numbers[1] = 22;
numbers[2] = 34;
numbers[3] = 72;
```

```
var numbers = [];
numbers.push(57);
numbers.push(22);
numbers.push(34);
numbers.push(72);
```

```
numbers.length // is 4
```

add(value)	push(value)
remove(length-1)	pop()
remove(index)	delete(index)
clear()	numbers = [] //reinitialize

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Functions

```
int myAddInt(int num1, int num2)
{
    return num1+num2;
}
```

```
function myAddInt(num1, num2)
{
    return num1+num2;
}
```

```
void printFloat(float num)
{
    println(num);
}
```

```
function printFloat(num)
{
    console.log(num);
}
```

```
void doSomething()
{
    //something
}
```

```
function doSomething()
{
    //something
}
```

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Objects

```
class Ball
{
   float x;
   float y;

   Ball()
   {
       x = random(100);
       y = random(100);
   }

   void update()
   {
      x += 5;
      y += 5;
   }

}

Ball ball = new Ball();
```

```
var Ball =
{
   x,
   y,
   Ball: function()
   {
       this.x = Math.random(100);
       this.y = Math.random(100);
   },

   update: function()
   {
      this.x += 5;
      this.y += 5;
   }

};


var ball = Object.create(Ball);
```

Useful JavaScript Functions

```
//access HTML objects: images, paragraphs, etc.
document.getElementById("elementID")

//do something when the page loads - like Processing's setup() function
window.onload = myFunction();

//call a function every x milliseconds - 30ms ~ like Processing's draw() function
setInterval(myFunction, 30);

//output to the console
console.log("Hello World!");

//get the window width and height
window.innerWidth
window.innerHeight
```