Introduction to Objects

Quiz Review

```
int sum = 0;  1→3→6→10

int[] nums = new int[10];
```

`0 1 3 6 10 15 0 0 0 0`

```
for (int i=0; i<nums.length; i++) {
```

`0 1 2 3 4`

```
    sum += i; // 0, 1, 3, 6, 10, 15, 21, 28...
    nums[i] = sum;
}
int result = nums[4]; // 10
```

`i++` is the same as `i += 1`

```
int[] nums = new int[10];
```

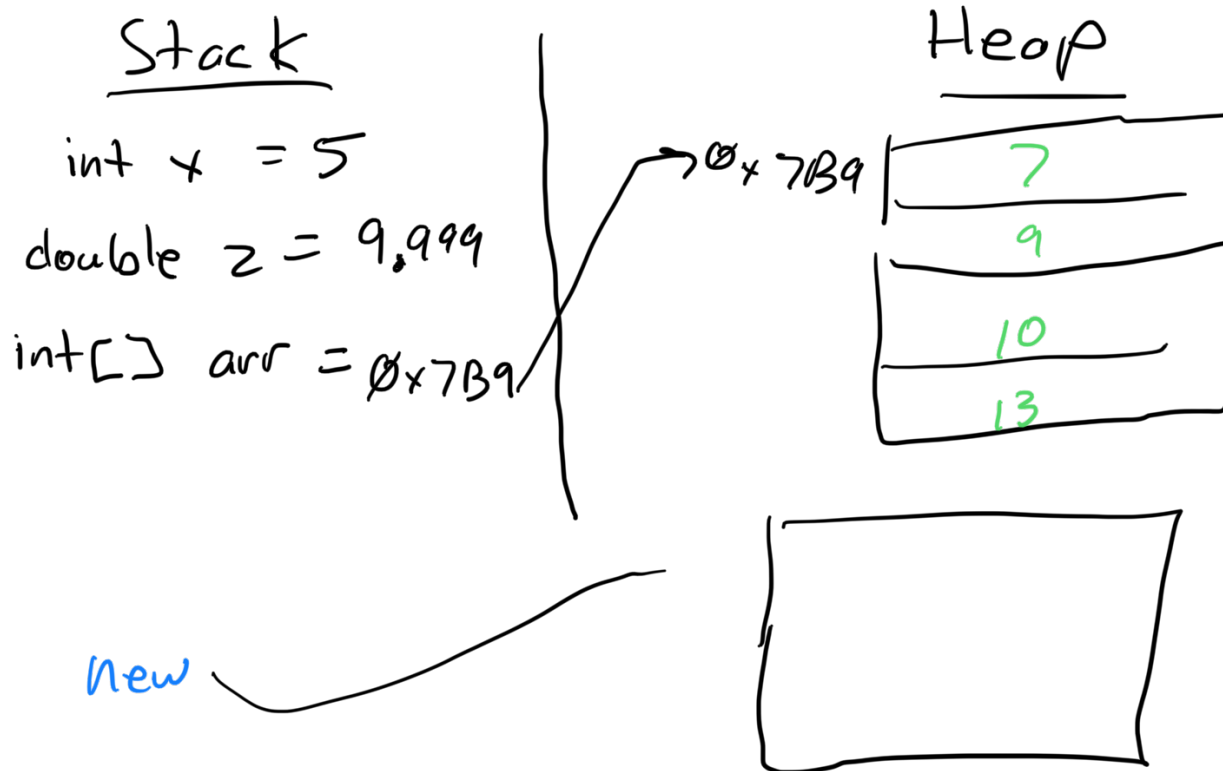type | Variable name | assign. operator | expression type

`new` — `int[ a ];`

expression of int

Families of languages

Object Oriented
Functional
Procedural / Scripting *

Stack

int x = 5

double z = 9.999

int[] arr = 0x7B9

Heap

0x7B9 | 7
9
10
13

new

in Java a Class is a template
or blue print for an Object
the new keyword instatiates an
object from its t   l   l

Strings are objects however unlil
most Java objects Strings are
immutable

As a consequence every operation
or method on a String returns a
new copy.

example:

String   s   = " Hello ";

s = s ⊕ " Andrew "; ← new string

new String

ey 2:

String   foods = "pie cake candy";

String[] foodArr = foods.split(" ");
// ["pie", "cake", "candy"]   → sepeual

```
Food Arr [0]  =  'Carrots';
//["Carrots", "cake", "candy"]
```

```
int    x = 5;
int    y = x + 5                    Strings
y++;  // does not  change  x
double [ ]  a  = new  double[5];
double [ ]  b  = a;
b[1] = 7.0 // both  a  and  b  see
        // the  change
```