

COMP 1010- Summer 2015 (A01)

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comparing arrays

compare arrays!

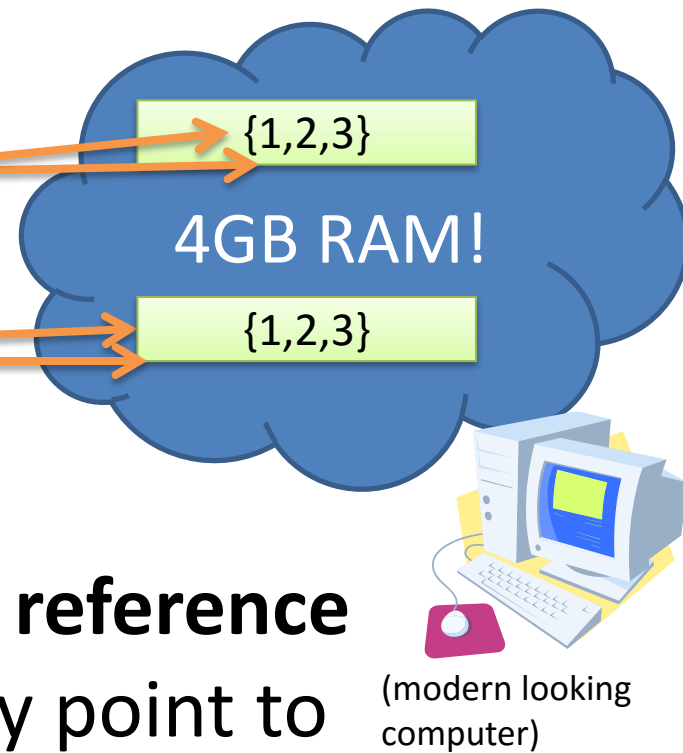
```
int[] i = {1,2,3};
```

```
int[] j = {1,2,3};
```

```
println(i==j); // ?
```

note: this only compares if i and j **reference** the same memory location. If they point to the same place.

note: There is no built in function for arrays for comparison – we usually write the comparison ourselves.



array comparison algorithm.

go from left to right through the array indices

- at each index (box), compare the data in one array to the other array at the same index

- if they are not equal, stop checking

use a for loop to go through the indices..

array comparison algorithm - detailed

```
boolean equals = true; // assume they are equal
for (int i=0; i < array.length; i++) {
    if (data not equals) // pseudo code
        equals = false;
}
```

array comparison algorithm.

use a for loop to go through the indices..

how to quit early?

use an additional boolean in the test
condition

array comparison algorithm - detailed

```
boolean equals = true; // assume they are equal
```

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

```
for (int i=0; i < array.length && equals; i++) {
```

```
    if (data not equals) // pseudo code
```

```
        equals = false;
```

```
}
```

Example: wandering star

Make a program that

- Draws lines between the following points
- Makes the points move randomly (wander around)

```
float[] xOriginal = {100, 140, 40, 160, 60};
```

```
float[] yOriginal = {40, 160, 80, 80, 160};
```


Example: wandering star

What if we want the points to go back to their original spot if we click the mouse?

How can we save the original points??

Make another set of arrays

- instead of making the original points wander around, work with a copy – the original sticks
- When the mouse is pressed, copy the originals into the copy arrays