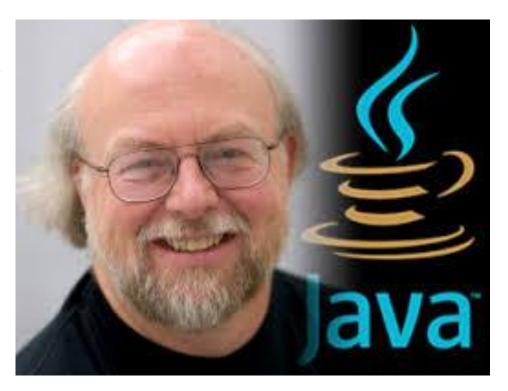
## AP Computer Science A (JAVA)

- Collegeboard does not allow school to teach AP Computer A (AP CSP) and AP Computer Science Principle (AP CSP)
- This class is AP Computer A (AP CSP)
- Students may take AP CSP test personally
- AP CSP
- 1 page presentation
- Video of a program
- Paper test

Assessment	Timing	Percentage of Total AP Score	
Explore Performance Task	8 hours	16%	
Create Performance Task	12 hours	24%	
End-of-Course Exam	2 hours	60%	

## History of Java

- Java was originally developed by at Sun Microsystems and released in 1995
- · 00 fragram
- Good for software engineering



## HW11 Key

```
package homework;
   public class HW11 {
       public static void main(String[] args) {
       int x = 10;
       int y = 20;
       int temp = 0;
10
       System.out.println("Let me show you how to swap two numbers, X and Y");
11
       System.out.println("X=" + x);
       System.out.println("Y=" + y);
       System.out.println("Temp=" + temp);
13
14
15
       System.out.println("1. Assign X to Temp");
16
17
       System.out.println("X=" + x);
       System.out.println("Y=" + y);
19
       System.out.println("Temp=" + temp);
20
21
       System.out.println("2. Assign Y to X");
22
       x = y;
23
       System.out.println("X=" + x);
24
       System.out.println("Y=" + y);
25
       System.out.println("Temp=" + temp);
26
27
       System.out.println("3. Assign Temp to Y");
       y = temp;
       System.out.println("X=" + x);
29
30
       System.out.println("Y=" + y);
31
       System.out.println("Temp=" + temp);
32
33
       x = 10;
       y = 20;
35
       temp = 0;
36 // We can also print X,Y and Temp in one line
       System.out.println("Let me show you how to swap two numbers, X and Y");
37
       System.out.println("X=" + x +" " + "Y=" + y + " " + "Temp=" + temp);
       System.out.println("1. Assign X to Temp");
40
       temp = x;
       System.out.println("X=" + x +" " + "Y=" + y + " " + "Temp=" + temp);
42
       System.out.println("2. Assign Y to X");
43
       System.out.println("X=" + x +" " + "Y=" + y + " " + "Temp=" + temp);
45
46
       System.out.println("3. Assign Temp to Y");
47
       y = temp;
       System.out.println("X=" + x +" " + "Y=" + y + " " + "Temp=" + temp);
49
50
```

### **HW11**

Assign x to temp

```
x = temp
temp = x (
```

- x=10 y=20 temp = 0 System.out.println("X=" +x + " " + "Y="+ y + "Temp=" + temp) => Output :
- int x=10;
  - int : <- one of</pre>

# Primitive types

Туре	Size (bits)	Minimum	Maximum	Example
byte	8	-2 <sup>7</sup>	2 <sup>7</sup> - 1	byte b = 100;
short	16	-2 <sup>15</sup>	2 <sup>15</sup> - 1	short s = 30_000;
	32	-2 <sup>31</sup>	2 <sup>31</sup> – 1	int i = 100_000_000;
long	64	-2 <sup>63</sup>	2 <sup>63</sup> - 1	long l = 100_000_000_000;
float	32	-2 <sup>-149</sup>	(2-2 <sup>-23</sup> )·2 <sup>127</sup>	float f = 1.456f;
	64	-2 <sup>-1074</sup>	(2-2 <sup>-52</sup> )·2 <sup>1023</sup>	double f = 1.456789012345678;
	16	0	2 <sup>16</sup> - 1	char c = 'c';
	1	_	_	boolean b = true;

#### 1.2 Primitives

• int, double, char, boolean...

- int :[

- double: numbers with 12.345

- char : a such as 'A', '3', '?'

- boolean :



- Watch 3 videos
- https://www.youtube.com/watch?v=TVSj N2Rmfo&list=PLLAZ4kZ9dFpPpd R 9IQBUDLjYalvdrGGb&index=5
- Type and run every code in the videos.

### HW12. Decode a hidden message

1. Write a simple message and make a hidden message using alphabetic numbers.

Simple message has alphabets only

Example: Simple message

"Hi Katie Have you finished computer science homework it is so fun if you want I can help you"

2. Create a secrete message using the map(function) below.

```
String simpleMessage ="Hi Katie Have you finished computer science homework it is so fun if you want I can help you";

// 0 1 2 3 4 5 6 7 8 9

// 0123456789012345678901234567890123456789012345678901234567890123456789012345678901
```

3. Send email to a friend with the simple message and the secrete code.

Example: 21 86 56 3 85 91

- 4. Use simpleMessage.charAt(21) and decode the secret message that you received.
- 5. Decode the email with title "??"
- 6. Make a tutorial video

## Example