

Introduction to Java

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Agenda

- Where has Java?
- Why you need to learn Java?
- What's difference between C and Java?

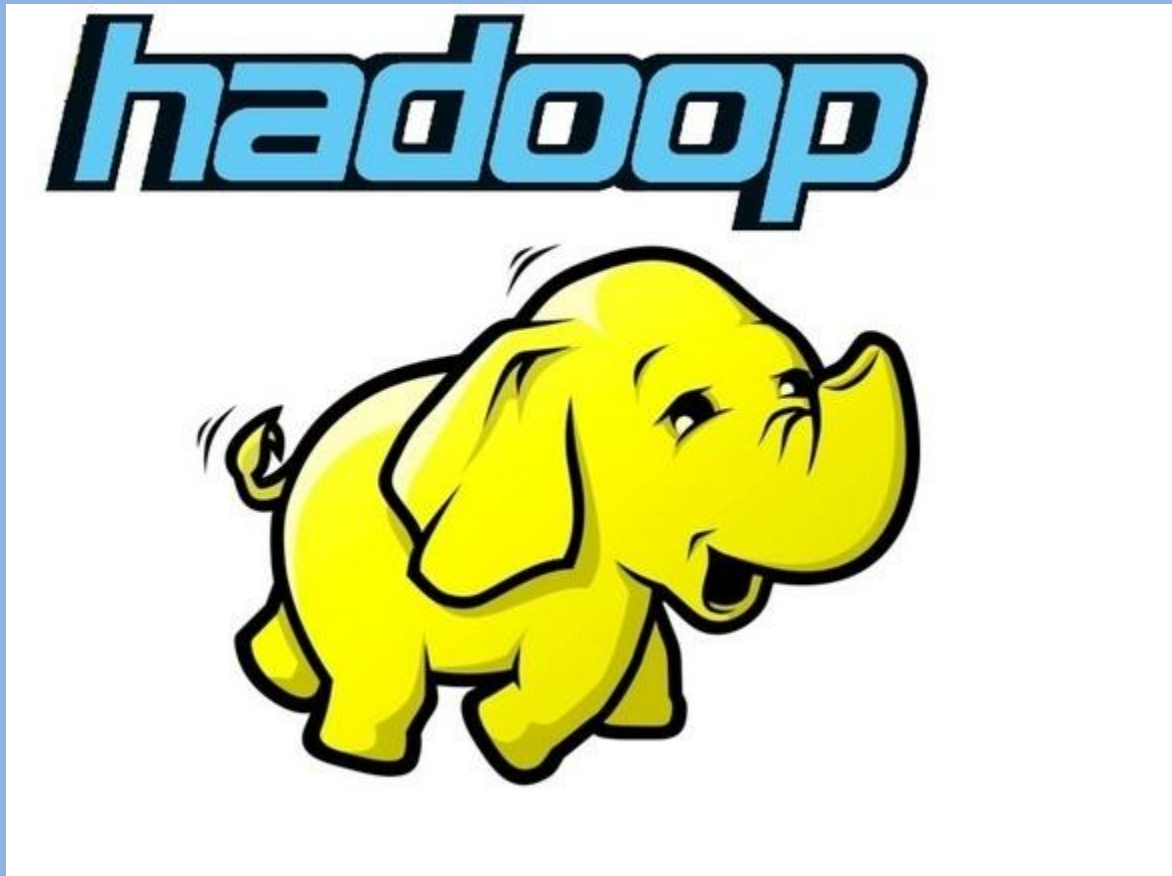
- Where has Java?
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Android App



Hadoop

- Google, Facebook, Yahoo...etc.



CloudStack

- Citrix, Cisco, TOMTOM...etc.



Web Service

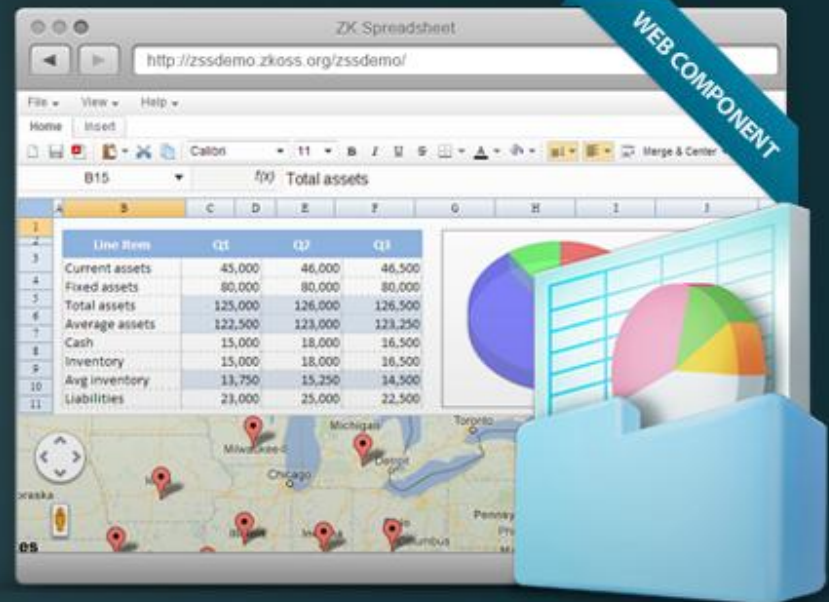
- Ex. Tomcat, ZK, Spring...etc

ZK Spreadsheet is an embeddable Ajax component for Java Web Applications.

Demo
EXPERIENCE THE DEMO



Download
GET HANDS ON WITH ZK



SONY

Deutsche Bank



Sun

IBM

Roche

TOYOTA

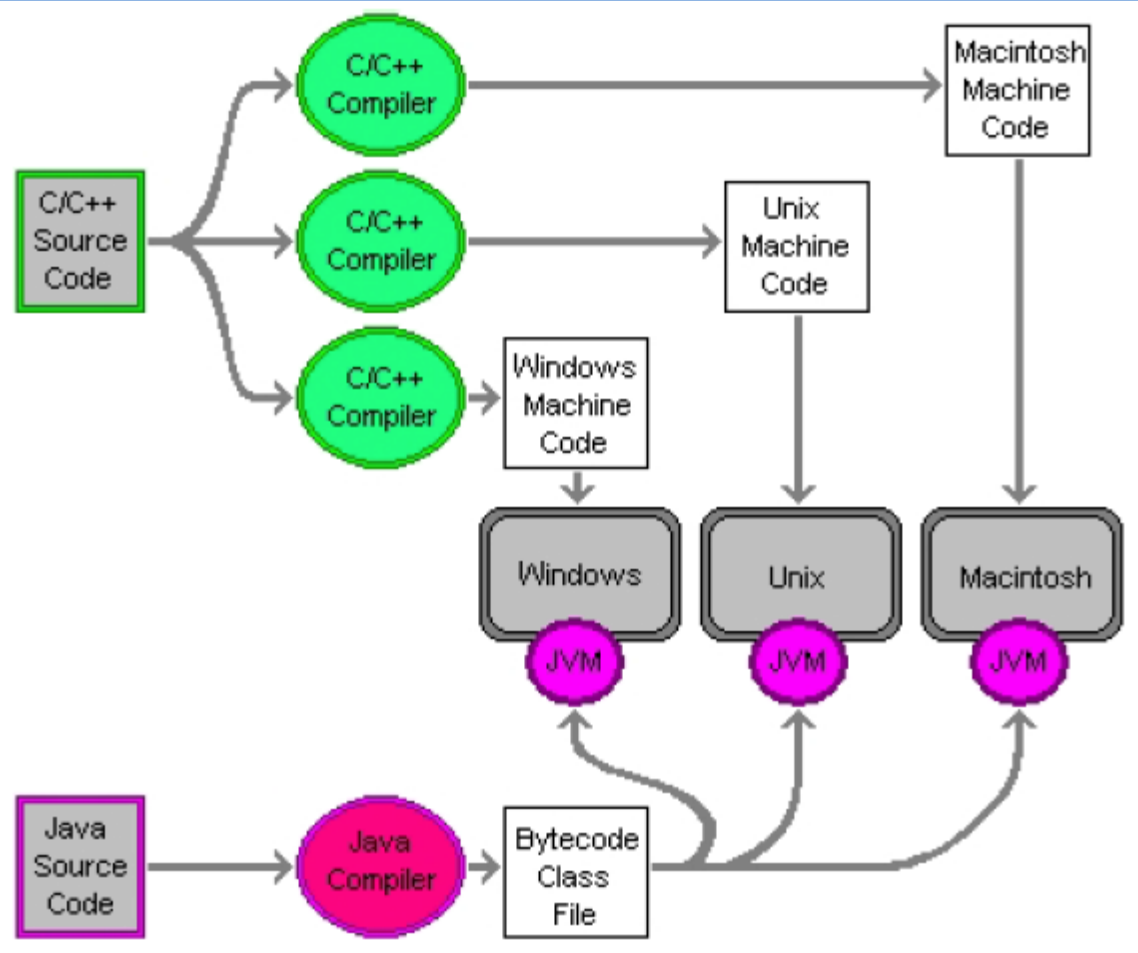
Adobe

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Popularity

Mar 2014	Mar 2013	Change	Programming Language	Ratings	Change
1	2	▲	C	17.535%	+0.39%
2	1	▼	Java	16.406%	-1.75%
3	3		Objective-C	12.143%	+1.91%
4	4		C++	6.313%	-2.80%
5	5		C#	5.572%	-1.02%
6	6		PHP	3.698%	-1.11%
7	7		(Visual) Basic	2.955%	-1.65%
8	8		Python	2.021%	-2.37%
9	11	▲	JavaScript	1.899%	+0.53%
10	16	▲	Visual Basic .NET	1.862%	+0.97%

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Comparisons

C

1. Function
2. It has pointer.
3. Function oriented
4. It has preprocessor.
5. It has no garbage collection.
Ex. When you use malloc(),
you must follow with free()
in the end.

Java

1. Method
2. It only has reference.
3. Object oriented
4. It has no preprocessor.
5. It has garbage collection.

Array

C/C++

```
int scores[10];
```

```
char grades[] = {'A', 'B'};
```

```
int table[2][2] = {{1, 2}, {3, 4}};
```

Java

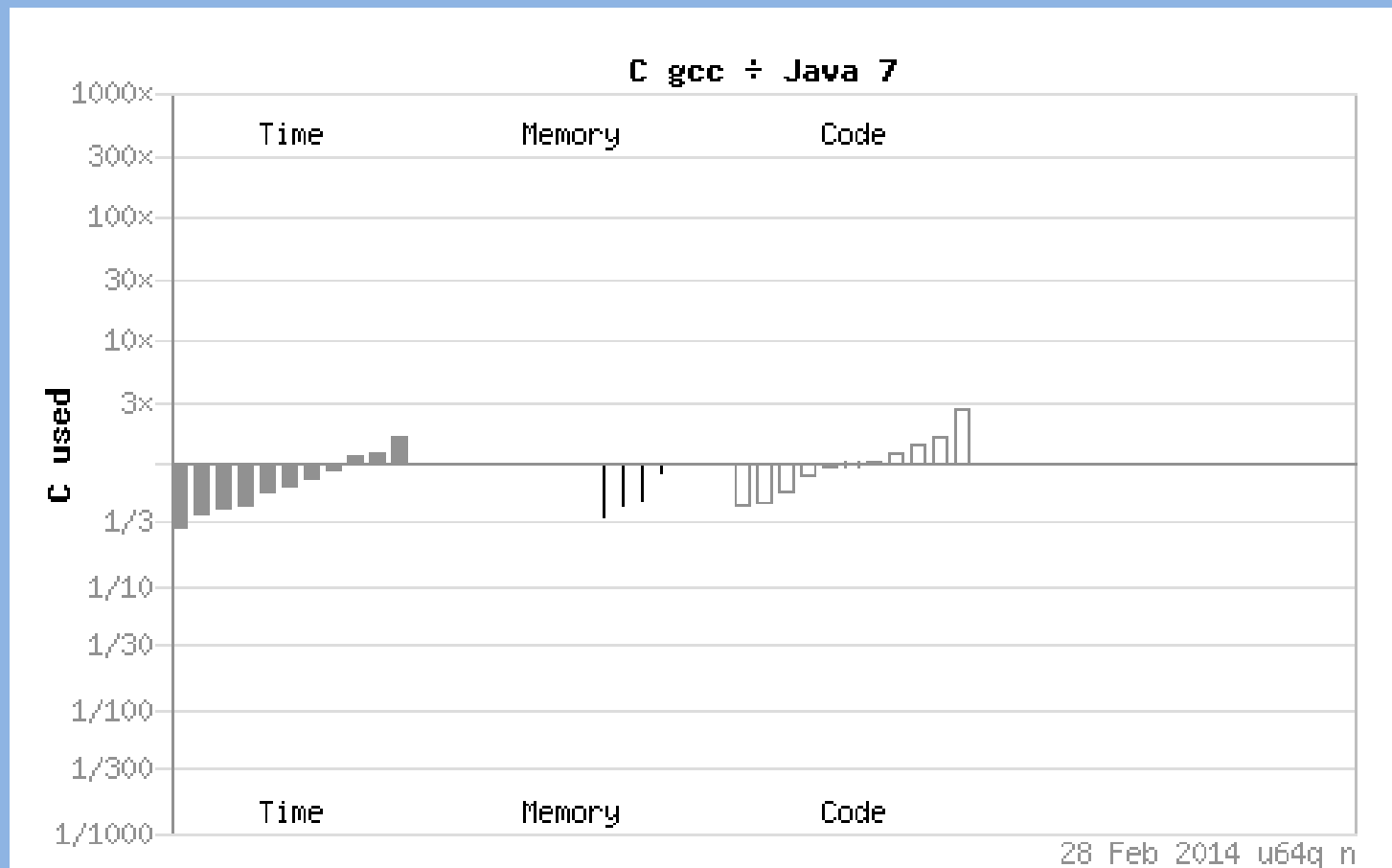
```
int[] scores = new int[10];
```

```
char[] grads = {'A', 'B', 'C'};
```

```
int[][] table = {{1, 2}, {3, 4}};
```

Performance Benchmark

- Most of time, C beats Java.



Why not just C?

- Performance is important.
- But there are things more important than performance!
 - modularity
 - maintainability
 - programmer time
 - extensibility
 - user-friendliness
- correctness
- functionality
- robustness
- simplicity
- reliability
 - Cite from MIT

Q&A

Thanks for you attentions!

Option

- Java is object-oriented programming(OOP) language.
- When we talk about OOP, most of articles will mention 3 characteristics – encapsulation, inheritance, and polymorphism.
- Previous semester, you learn C. C is not a OOP language, but it **could simulate** above characteristics.