sun.misc.Unsafe: Is it used really?

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***Abstract*—**
We analyse source code repositories to answer the following question: How and how much the Unsafe API is used in Java projects?

Our aim is to devise if the Unsafe API is used extensively so it is worth to create a new language to improve programmer productivity.

I. Introduction

Performance is the main reason for Unsafe.

Trend using unsafe methods. But what for? Certainly you can do everithing without Unsafe API, so why using it? The key is performance.

We searched for Boa [1]

GHTorrent [2] provide GitHub quering but for metadata, not source code mining, true?

A. Subsection Heading Here

Subsection text here.

1) Subsubsection Heading Here: This demo file is intended to serve as a "starter file" for IEEE conference papers produced under LaTeX using IEEEtran.cls version 1.7 and later.

Stackoverflow mining.

Measure error with boa.

B. Reflection

```
Class<?> unsafeClass = Class.forName("sun.misc.Unsafe");
Field unsafeField = unsafeClass.getDeclaredField("theUnsafe");
unsafeField.setAccessible(true);
Object unsafe = unsafeField.get(null);
int addressSize = ((Number) unsafeClass.getMethod("addressSize").invoke(unsafe)).intValue();
```

What happens with other uses such as reflection? It is not detected but it uses Unsafe. There should be a way to measure this kind of use.

Mine github, maybe parsing html.

Look for problematic uses of the API, and some use patterns.

II. Results

The Figure 1 shows the pie.

The figure 2 shows how many times a method is called. Grouped by functional group.

The most called is `objectFieldOffset`. Because the result is then used by many other calls to Unsafe.

III. Conclusions

The conclusion goes here.

And yes, it is used,

Acknowledgment

The authors would like to thank...

References

[1] R. Dyer, H. A. Nguyen, H. Rajan, and T. N. Nguyen, "Boa: A language and infrastructure for analyzing ultra-large-scale software repositories," in *Proceedings of the 35th International Conference on Software Engineering*, ser. ICSE'13, May 2013, pp. 422–431.

[2] G. Gousios, "The ghtorrent dataset and tool suite," in *Proceedings of the 10th Working Conference on Mining Software Repositories*, ser. MSR '13. Piscataway, NJ, USA: IEEE Press, 2013, pp. 233–236. [Online]. Available: http://dl.acm.org/citation.cfm?id=2487085.2487132

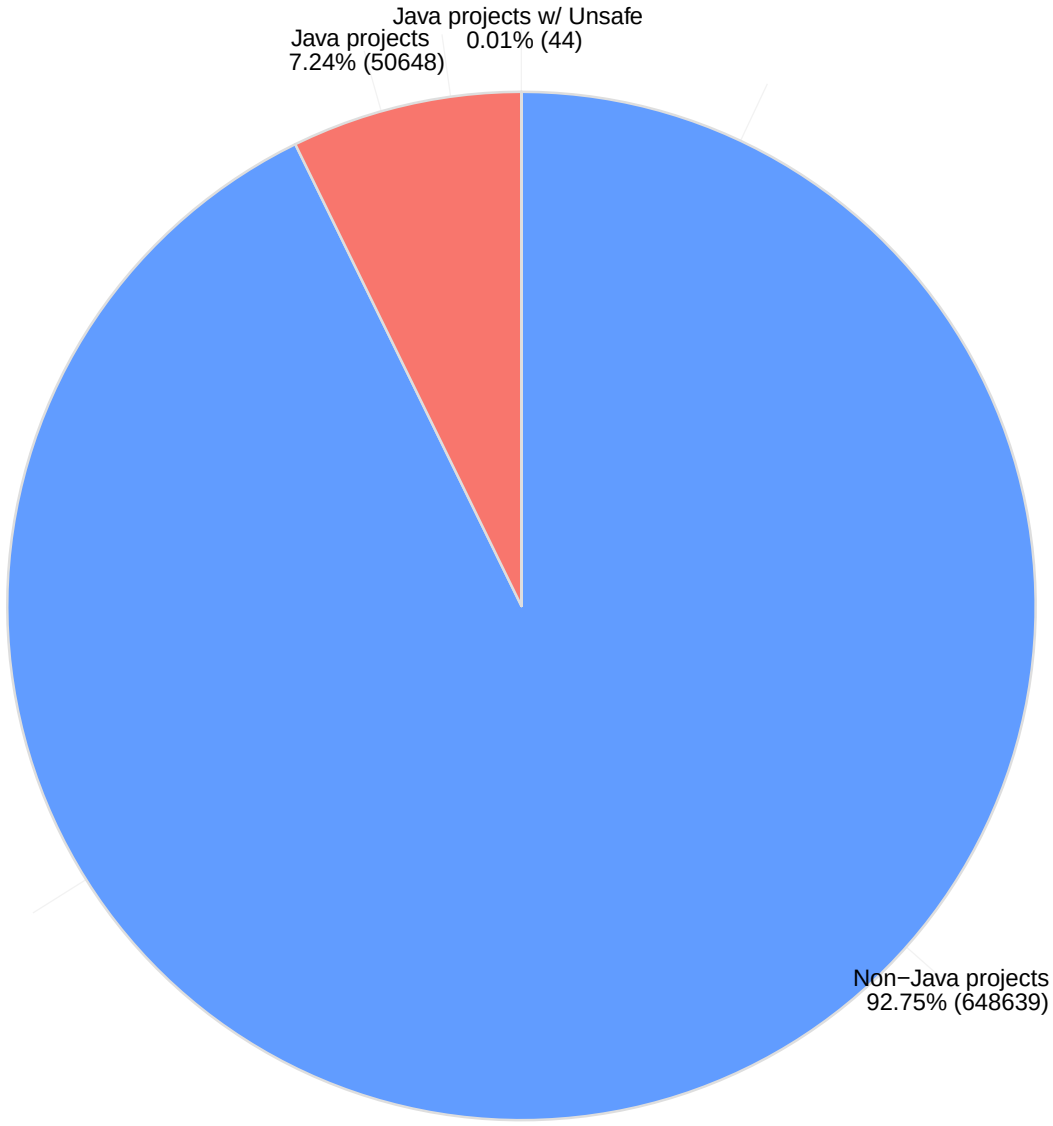

Fig. 1. Project using unsafe

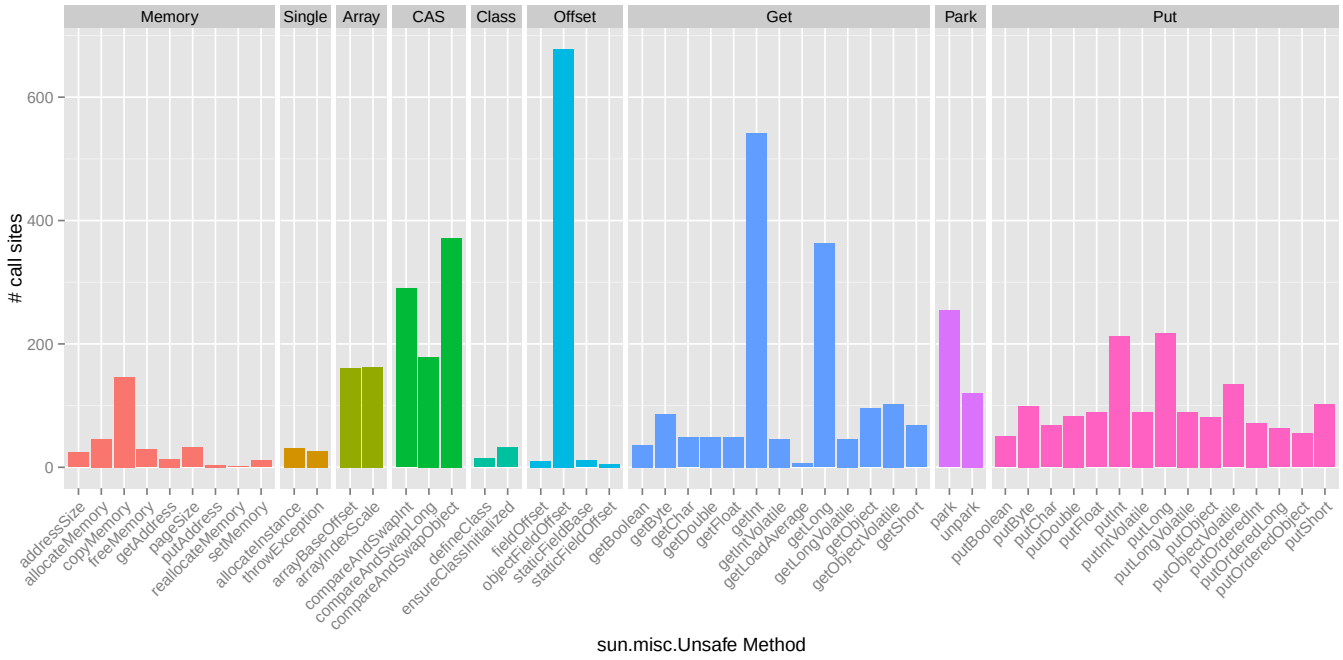

Fig. 2. sun.misc.Unsafe methods usage