



University of Arizona, Department of Computer Science  
CSc 620 — Assignment 3 — Due midnight, Fri Oct 7 — 5%

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## 1 Introduction

The purpose of this assignment is to learn about JVMPI (the Java profiling interface) and JNI (the Java native function interface).

Alternatively, you can choose to use the JVMTI (Java Tool Interface) which is the new way (from Java 1.5) to inspect the virtual machine:

JVMTI is intended to provide a VM interface for the full breadth of tools that need access to VM state, including but not limited to: profiling, debugging, monitoring, thread analysis, and coverage analysis tools.

- See <http://java.sun.com/j2se/1.4.2/docs/guide/jvmpi/jvmpi.html> for the JVMPI API.
- See <http://java.sun.com/j2se/1.5.0/docs/guide/jvmti> for the JVMTI API.
- See <http://java.sun.com/j2se/1.5.0/docs/guide/jni/> for the JNI API.

You can do this assignment in teams of two.

## 2 Object Creation Profiling

Write a Java object creation profiler using JVMPI/JVMTI. When the profiled program exits, the profiler should print out a chart showing the number of objects created of each type:

TYPE	COUNT
java.lang.Object	1238472
java.lang.String	1238
life.universe.everything	42
apple.pie.mom	314159

## 3 Submission and Assessment

The deadline for this assignment is midnight, Fri Oct 7. It is worth 5% of your final grade.

You should submit the assignment electronically using the Unix command

```
turnin cs620.3 README README.
```

README should briefly describe your implementation and list the members of your team.

**Don't show your code to anyone, don't read anyone else's code, don't discuss the details of your code with anyone. If you need help with the assignment see the instructor.**