University of Arizona, Department of Computer Science

CSc 620 — Security Through Obscurity — Assignment 1

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1 Introduction

The purpose of this assignment is to get you started learning about the Java virtual machine, bytecode, classfiles, and cvs.

2 Try out SandMark

SandMark source code is stored in a CVS repository at `cvs.cs.arizona.edu`. To get the source, do the following:

```
> cvs -d :ext:MyLogin@cvs.cs.arizona.edu:/cvs/cvs/wmark \
      checkout -P smark2 smextern smapps2 smbloat smbin
```

where `MyLogin` is your normal (`lectura`) account name.

Compile and run SandMark according to the installation instructions in the SandMark manual.

3 Viewing Classfiles

Write a small Java program. Compile it. View the bytecode using

1. `javap`,
2. `cck` (BCEL's Class Construction Kit), and
3. BCEL's `listclass`.

Appendix A of the SandMark manual describes how to use these tools.

4 Writing Java bytecode

Write a small program in bytecode. It doesn't have to do anything particularly interesting, but it should – at the very least – do some arithmetic, print something out, and make a method call.

Use the Jasmin assembler to convert the assembly code to a classfile. Run the program. Examine the classfile using `javap`.

Appendix A of the SandMark manual describes how to invoke Jasmin.

5 Adminstrivia

This assignment is due Thursday, January 17. It is worth 1% of your final grade. To submit, email me (`collberg@cs.arizona.edu`) the Java assembly code you wrote.

This is an individual assignment!