

## CS547 Secure E-commerce Class note #1

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### 1. Introduction

- a. LGI model and LGI mechanisms (Moses), from system perspective
- b. Overview
- c. Prerequisites: knowledge on Java (language, concurrency); understand the concept of TCP/IP and HTTP

If you don't know them, maybe you can find some useful information here:

<http://paul.rutgers.edu/~wzhang/Main/tech.html>

- d. <http://www.moses.rutgers.edu> (LGI, mainpage) (\*)
- e. <http://www.moses.rutgers.edu/documentation/manual.pdf> (LGI, menu)

### 2. Publishing a law

A law is most often referenced by a URL to a file containing the text of the law. Users developing and using their own laws can use any HTTP server in order to publish them. Moses toolkit also provides a small footprint HTTP server, called the *Law Server*.

So: you may simply put the law in your ~/public\_html;

Or you may use the law server: <http://www.moses.rutgers.edu/lawserver.html>

Example: <http://www.moses.rutgers.edu/examples/simple/simple.java1> (\*)

### 3. Starting a controller

- a. Installation: <http://www.moses.rutgers.edu/installation.html>

Before you start your controller, make sure that you have: (\*)

1. Downloaded and unzipped the Moses distribution to place it in a newly created *installationdir*
2. Downloaded these two jar files: jinni.jar, xerces.jar and put them in *installationdir*
3. Set your java version as 1.4 or 1.4.\*  
(To check it: <http://www.cs.rutgers.edu/~watrous/java-script.html>)
4. Set the CLASSPATH environment variable to point to the following items:

.  
*installationdir/*

*installationdir/jinni.jar*  
*installationdir/xerces.jar*  
*javadir/tools.jar*

(What does “CLASSPATH” mean?  
[http://en.wikipedia.org/wiki/Classpath\\_\(Java\)](http://en.wikipedia.org/wiki/Classpath_(Java)) )

In Unix, depending on the shell being used and the login script, set the classpath in **.cshrc** file.

b. Starting a controller: <http://www.moses.rutgers.edu/controller.html>

Type > java moses.Controller, and we are done! (\*)

- Set port number: > java moses.Controller -sp9001 (By default it is 9000)
- Physical controllers (processes) and logical controllers (threads)

4. Starting an actor: <http://www.moses.rutgers.edu/controller.html>

a. The human interface (“human actors”) (\*)

- [http://domainName:\(portNo-500\)](http://domainName:(portNo-500))
- Naming: localName@domainName (like SMTP rather than HTTP)
- Human actors can send/receive (string) messages
- Disconnect
- When an error returned, check the error code  
[http://www.moses.rutgers.edu/cs547\\_2007/errorCodeInAdoption.html](http://www.moses.rutgers.edu/cs547_2007/errorCodeInAdoption.html) (\*)

b. Building a software actor

Example: <http://www.moses.rutgers.edu/examples/simple/SimpleAgent.java> (\*)

This is definitely useful: <http://www.moses.rutgers.edu/api/> (\*)  
(Starting from the following classes: Member, Answer, Law, Receiver, Term, UnifyResult)

5. Misc

- a. More information & examples: <http://www.moses.rutgers.edu>
- b. Homework and my office hour