Lecture 3
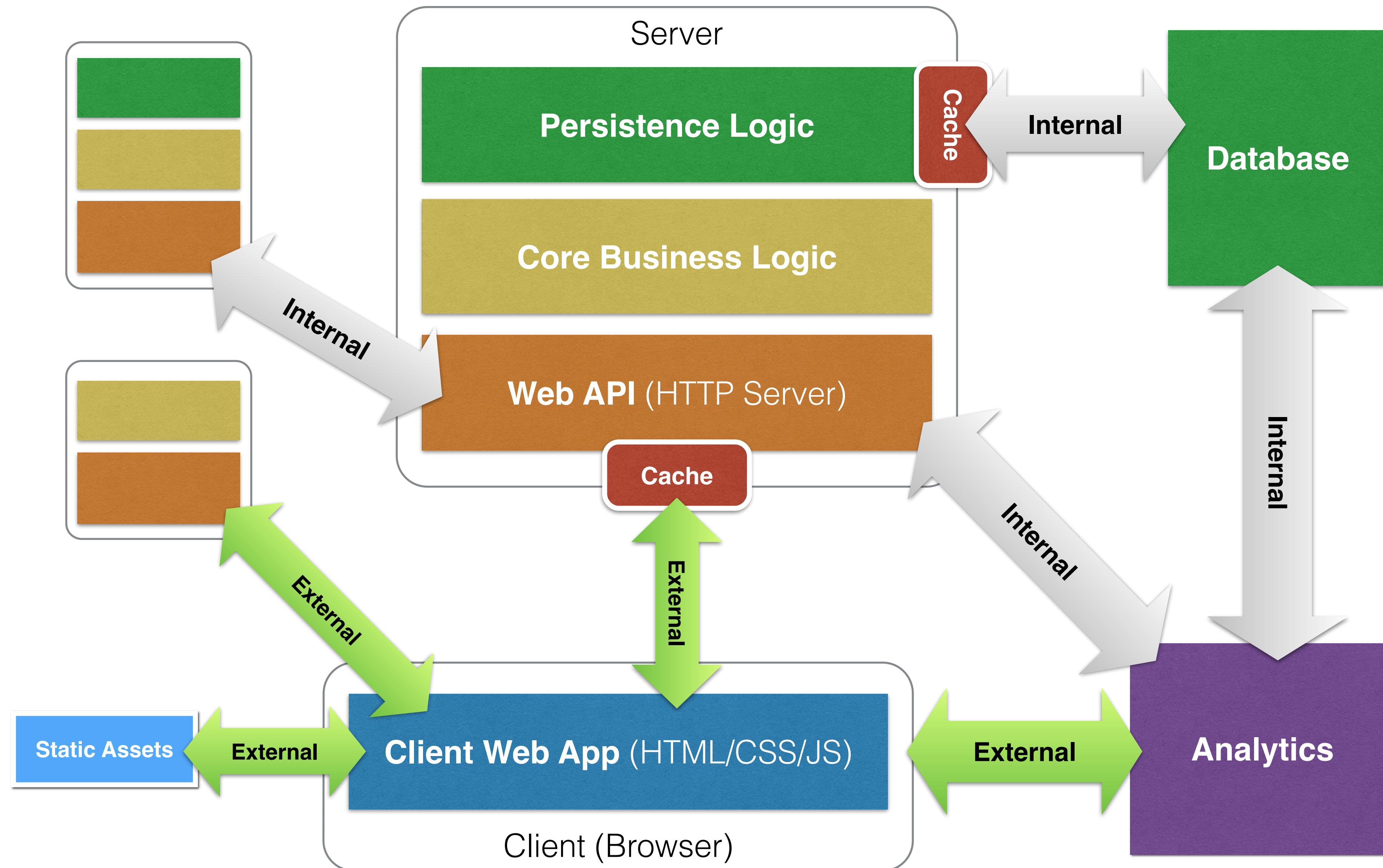
CSCI 6907.12 - Full Stack Application Engineering

Microservice Architecture

Tool Chain for Java

	Purpose	Website	Alternatives
Oracle JDK8	Java Implementation	http://www.oracle.com/technetwork/java/	OpenJDK
Apache Maven	Package management and build tool	https://maven.apache.org/	Apache Ivy
Apache Commons	Utility Library	https://commons.apache.org/	n/a
Dropwizard	Web API	https://dropwizard.github.io/	RESTEasy
Jackson	JSON Serialization	comes with Dropwizard	Google Gson
JDBC	Database Connection	comes with JDK	Hibernate
JUnit	Unit Testing	http://junit.org/	

Tool Chain for Scala

	Purpose	Website	Alternatives
Scala 2.11	There's only one Scala implementation	http://scala-lang.org/	n/a
SBT	Package management and build tool	http://www.scala-sbt.org/	Maven
Scalatra	Web API	http://scalatra.org/	Lift, Play, spray
Json4s	JSON Serialization	http://json4s.org/	argonaut, rapture, spray
JDBC	Database Connection	comes with JDK	Slick
Specs2	Unit Testing	https://etorreborre.github.io/specs2/	ScalaTest

Tool Chain for Python

	Purpose	Website	Alternatives
CPython	Official Python Implementation	https://www.python.org/	PyPy, Jython
pip	Package management	https://pip.pypa.io/	easy_install
Flask	Web API	http://flask.pocoo.org/	Django, Bottle, Pylons
json from PSL	JSON Serialization	https://docs.python.org/3/library/json.html	simplejson
various drivers	Database Connection	comes built in	http://www.sqlalchemy.org/
unittest	Unit Testing	comes built in	n/a

Tool Chain for Ruby

	Purpose	Website	Alternatives
MRI	Official Ruby Interpreter	https://www.ruby-lang.org/	JRuby, Rubinius
RubyGems	Package management	https://rubygems.org/	n/a
Sinatra	Web API	http://www.sinatrarb.com/	Ruby on Rails
Sinatra::JSON	JSON Serialization	http://www.sinatrarb.com/contrib/json.html	libjson-ruby
various drivers	Database Connection	comes built in	sequel
test/unit	Unit Test	comes built in	n/a