LOAD TESTING WITH GATLING

WHY LOAD TESTING?

- Process of putting demand on a system or device and measuring its response
- What's the performance when ten people are using a system, 1000? 10,000?
- Opportunity to improve your site speed or server performance
- Simply knowing your site's limits

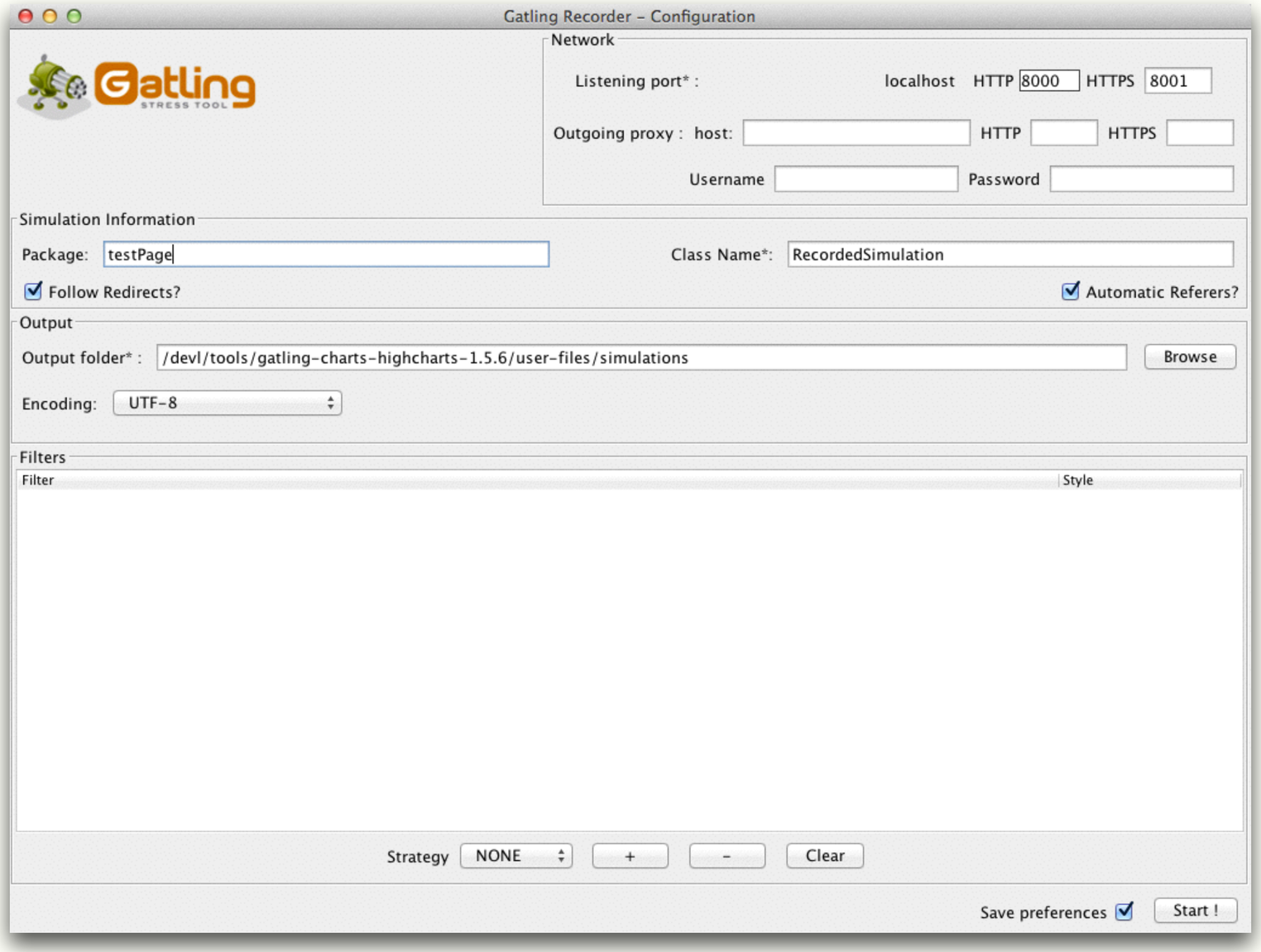
GATLING: LOAD TESTING WITH SCALA

- Open-source load testing framework based on Scala
- Uses Scala DSL for scripting
- Allows for scripts to be written from scratch (Scala DSL)
- or generated through recording (via Selenium)

WRITE SCENARIOS USING THE SCALA DSL

```
val scn = scenario(“ComputerStoreSimulation")

        .exec(http(“index”)
              .get("/"))

        .exec(http(“new")
              .get("/computers/new"))

        .pause(3 seconds)

        .exec(http(“create”)
              .post("/computers")
              .formParam("name", "Gatling Stress Tool")
              .check(css("div.alert-message")))
```

... OR USE THE RECORDER



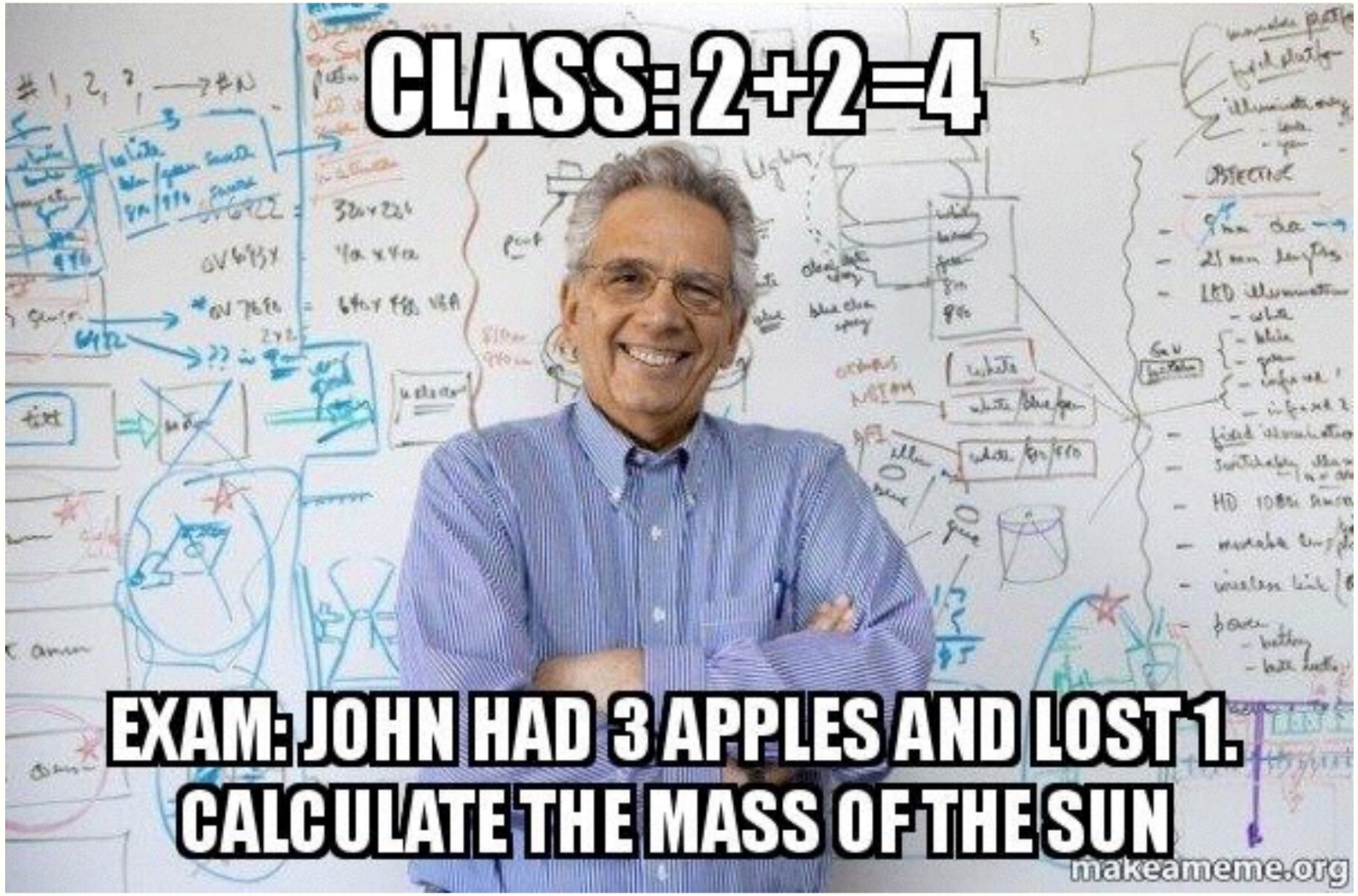
Gatling DSL Breakdown

```
import scala.concurrent.duration._

import io.gatling.core.Predef._
import io.gatling.http.Predef._
import io.gatling.jdbc.Predef._

class RecordedSimulation extends Simulation {

  val httpProtocol = http
    .baseURL("http://gatling.io")
    .inferHtmlResources()

  val headers_0 = Map("Accept" -> "text/html,application/xhtml+xml,
                                   application/xml;q=0.9,image/webp,*/*;q=0.8")

  val scn = scenario("GatlingIOSimulation")
    .exec(http("loadHomePage")
      .get("/")
      .headers(headers_0)
      .check(status.is(200))
      .check(bodyString.saveAs("homePageHtml")))
    .exec(session => {
      print(session("homePageHtml"))
      session
    })

  setUp(scn.inject(atOnceUsers(1))).protocols(httpProtocol)
}
```

- required Gatling class/library (Need at the top of each Simulation)
- All ‘Simulations’ classes extend *Simulation*
- Sets up http protocol for simulation.
- Includes Base URL you are testing against
- We tell the protocol to infer all the resources need to do the requests
- Sets up Scenario
- This example does the following:
  - perform a ‘get’ request against the root
  - performs the request with a given header
  - checks that the response of status ‘200’
  - Saves the body of the response to a variable
- This setup function executes the scenario with a given # of users

DEMO

YOUR TURN!


CLASS: 2+2=4
EXAM: JOHN HAD 3 APPLES AND LOST 1.
CALCULATE THE MASS OF THE SUN
makeameme.org

EXERCISES

All Exercises will use: *http://computer-database.herokuapp.com/*

1. Using the recorder, record a scenario where a user searches for a computer and selects a few. Run the scenario from the command line.

2. Without using the recorder, create a scenario that emulates a single user searching through the full list of users (next button)

EXERCISES CONTINUED

Use maven archetype for the rest of the examples:

http://gatling.io/docs/2.0.3/extensions/maven_archetype.html

http://scala-ide.org/download/current.html

1. Adding to the previous example, emulate adding a new computer to the list (make sure to add pauses to simulate a user accessing the site!).
    - Scenario: 10 users ramped over 60 seconds

2. Use a CSV feeder to provide a list of computers to be created; emulate several users adding computers to the list

3. Create a new class that runs the two scenarios.
    - The Search scenario: 30 users ramped over a 2 minute period, repeat 2 times
    - The Creation scenario: 3 users over 30 seconds

IF YOU'RE FEELING AMBITIOUS:

Take some time and check out the Clojure Koans:

http://clojurekoans.com