CSE 6331   Cloud Computing
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Programming Assignment 7
Performance and Auto Scaling

Description:
  Frequently cloud service based systems need to support thousands or even millions
  of users (or subscribers) often simultaneously. In order to more accurately model
  these type of systems, one needs to employ traffic modeling systems that can both
  create events as well as measure responses.

  Additionally cloud applications can be employed to automatically "scale", create
  multiple instances automatically, when needed.

Using assignment 2 or 3 (or any other assignment you wish) as a template, or "driver",
you need to create a cloud based system that responds to user queries and that (on the
"cloud") performs simple database queries and formats a web interface response to the
user. You will test (exercise) that system remotely, from your PC, and gather performance
metrics. "Jmeter" is one (free) software tool that will provide the needed features,
others will work well, too.

1. Create/implement a cloud based web site similar to assignment 2 or 3, or any that
   responds to user queries, retrieving information from a relational database.
2. Test your implementation.
3. Obtain Jmeter (or similar), install, test your understanding.
4. Use Jmeter to drive your cloud application. Try several parameters, such as
   amount of requests per unit time, intervals between requests, and similar variations
   on request traffic.
5. Get, and interpret, results.

6. Modify the install parameters to automatically scale your application to multiple
   instances

 You must submit this lab, working (or partially) by the due date.
 Your program should be well commented and documented, make sure the first
 few lines of your program contain your name, this course number, and the
 lab name and number.
 Your comments should reflect your design and issues in your implementation.
 Your design and implementation should address error conditions.