Hypermedia Services Assignment

# Assignment Objective

This assignment is give you hands an experience using Hypermedia as the Engine of Application State (HATEOAS) to implement business function

# Assignment Task

## Problem Domain

Consider the process for submitting a grade appeal in this class. The basic steps are:

1. I post grades with comments
2. You review the grade and comments
3. You re-check your work against my comments
4. You identify areas where you feel you did do what I claim you did not
5. You compose an appeal. You may update the appeals several times as you
   1. Add more appeal items
   2. Reword the appeal to tone down the language
   3. Add images or highlighted answer segments
6. You send me your appeal following the instructions in the syllabus (Appeals by eMAil, the word APPEAL must be in the subject line, …)
7. I review the appeal
8. I rechecked work
9. I compose and send a reply to the appeal to the student
10. If appropriate, I upgrade the grade in the class grade book

## Assignment Tasks

For this assignment you are to:

1. Take the workflow steps described above and create a
   1. HTTP Request mapping for Appeal process (See Figure 5-3 in text for an example)
   2. Resource transition diagram (See Figure 5-4 in text for an example)
2. Create a DAP and supporting hypermedia format called application/vnd-cse564-appeals+xml for the appeals process
3. Design the necessary Hypermedia Controls need by the hypermedia format
4. Identify and design the necessary resources, resource representations, base data models, and activities
5. Design the necessary URI’s
6. Create a URI that will serve as the entry point for the Appeal process
7. Create REST Webservice(s) that implements the Appeal process described above using the output of tasks 1-6 above.
8. Create a REST Client that interact with the implements the following scenarios
   1. Case 1. Happy case – Submit an appeal and appeal in processed
   2. Case 2. Abandoned case – You create and appeal but abandon it as you do not feel I will consider it
   3. Case 3. Forgotten case – You submit an appeal and after a week you still have not heard from me so you follow up on the appeal
   4. Case 4. Bad start – Same as Happy case but you use an incorrect entry URI
   5. Case 5. Bad ID – Same as forgotten case but the client has forgotten/lost the id of the appeal when following up

## Assignment Assumption you can make

1. Any storing of appeals can be kept in memory.
2. The Client works as a test driver, so the client application runs through its scenarios one after the other without having an end user provide input. Your client application should display enough information so that the person monitoring the client can determine
   1. Which test scenario is being execute
   2. Where they are in the execution,
   3. Determine the accuracy of the data being passed back to the client by the service
   4. Determine the accuracy of the data being passed around between resources by the service

# Assignment Submission

1. Create a REST project with a name of the form

HATEOAS-Appeals-<userid>-<IDE-Version>

Where userid is the alphanumeric id that ASU gave you (not the numeric on id), and IDE-Version is the name and version of the IDE you used e.g., Eclipse-Juno or VisualStudio-2012

1. Create a ZIP file containing
   1. The completed project.
   2. Complete and detailed build and run instructions in a file called ReadMe. **IMPORTANT** - If I cannot follow the instructions to build and run the submission then I cannot give you credit for the submission. I have too many submissions to grade to read through your code and try to figure it out
   3. Add the designs that come from Assignment Tasks 1. They cannot be hand drawn. Refer to the syllabus for approved formats
2. Upload the ZIP file to Blackboard