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Assignment 3: Part 2

**http://apicourses-1208.appspot.com**

**Explanation of URL structure**
My url structure is mainly a resource based API with some restful components that
contains the path (http://apicourses-1208.appspot.com) followed by these paths.

/course/cid:[0-9] +> – GET to view specific courses
/updateCourse – POST to update attributes of courses
/deleteCourse – POST to DELETE course as to make a deletion
/updateStudent – POST to update attributes of students
/deleteStudent - POST to DELETE student as to make a deletion
/student – GET view student keys
/course – GET view course keys
/student/<sid:[0-9] – GET to view specific student
/student/<sid:[0-9]+>/course/cid:[0-9] + - PUT to add course id to student id

**RESTful constraints**
Constraints not restful
I didn't implement caching, something that a true API might have.  I didn't use
hypermedia or urls to navigate to other resources.  My example is not entirely obvious. It
needs documentation.

Restful constraints
There is information maintained about what resources a client used or changed so these
resources and changes are stored in google datastore.  I did implement a somewhat
uniform interface.  I allowed JSON only to requested else I created an error like the
lecture did.  I didn't use HTML or XML.  I updated data by changing the representation
to make changes to the original.

**Changes**
I made a few changes in fields.  For the entity student I combined first and last name into
just name for simplicity.  I also removed the 4 class constraints and just allowed a list of
classes.  For the Class entity I removed quarter, it was unnecessary.  Subject changed to
name and time, which was a datetime object originally was downgraded to just text.
Students still hold a Class list and that is how the entities relate.

**Reflection**
I had a very hard time with this project so I kept removing features.  Things I removed
were the datetime.time object and the ability to clean up classes from the python list.
These two things literally ate my time.  For whatever reason I couldn't actually delete
courses from a student list without getting the wrong id, which trailed with an "L" that I
couldn't get rid of.  As to how I will do something different in the future.  I gave myself
plenty of time until I wasted my time.  I am going to emplement spikes for things I do not

know how to do.  If after an hour I do not figure something out its probably time to get help or move on.  I wrote decent error checking that used arrays to hold the errors and then was going to spit them all out at once but it didn't work so I removed it.  This project was actually a failure in my eyes, but people learn the most from failures.

**cURL tests and Source**
View tests.txt in zip file along with source
I didn't have any of my basic tests fail but if left off a field in the post completely those tests failed and I thought I wrote proper error checking with response codes. One failure was due to a put though I left the original failure in addition to the fix.