

# RESTful APIs: The student evaluations case

## Reading / References

- Restful Web Services<sup>1</sup>, chapters 4 and 5. Optionally 6, 7, 8.
- Current HTTP Specification<sup>2</sup> for some “light reading”.

## Notes

We will now delve deeper into the API for our student evaluations.

Recall the entity-relation graph for the student evaluations database:

Here is a table of the various resources (printable form<sup>3</sup>)

Resource	URI Scheme	Properties	Links	GET	PUT	DELETE	POST
students	/student		students	Student Links	N/A	N/A	Add student?
student	/student/{login}	login first last	enrollments	Student info. en- rollment links	Create? Replace?	Delete?	Update info name
enrollment	/enrollment/{section}/login		enrollment section	Is enrolled?	Enroll student	Remove student	N/A
roster	/enrollment/{section}		enrollments section	Class roster		N/A	Mass enroll?
instructor	/instructor		active instrs	Active instrs	N/A	N/A	Add instr?
instructor	/instructor/{login}	first last	sections dept	Instructor info	Create? Replace?	Remove?	Update name
admins	/admin		admins	Admin list	N/A	N/A	Add admin?
an admin	/admin/{login}	first last		?????	Create? Replace?	Remove?	Update info
terms	/term		terms	terms list	N/A	N/A	Add term?
term	/term/{year}/{period}	dates	year period sections	term info sections year, period	New term?	Remove?	Update dates
depts	/dept		depts divisions?	dept links	N/A	N/A	Add dept?

<sup>1</sup>[http://learning.acm.org/books/book\\_detail.cfm?id=1406352&type=safari](http://learning.acm.org/books/book_detail.cfm?id=1406352&type=safari)

<sup>2</sup><https://tools.ietf.org/html/draft-ietf-httpbis-p2-semantics-21>

<sup>3</sup>[images/rest\\_printable.pdf](images/rest_printable.pdf)

Resource	URI Scheme	Properties	links	GET	PUT	DELETE	POST
a dept	/dept/{prefix}	name	head members parent tags courses	dept info	Create?	Remove?	Update what?
courses	/course			course list depts?	N/A	N/A	Add course?
a course	/course/{prefix}/{id}	descr no	dept sections tags parent sections	course info dept sections tags section list	Create?	Remove?	Update info
sections	/section				N/A	N/A	Add section?
a section	/section/{year}/{term}/{id}	state (no)	course roster year term tags	section info	Create?	Remove?	Update info?
tags	/tag			links to tags	N/A	N/A	Create new tag?
a tag	/tag/{tag}	descr?	questions depts? courses? sections?	tag info questions?	Create?	Delete?	Change descr? Change questions?
questions	/tag/{tag}/question		questions	ordered questions	N/A	N/A	Add ques- tion. order?
question	/tag/{tag}/question/{id}	type prompt	choices	question info	N/A	Remove?	Update ques- tion. order? choices?
answers? evals?							

## Questions

- How should a section be assigned to an instructor?
- What should show up when we get an admin's page? Should it include links to the various resources *they* have access to?
- Should we characterize terms via year/period? What if we want ad-hoc terms?
- Do we need list of years as a resource?
- Do we need an individual year as a resource?

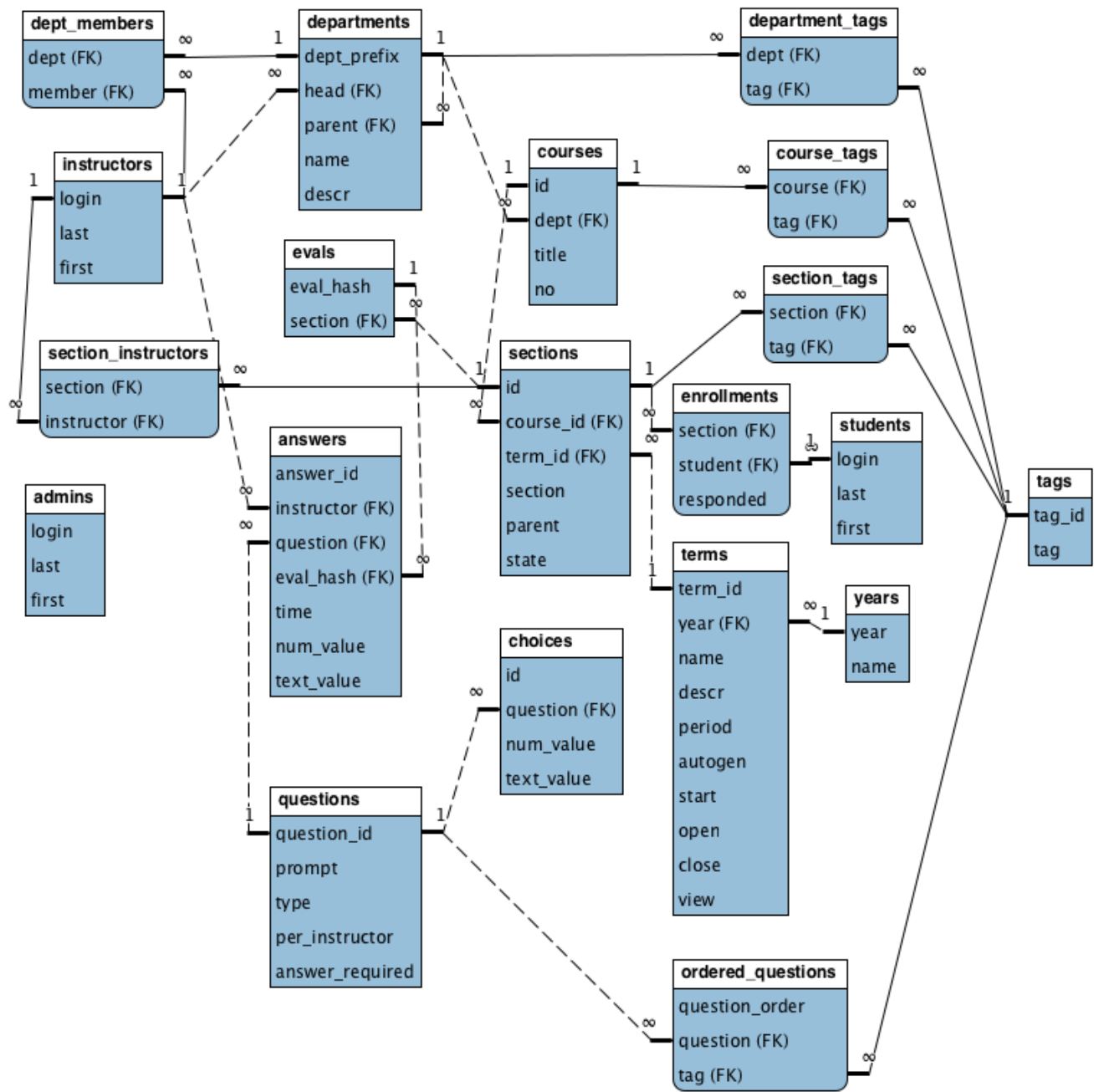


Figure 1:

- Should it be its own thing?
- Or should terms allow a query to set the year, or just allow /term/{year}?
- How should we add a section to a term?
- Option 1: Only do it by updating a section's information
- Option 2: Set up the "term's course list" as a resource.
- Should we have a way to specifically add a new section of a course?
- Can we add query filtering in some of those lists?
- When to use query vs more slashes?
- Should questions be subordinate to a tag or on their own?
- Need to somewhere coordinate tag question order.
- Should a question be allowed to belong to multiple tags?