SenWeb Project Correspondence

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Date: Fri, 1 Nov 2013 10:55:04 -0700  
Subject: APIs (Java or REST?)  
From: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
To: Lyman Cao <[lyman.cao@sv.cmu.edu](mailto:lyman.cao@sv.cmu.edu)>

Hello Lyman,  
  
My group has a question about the APIs that are going to ultimately get  
used for the webapp.  
  
The spec at https://github.com/SensorServicePlatform/APIs details a set of REST APIs.  
Is the business logic within the webapp going to be calling these REST APIs?  
Or will there be a jar (or other java artifact) that contains Java versions of these APIs?  
  
Obviously, our front-end work can proceed independently of theimplementation.  
  
Thanks.  
  
--Geoff

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Date: Fri, 1 Nov 2013 11:31:25 -0700  
Subject: Re: APIs (Java or REST?)

From: Lyman Cao <lyman.cao@sv.cmu.edu>  
To: Geoffrey Schaeffer <[geoffrey.schaeffer@sv.cmu.edu](mailto:geoffrey.schaeffer@sv.cmu.edu)>

Hi Geoff,  
  
Right now, there is no jar with API support right now. I suppose we need to  
call the APIs in HTTP requests.  
  
Lyman

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Date: Fri, 1 Nov 2013 12:06:54 -0700  
Subject: Re: APIs (Java or REST?)  
From: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
To: Lyman Cao <[lyman.cao@sv.cmu.edu](mailto:lyman.cao@sv.cmu.edu)>

Lyman,  
  
Thanks for the confirmation.  
  
--Geoff

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Date: Mon, 4 Nov 2013 15:21:16 -0800  
Subject: Project3 update  
From: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
To: Lyman Cao <[lyman.cao@sv.cmu.edu](mailto:lyman.cao@sv.cmu.edu)>

Hello Lyman,  
  
The part-time team is currently working on a private repo to get familiar  
with Play and work on getting an end-to-end spike done for one of the  
category 2 APIs. We will eventually move this work over to the shared  
project, but we wanted to keep from stepping on your toes for right now.  
  
Our assumption is that your team is handling the HANA test database work.  
  
Another assumption we have made is that your team will handle adding user  
functionality to the webapp in concert with supporting existing  
functionality for the category 4 APIs. As such, we are going to steer  
clear of that area for now.  
Please let me know if you had a different idea or expectation.  
  
Thanks.  
  
--Geoff

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Date: Mon, 4 Nov 2013 16:07:59 -0800  
Subject: Re: Project3 update

From: Lyman Cao <lyman.cao@sv.cmu.edu>  
To: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>

Hi Geoff,  
  
I asked Jia, and she does not want a separate schema for tests. So right  
now, if we want to insert a record into the database, we can just put the  
ID as 'testxxx'.  
And yes, full-time students will handle the category 4 APIs for the time  
being. It  
  
Jia has refactored the data model this morning, which I think will be  
revealed during the team meeting this week. Basically, there are no big  
changes, just more fields.  
  
Regards,  
Lyman

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Date: Fri, 8 Nov 2013 14:52:00 -0800  
Subject: Project 3 Part-time status update  
From: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
To: Lyman Cao <[lyman.cao@sv.cmu.edu](mailto:lyman.cao@sv.cmu.edu)>

Hello Lyman,  
  
Here is a copy of the powerpoint slides we prepared for or meeting with Jia  
last night, to give you an idea on our group's progress:  
  
 merc1.pptx  
  
The big takeaway is that we've created a simple project in a separate repo.  
We'll continue to work in that repo for a bit to get some more  
functionality and structure to our part of the project.  
We'll merge our stuff into the main project once it is a bit more together.  
  
If you have a status update from your team, we would like to hear it so we  
can stay in sync.  
  
We have a couple of other questions and such for you:  
  
1.) Have you been able to access the sensorapplication2 code that Jia  
recommended that we clone? If so, can you give us a copy of it? If not,  
do you know who is working on that code?  
We haven't been able to access the repo. Jia gave us some credentials last  
night, but we haven't been able to make them work.  
  
2.) If you take a look at our simple sample app, you can see it uses a form  
to pass values.  
We are thinking of displaying the available options in a list format (like  
a combobox). Is your team planning on maintaining a list of the available  
sensors on the webapp side? Or is your metadata management going to be  
concerned with the database directly? No worries either way, if you guys  
aren't maintaining a list as part of your work, we might do something like  
cache the results from a "list sensors" request. Then we you would just  
need to make a call to rebuild the cache when the metadata changes. Or  
maybe we can figure out another method.  
  
3.) Our group has taken a look at myexperiment.org on Jia's recommendation.  
I'll let you know if we decide to use any concepts from this site. However,  
from our look at the site, the features available seem outside the current  
scope of this webapp project. Let us know if your team is going to try and  
incorporate any ideas from myexperiment.org.  
  
Thanks.  
  
--Geoff

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Date: Fri, 8 Nov 2013 20:29:46 -0800  
Subject: Re: Project 3 Part-time status update

From: Lyman Cao <lyman.cao@sv.cmu.edu>  
To: Geoffrey Schaeffer <[geoffrey.schaeffer@sv.cmu.edu](mailto:geoffrey.schaeffer@sv.cmu.edu)>

Hi Geoff,

Our slides for the team meeting this week [Link to slides]

1) About the sensorapplication2 code. I cannot clone it, either. I checked the account cmusv.soc@gmail.com, but this Heroku app is not affliated to that account. I don’t know who is working on that. Maybe we can only view the Heroku app by url right now by <https://sensorapplication2.herokuapp.com/> (I think it is drawn by SVG)

2) The metadata management need to be stored in the database directly by calling APIs. I think the cache idea is a perfect solution. But if we want to make it simple, right now we can just make an API call to fetch all the options into a combo box every time the page is refreshed. For example, calling <http://einstein.sv.cmu.edu/get_sensor_types/firefly_v3>, then we can get all the sensor types of a firefly.

3) Same feeling from my perspective… I think we should focus on this web app project first.

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Lyman Cao

Carnegie Mellon Silicon Valley

Graduate Student - Software Engineering

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Date: Sat, 9 Nov 2013 12:40:48 -0800  
Subject: Re: Project 3 Part-time status update  
From: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
To: Lyman Cao <[lyman.cao@west.cmu.edu](mailto:lyman.cao@west.cmu.edu)>

Lyman,  
  
Thanks for your slides.  
  
1.) I'll email Jia and cc you, since neither of us have been able to get  
that code.  
2.) Agreed. Starting with API calls every time is a simpler option - we (or  
someone else) can refine it later.  
3.) Agreed.  
  
--Geoff

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Date: Fri, 15 Nov 2013 15:53:10 -0800  
Subject: Status Update on Project 3  
From: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
To: Lyman Cao <[lyman.cao@sv.cmu.edu](mailto:lyman.cao@sv.cmu.edu)>

Hello Lyman,  
  
1.) Here is a copy of our slides from meeting with Jia.  
[merc2.pptx]  
  
We are re-working our in-class presentation based on feedback from Jia.  
I believe Jia will distribute everyone's in-class stuff on Sunday or early  
next week.  
  
2.) We've been rolling along on the webapp. When we get the reworked  
presentation to you, it should be clear what we are working on. Basically  
it is:  
API->Query Request/Response (DAO layer)->QueryManager->POJO layer->Views  
I think it is possible that when we integrate, we'll need to pay attention  
to the POJO layer.  
Is your group creating pure Java representations of concepts like Sensor  
and Device?  
  
3.) I'll send Jia an email about the sensorapplication2 code, and cc you.  
We still haven't been able to get this.  
  
4.) API suggestions for improvement:  
Currently, there are two category 3 APIs. getAllDevices and  
getSensorTypesForDevice  
It would be helpful for us if there was a third API. Something like:  
getAllDevicesWithSensorTypes  
Basically, a join between the info returned from the other APIs (so, it  
would return the same list from getAllDevices, but each device would have  
an additional value for the sensorTypes it supported).  
This would mean we would only have to make one API call over the network,  
instead of N+1 (where N is the number of Devices currently on the system).  
  
--Geoff

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Date: Fri, 15 Nov 2013 18:08:01 -0800  
Subject: Re: Status Update on Project 3

From: Lyman Cao <lyman.cao@west.cmu.edu>  
To: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>

1. Here is the copy of our slides for this week’s meeting with Jia

[Link to Slides]

2. Yes. We use pure Java representation. We talked to Jia about using Hibernate, but she said that

3. OK.

4. Yes. I also want some more APIs. There is another team doing the refactoring job and redefining new APIs and models. Right now, according to Jia, we can have a test version with fake data or fake API calls returning the results we want. And if the new APIs are ready, we can switch to a product version with the normal API calls.

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Lyman Cao

Carnegie Mellon Silicon Valley

Graduate Student - Software Engineering

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Date: Fri, 22 Nov 2013 12:00:18 -0800  
Subject: Project Integration and other Issues  
From: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
To: Lyman Cao <lyman.cao@sv.cmu.edu>  
Cc: Rob Black <[rob.black@sv.cmu.edu](mailto:rob.black@sv.cmu.edu)>

Hello Lyman,  
  
I've cc'ed Rob on this email as I'll be traveling for the next couple of  
days with limited e-mail availability.  
  
Our two groups need to meet at some point and integrate our work.  
I believe my group was discussing some amount of time on the 30th of  
November or 1st of December. Please let us know, if a time-slot on these  
dates would work for you.  
  
Also, how much look-and-feel work has your group done so far?  
We've noticed that your project has a large amount of CSS in it. Our group  
has been concentrating so far on functional requirements, but we are  
thinking about doing some work on the look-and-feel of the webapp. However,  
if your group has already put effort into the look-and-feel, we don't want  
to go off in our direction and make integration difficult.  
Please let us know.  
  
Thanks much.  
  
--Geoff

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Date: Fri, 22 Nov 2013 14:03:54 -0800

Subject: Re: Project Integration and other Issues  
From: Lyman Cao <[lyman.cao@west.cmu.edu](mailto:lyman.cao@west.cmu.edu)>

To: Geoffrey Schaeffer <geoffrey.schaeffer@sv.cmu.edu>  
Cc: Rob Black <[rob.black@sv.cmu.edu](mailto:rob.black@sv.cmu.edu)>

What about meeting next Tuesday night after Architecture’s class (rescheduled)?

The API problem, what Jia suggests is that we should talk to the Project-2 team about what we want, who is in charge of designing the new data model and the new API. Currently, the old data model has its own flaws and inconsistencies. I will try to do what I can, but I have no right to change the data already stored in the database.

Yes we made changes to the styles. But that’s bootstrap code. If you and your team have time for the styling, we have no objection.

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Lyman Cao

Carnegie Mellon Silicon Valley

Graduate Student - Software Engineering

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Date: Fri, 22 Nov 2013 16:51:50 -0800  
Subject: Re: Project Integration and other Issues  
From: Rob Black <rob.black@sv.cmu.edu>  
To: Lyman Cao <lyman.cao@west.cmu.edu>  
Cc: Geoffrey Schaeffer <[geoffrey.schaeffer@sv.cmu.edu](mailto:geoffrey.schaeffer@sv.cmu.edu)>

Hi Lyman -

To clarify the API issues - we agree that the data should in the database should not be changed at all. Our suggestions are really around the existing API, which Jia said we should contact you about. If you're not the right person, we can gladly forward the feedback to team two.

Issue #1 - when an *error* response is sent back from the API, it is not JSON formatted, even though the requestor is asking for a JSON response.

* Example: <http://einstein.sv.cmu.edu/get_sensor_types/Device_7839/json> (response is not JSON)
* Possible solutions:
  + Update API so that it responds with errors in JSON format
  + Update documentation to reflect that the response will not be JSON in cases where an error is returned.

Issue #2 - it's not clear from the documentation which, if any, of the fields in *any* of the existing APIs are required or if they're just optional.

* Possible solutions:
  + Update API so that it responds with all keys related to the requested resources, and leave the values blank for those keys that do not have a value.
  + Update documentation to reflect which keys are optional and which are required.

Again, we're only asking you because Jia told us that we should bring suggestions for the existing API to you. If you believe another team should work on it, we'll gladly send them that feedback instead.

Thanks,

Rob

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Date: Fri, 22 Nov 2013 19:17:36 -0800

Subject: Re: Project Integration and other Issues  
From: Lyman Cao <lyman.cao@west.cmu.edu>  
To: Rob Black <rob.black@sv.cmu.edu>  
Cc: Geoffrey Schaeffer <[geoffrey.schaeffer@sv.cmu.edu](mailto:geoffrey.schaeffer@sv.cmu.edu)>

Hi Rob and Geoff,

Thank you for your information. Sorry I was out before.

Issue 1:

This has been a legacy mistake not only for get\_sensor\_types. I will try to look into other API calls to fix this.

Issue 2:

Just assume every key/value is optional. Because some API calles piece up an old table and a new table, which have different schema. So right now, there is no foreign key constraint or something, at least on metadata API calls.

I wil fix issue 1 by tomorrow. And I will check if there is any current key constraints.

Will keep you posted.

Regards,

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Lyman Cao

Carnegie Mellon Silicon Valley

Graduate Student - Software Engineering

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Date: Tue, 26 Nov 2013 22:19:31 -0800  
Subject: Re: Project Integration and other Issues  
From: Rob Black <rob.black@sv.cmu.edu>  
To: Lyman Cao <lyman.cao@west.cmu.edu>  
Cc: Geoffrey Schaeffer <[geoffrey.schaeffer@sv.cmu.edu](mailto:geoffrey.schaeffer@sv.cmu.edu)>

Hey Lyman -

Unfortunately we were not able to meet tonight. Will your team be available at all this weekend? If not, can we have your github link to see your current code?

Thanks,

Rob

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Date: Tue, 26 Nov 2013 22:28:31 -0800

Subject: Re: Project Integration and other Issues  
From: Lyman Cao <[lyman.cao@west.cmu.edu](mailto:lyman.cao@west.cmu.edu)>

To: Rob Black <rob.black@sv.cmu.edu>  
Cc: Geoffrey Schaeffer <[geoffrey.schaeffer@sv.cmu.edu](mailto:geoffrey.schaeffer@sv.cmu.edu)>

Hi Rob,

I don’t know if my team mates have plans for the thanksgiving weekend. I think someone from our team needs to be away with his/her family.

What about your team?

Here is the gihub link

<https://github.com/caoyifanlyman/Fall-2013-CMUSDS>

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Date: Wed, 4 Dec 2013 21:19:52 -0800  
Subject: API Status  
From: Rob Black <rob.black@sv.cmu.edu>  
To: Lyman Cao <lyman.cao@west.cmu.edu>,   
 Geoffrey Schaeffer <[geoffrey.schaeffer@west.cmu.edu](mailto:geoffrey.schaeffer@west.cmu.edu)>

Hi Lyman -

Just wanted to clarify one thing on the API page:

* **Please refer to** [**this link**](https://github.com/SensorServicePlatform/APIs/wiki/New-Sensor-Table) **for the new device\_id. The old device\_id in this API doc may not be available any more.**

Does this mean that the device ids provided by the following API are no longer valid?

* [Get all devices registered](https://github.com/SensorServicePlatform/APIs#1)

Your expedient reply is appreciated as we only have 24 hours until our presentation and our team's project depends upon the API.

Thanks,

Rob

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Date: Wed, 4 Dec 2013 21:25:24 -0800

Subject: Re: API Status  
From: Lyman Cao <[lyman.cao@west.cmu.edu](mailto:lyman.cao@west.cmu.edu)>

To: Rob Black <rob.black@sv.cmu.edu>  
Cc: Geoffrey Schaeffer <geoffrey.schaeffer@west.cmu.edu>

For the sensor reading table, then yes.

Because the old data use old device\_id.

Now that the old data have been archived, all the new sensor data are collected using the new device\_id.

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Lyman Cao

Carnegie Mellon Silicon Valley

Graduate Student - Software Engineering

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Date: Wed, 4 Dec 2013 21:33:27 -0800  
Subject: Re: API Status  
From: Rob Black <rob.black@sv.cmu.edu>  
To: Lyman Cao <lyman.cao@west.cmu.edu>  
Cc: Geoffrey Schaeffer <geoffrey.schaeffer@west.cmu.edu>

Thanks. Just to be clear then, the URIs listed here: <http://einstein.sv.cmu.edu/get_devices/json> won't work for looking up any sensor readings, correct?

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Date: Wed, 4 Dec 2013 21:53:16 -0800

Subject: Re: API Status  
From: Lyman Cao <[lyman.cao@west.cmu.edu](mailto:lyman.cao@west.cmu.edu)>

To: Rob Black <rob.black@sv.cmu.edu>  
Cc: Geoffrey Schaeffer <geoffrey.schaeffer@west.cmu.edu>

As far as what I can tell from calling the API, correct.

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