Introduction

In this homework, we will explore the Almond virtual assistant and you will have a chance to contribute new ideas and applications to extend Thingpedia.

You are encouraged to work in groups, but groups with more students are expected to do more work. Only one submission per group is required. Submissions are due April 17 electronically on the Thingpedia website. This homework is worth 5% of your grade.

Getting Started

First of all, you should familiarize yourself with Almond and Thingpedia, at https://almond.stanford.edu.

Preliminaries:

1. **All members of the group**: Register an account on Almond website https://almond.stanford.edu/user/register. Please use your SUNET ID as your username and use your Stanford email.

2. **One member of the group**: Apply to be a Thingpedia developer from the Settings page on the website; in the request, please indicate names and student IDs of all members of the group, use “cs294s” as Organization name.

3. **After the application has been approved**, you should see a developer key shown in the Thingpedia website. If you filled the form right, you’ll see that all members of your group have the same developer key.

   **If you plan to work in groups, please indicate so on your Thingpedia developer application.** Groups can be formed later, but the process is manual and will require some time.

Writing Thingpedia Entries

Your Task

Your group will develop a new Thingpedia entry for everyone to use.

To obtain full credit for this task, you must complete both the configuration part of the device and at least 1 function per student in the group. Each function must have at least 3 example commands.
Logistics

Your group must sign up at [https://goo.gl/3eNqrX](https://goo.gl/3eNqrX) indicating what device you wish to implement. We have provided a few suggested devices in the spreadsheet, but feel free to work on anything you are interested.

Submission must happen through the “Upload a new device” button in the Thingpedia page. You can submit any number of times, and after you submit you can start testing the new device. Only the last submission will be graded.

You can use the code of existing devices at starting point in writing your own. You can find it at our Github repository and you can ask the TA for explanations.

You can find detailed documentation in the Thingpedia Developer Portal. You will need to read at least Getting Started with Almond and Writing Thingpedia Entries. When writing example commands, you may also find Introduction to ThingTalk and ThingTalk Reference useful.

Tips

1. Make sure the APIs of the service you choose are working (for example using `curl` or Postman) before you start.

2. Each Web Almond has a cached copy of the code you uploaded to Thingpedia. After you make changes to your Thingpedia device, to test your latest changes, update the cache at the page [https://almond.stanford.edu/me/status](https://almond.stanford.edu/me/status).

3. In the same page you can find the logs for your Web Almond, which will make your life much easier to debug. You can use `console.log` and `console.error` from your code to print in these logs.

4. The training of natural language takes up to 1 hour. You can see the status of the training at the top of the details page for your entry. The training is complete when the blue banner disappears.

5. When you upload your device the first time, you cannot use the natural language at all until it is fully trained. When you edit it later, your device will be usable but the language might not reflect your latest changes.

6. Before the training is ready, you can test by typing ThingTalk directly; this is accomplished using the `\t` prefix in Web Almond. For example, to test the command “@org.weather.current”, you can write:
   \t now => @org.weather.current() => notify;

7. When testing, save your ThingTalk code somewhere to avoid typing it over and over again.

8. If Almond cannot understand a sentence after training, you can either add more example commands in the Thingpedia entry, or train it manually at [Train Almond](#) page.