Project 1: BART Helper

In this project, we are going to continue to develop our BART Helper Skill to make it more useful to our users.

Recall that this Skill retrieves information about the [Bay Area Rapid Transit](#) System (one of Silicon Valley's public transportation systems).

Currently, this Skill can only tell you what the upcoming three holidays are, when BART will operate on a modified schedule. For instance, here is a sample interaction:

> **User**: "Alexa, ask BART Helper what the upcoming holidays are."

> **Alexa**: "The upcoming 3 holidays are Thanksgiving Day, Christmas Day, and New Year's Day."

Objective

Your primary task for this project is to:

- Create a new intent -- GetTrainTimes -- that lists for a user all the trains leaving from a particular station, with the number of minutes until departure and the platform of departure. For instance:

  > **User**: "Alexa, ask BART Helper when are the trains from Civic Center"

  > **Alexa**: "The train going to Daly City leaves in 4 minutes from Platform 1. The train going to Dublin/Pleasanton leaves in 12 minutes from Platform 2. The train going to Millbrae leaves in 7 minutes from Platform 3. The train going to Pittsburg/Bay Point leaves in 3 minutes from Platform 2.... "

In order to create this intent, you will need to use the BART Train Times API (example: http://bartjsonapi.elasticbeanstalk.com/api/departures/civc), which gives you a list of the train times from a particular station. Note that the last part of the URL ("civc" in this case) represents a station code, which maps to a station name (Civic Center in this case).

Thus, you will need to obtain a station name from the user request (hint: use custom slots for this), then map the user provided station name to its corresponding station code, and then append the station code to the URL above in order to get a list of train times from that station.

For your reference, here is a list of all station names with their corresponding codes:

"12th street oakland city center": "12th",

 "16th street mission": "16th",

"19th street oakland": "19th",

"24th street mission": "24th",

"ashby": "ashb",

"balboa park": "balb",

"bay fair": "bayf",

"castro valley": "cast",

"civic center": "civc",

"coliseum": "cols",

"colma": "colm",

"concord": "conc",

"daly city": "daly",

"downtown berkeley": "dbrk",

"dublin pleasanton": "dubl",

"el cerrito del norte": "deln",

"del norte": "deln",

"el cerrito plaza": "plza",

"embarcadero": "embr",

"fremont": "frmt",

"fruitvale": "ftvl",

"glen park": "glen",

"hayward": "hayw",

"lafayette": "lafy",

"lake merritt": "lake",

"macarthur": "mcar",

"millbrae": "mlbr",

"montgomery street": "mont",

"north berkeley": "nbrk",

"north concord martinez": "ncon",

"oakland airport": "oakl",

"orinda": "orin",

"pittsburg bay point": "pitt",

"pleasant hill": "phil",

"powell street": "powl",

"richmond": "rich",

"rockridge": "rock",

"san bruno": "sbrn",

"san francisco airport": "sfia",

"san leandro": "sanl",

"south hayward": "shay",

"south san francisco": "ssan",

"union city": "ucty",

"walnut creek": "wcrk",

"west dublin pleasanton": "wdub",

"west oakland": "woak"

Bells & Whistles (optional, for extra credit)

As you may have already surmised, Alexa's response to the user request above is unnecessarily detailed, and likely contains information the user didn't seek. A better interaction for the user might be:

> *User*: "Alexa, ask BART Helper when are the trains from Civic Center to Millbrae"

> *Alexa*: "You have several train options from Civic Center to Millbrae. The first one leaves in 7 minutes from Platform 3. The next one leaves in 28 minutes from Platform 1. And there's one in 48 minutes leaving from Platform 1."

Modify your BART Helper Skill to take two input stations from the user (one for departure, one for destination), and then use these to selectively convey information back to the user.

Note: If you are planning on doing this part of the assignment, make sure you have first completed the task above **and** committed your code to your Github branch. That way, even if you make changes to your code for this part, and your changes don't work as intended, you have already submitted a working skill for credit.