Class Catcher

- Course tracker based off location and professor score
    - Selenium for scraping
    - Rate My Professor API
    - Google Maps API
- How it works:
    - User lists where they live
        - They can type in an address if they live off campus
        - If they live on campus, they can select from the drop down menu
            - Drop-down menu already has addresses of BU dorms
    - Client also lists what class they want to register for
    - Course Catcher will get the list of professors and their ratings
    - Create Dictionary = {Professor:__, Section:___, Building:___ }
        - It calculates the score
            - score = -(professor score) + distance from building
        - It finds the min score (the best one) and returns it

- **Roles:**
  Efim - Backend
  Alex - Frontend
  Kevin - Frontend
  Kyle - Backend

Required Fields for Front-End (Needs to be validated):

1. Dorm or Address selector - dropdown with names of big dorms at BU where you can select by name (ok if sends the dorm name string to backend, we can map to addresses there) OR be able to type in any address (if you don't live in a big dorm)
2. Class selector -
    a. Field 1 - college selector - dropdown like in student link
    b. Field 2 - department - either dropdown or text field that takes at most 2 characters, ideally checks if it's a valid department
    c. Field 3 - course number - field that takes only numbers and must be 3 numbers
3. Transportation mode - dropdown that has these options: driving, walking, bicycle, transit

RateMyProfessor is not scrapable, will adjust to google calendar API

API endpoints:

- Search class
- Calendar

https://developers.google.com/maps/documentation/distance-matrix/overview

```
interface request {
    name: string,
    address: string,
    transportMode: string
}

// Name is a string with the College, Course Department and Course number fields

const example_request =
    {
        "name": "CAS CS 350",
        "address": "123 Example St", // OR "Warren Towers",
        "transportMode": "transit"
    }

interface response {
    name: string,
    time: string,
    building: string,
    distance: string,
    commute_length: string,
    professor: string
}

const example_response =
    {
        'name': "CAS CS 350",
        'time': "MWF 10:10 am-11:00 am",
        'building': "CGS",
        'distance': "10 miles",
        'commute_length': "5 min",
        'professor': "James Johnson"
    }

Google maps API
https://maps.googleapis.com/maps/api/distancematrix/json
  ?destinations=New%20York%20City%2C%20NY
  &origins=Washington%2C%20DC%7CBoston
  &units=imperial
  &key=YOUR_API_KEY
```