

**Problem**

- Mobile Judge still sources its student data from Senior Project Website.
- Senior Project Website does not provide students' course information.

**Solution**

1. Create public RESTful API in VIP.
2. Create token authentication system for API endpoints.
3. Create data objects needed for Mobile Judge.
4. Add course information to student data objects.
5. Expose API endpoint for consumption by Mobile Judge

**Current System**

- Mobile Judge calls Senior Project Website API and populates its own database with returned data set.
- Data passed to Mobile Judge includes: Email, Name, PID, Project title, Project ID.

```

0:
  email: ██████████
  id: ██████████
  firstName: ██████████
  lastName: ██████████
  middle: null
  valid: true
  projectTitle: "Cancer Care App - Code to Cure 1.0"
  projectID: "307"
    
```

Fig. 1: Example Data Object from Senior Project Website API

```

0:
  email: "q@v.edu"
  id: null
  firstName: "Q"
  lastName: "W"
  middle: null
  valid: true
  projectTitle: "VIP Website Test"
  projectId: "599b2e5a1b75ba7d7ccaadd8"
  course: "TES 5000 - U01 Fall 2017 (10000)"
    
```

Fig. 2: Example Data Object from VIP Website API with course information

**Screenshots**

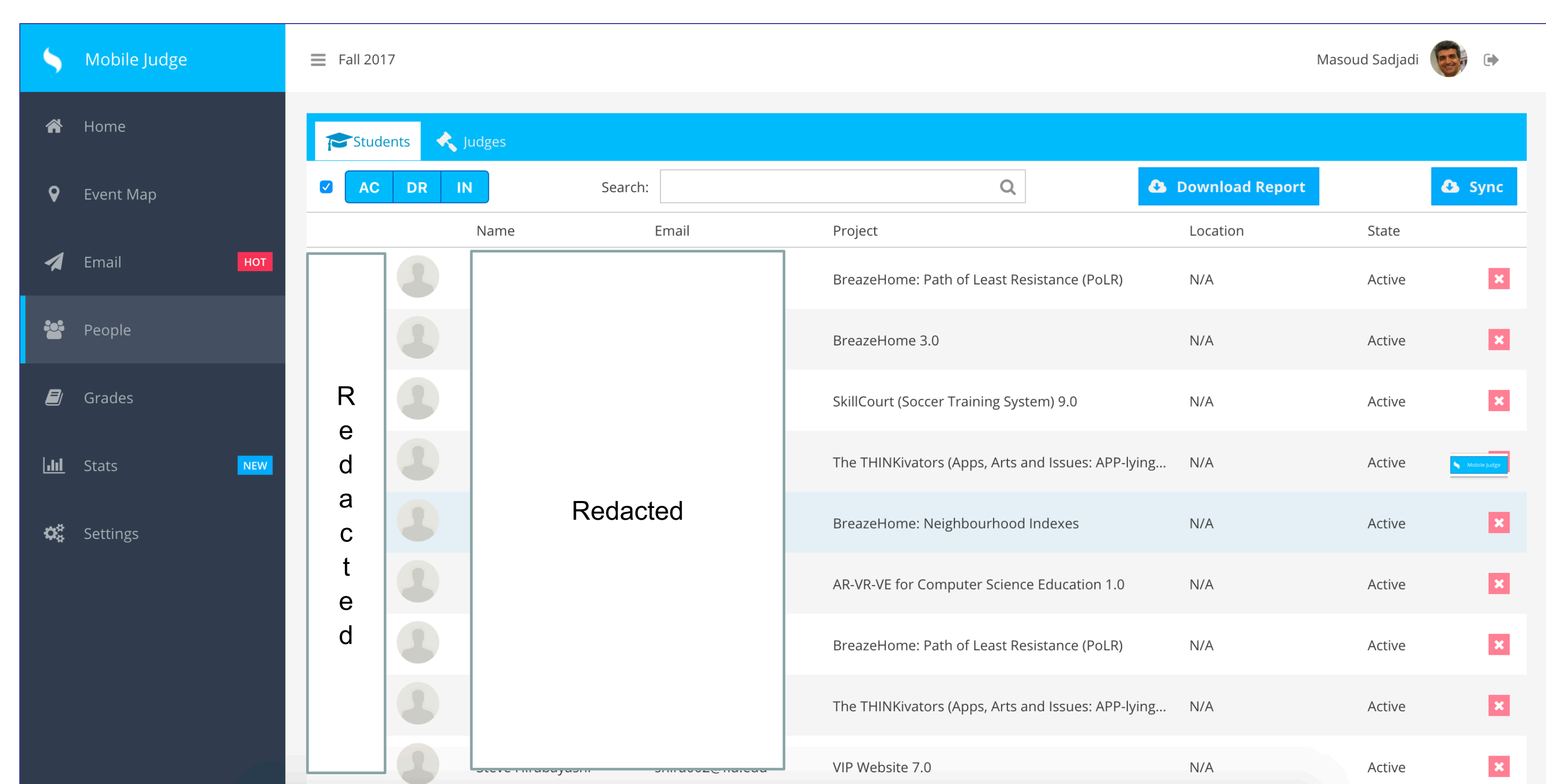
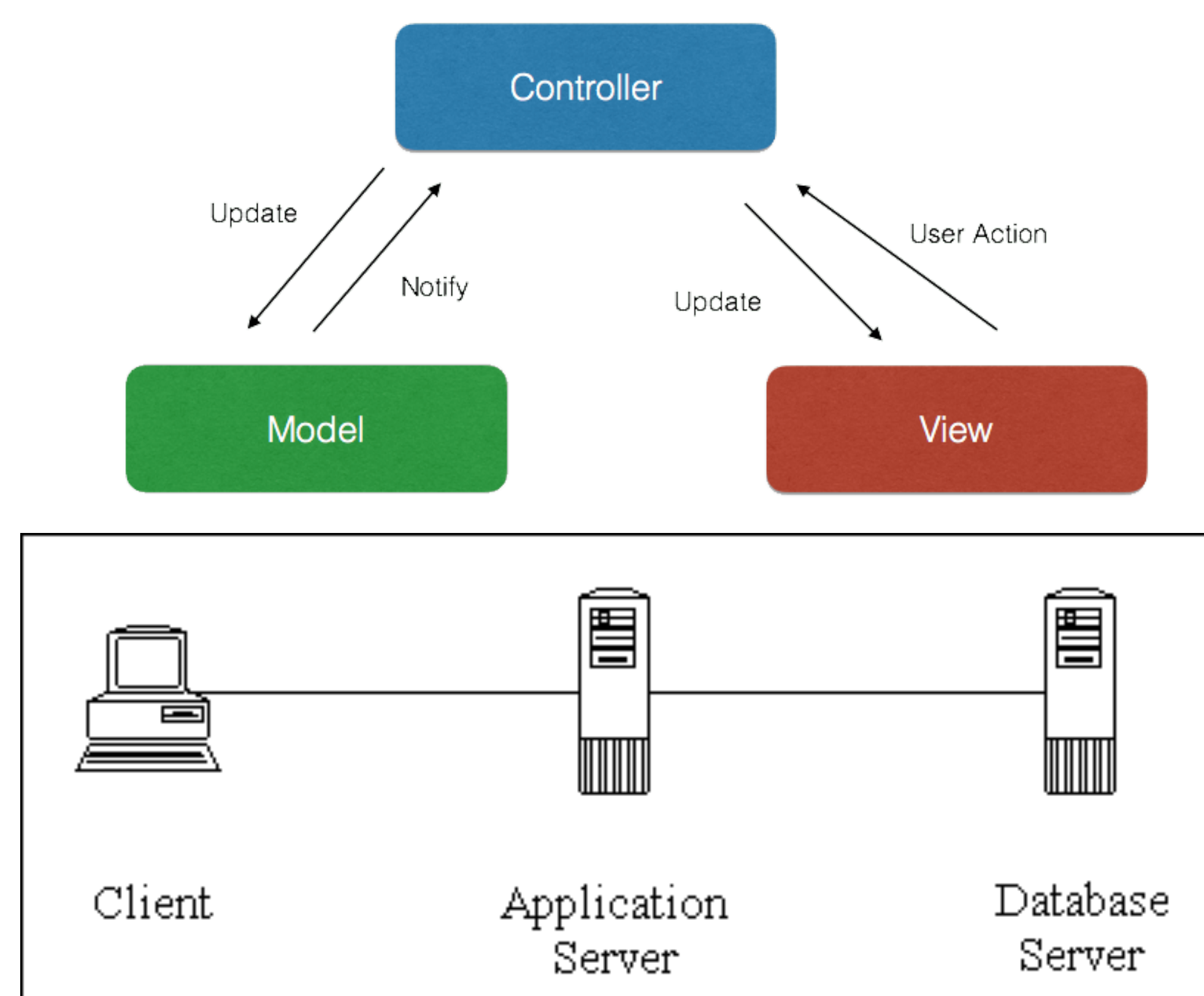


Fig. 3: Example of API data in use in the Mobile Judge application.

**Requirements**

- Seamlessly replace VIP Website as data source for Mobile Judge.
- Mobile Judge receives students' course data.

**System Design**



**Implementation**

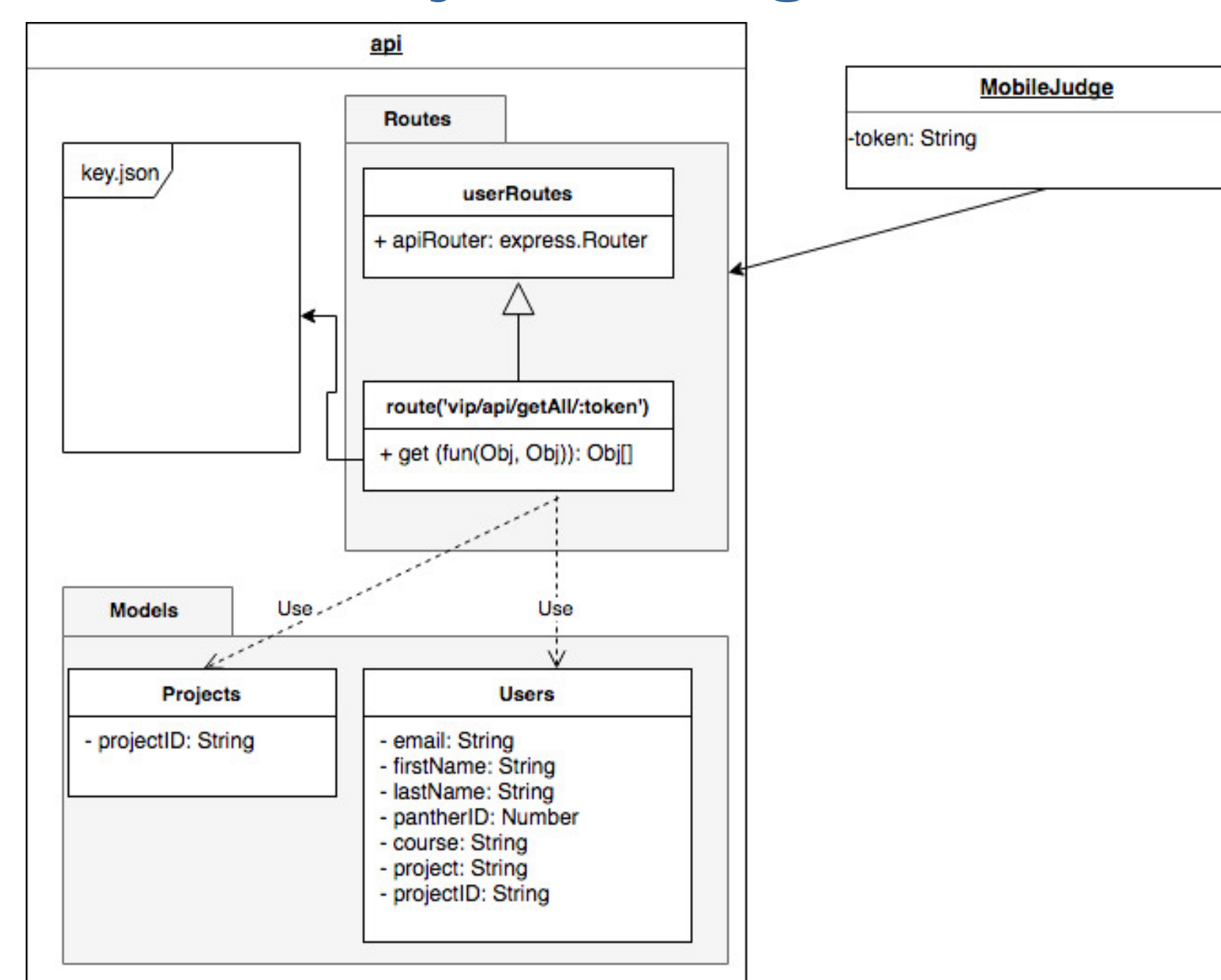
The system is implemented using the mean stack:

- MongoDB - Data store
- ExpressJS – API/Backend
- AngularJS – Front end Javascript framework
- NodeJS – Javascript runtime environment

**Verification**

- Authentication Sunny/Rainy Day local
- Authentication Sunny/Rainy Day live dev server
- Integration Sunny/Rainy Day local
- Integration Sunny/Rainy Day live dev server
- All tests received PASS

**Object Design**



**Summary**

- Improved functionality of Mobile Judge by adding course information\*
- Improved value of VIP Website by creating important functionality.
- Met owners requirements and managed expectations.

\*Stated assumption: Mobile Judge team has implemented new functionality.

**Acknowledgement**

The material presented in this poster is based upon the work supported by Dr. Francisco Ortega and Dr. Masoud Sadjadi. I am thankful to the help that I received from my group members, Andres Moser, Dale Keith, Steve Hirabayashi, and Leon Liang.