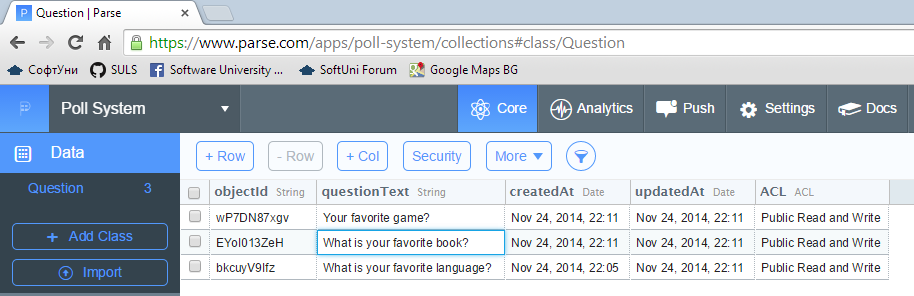
# Poll System HTML5 Application – JS Apps Lab

You are assigned to design and implement a **Poll System as Web front-end application** using HTML5, JavaScript, jQuery, AJAX, REST and JSON with a cloud-based backend. The app keeps questions, answers and votes. Users can view questions with their answers, vote for answers and view the voting results. The app should be implemented as client-side Web application in JavaScript with server-side REST services called by AJAX and returning JSON objects.

See the <Poll-System-Web-Design.pptx> file to get an idea how the application should look like.

## Create "Question" REST Service

Register at **Parse.com** and create an application to keep your data in the cloud. Create a class **Question(questionText)** to hold the poll questions. Fill a few sample questions:



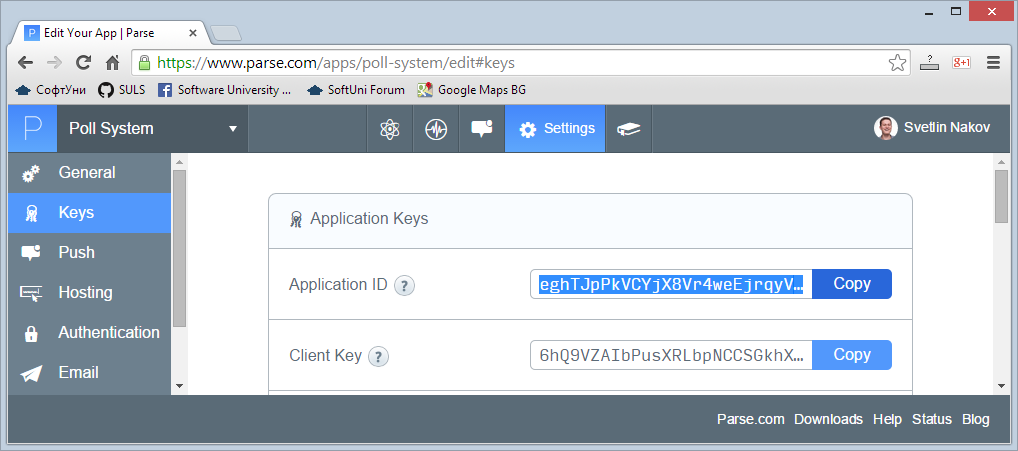
Parse.com will automatically create the following REST services to access your data:

* **List All Questions**
  + Endpoint: <https://api.parse.com/1/classes/Question>, Method: GET
  + Returns (JSON): {"results":[{"questionText":"…",…}, …]}
* **Create a Question**
  + Endpoint: <https://api.parse.com/1/classes/Question>, Method: POST
  + Request body (JSON): {"questionText":"…", …}
* **Update a Question**
  + Endpoint: <https://api.parse.com/1/classes/Question/question_id>, Method: PUT
  + Request body (JSON): {"questionText":"…", …}
* **Delete a Question**
  + Endpoint: <https://api.parse.com/1/classes/Question/question_id>, Method: DELETE

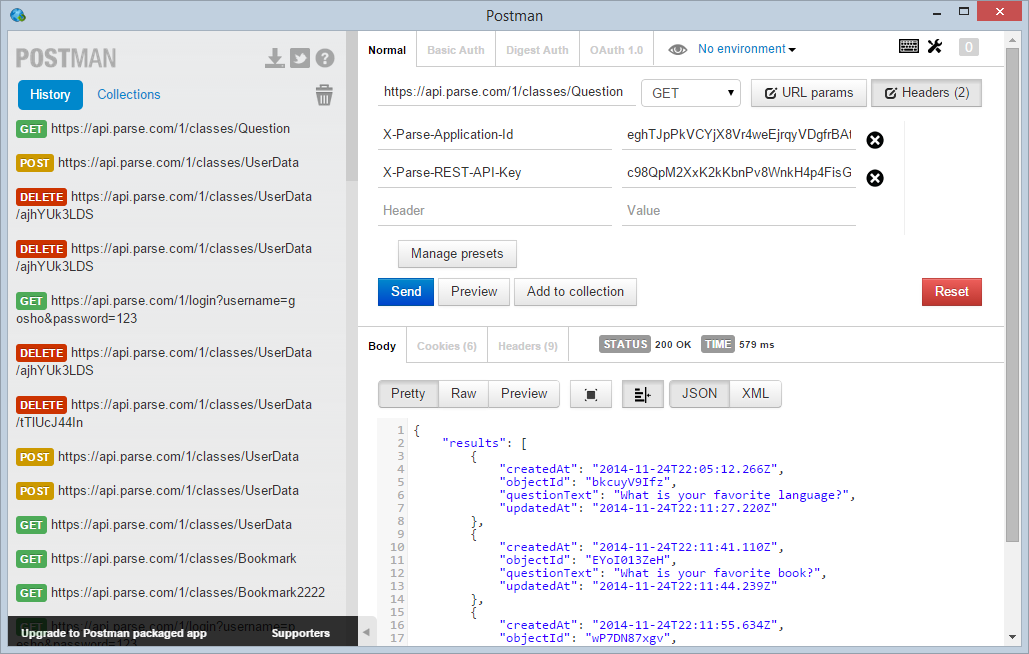
All Parse.com REST services require the following **HTTP request headers**:

* X-Parse-Application-Id: *your\_parse\_app\_id*
* X-Parse-REST-API-Key: *your\_parse\_rest\_api\_key*

To view your Parse.com access keys, go to Your Application 🡪 Settings 🡪 Keys:



Test your REST Service, e.g. using **Postman** Chrome Extension (<http://www.getpostman.com>). Try to list all questions in JSON format with an HTTP GET request to the REST API of Parse.com.

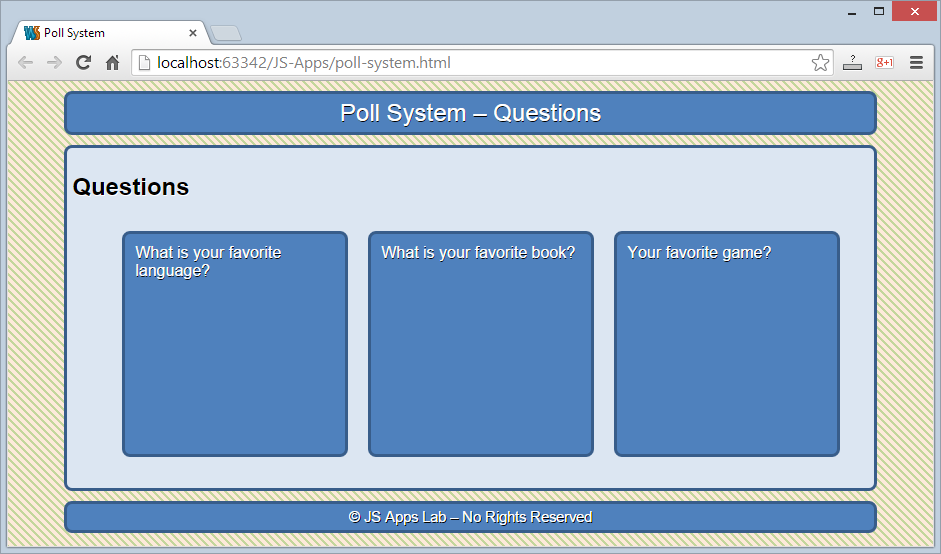


Submit a screenshot of the REST service call executed in your favorite REST client as result for this problem.

5 score

## List All Questions in the HTML Page

You are given an unfinished HTML5 project consisting of HTML, CSS and JS files. Your task is to add an AJAX call that takes all questions from your application in Parse.com as JSON object and displays them at page load.

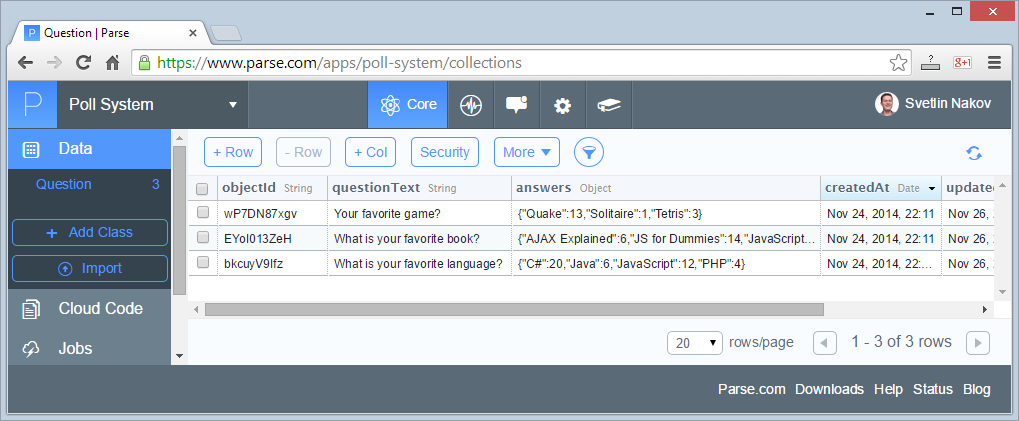


Submit the source code of your HTML5 application.

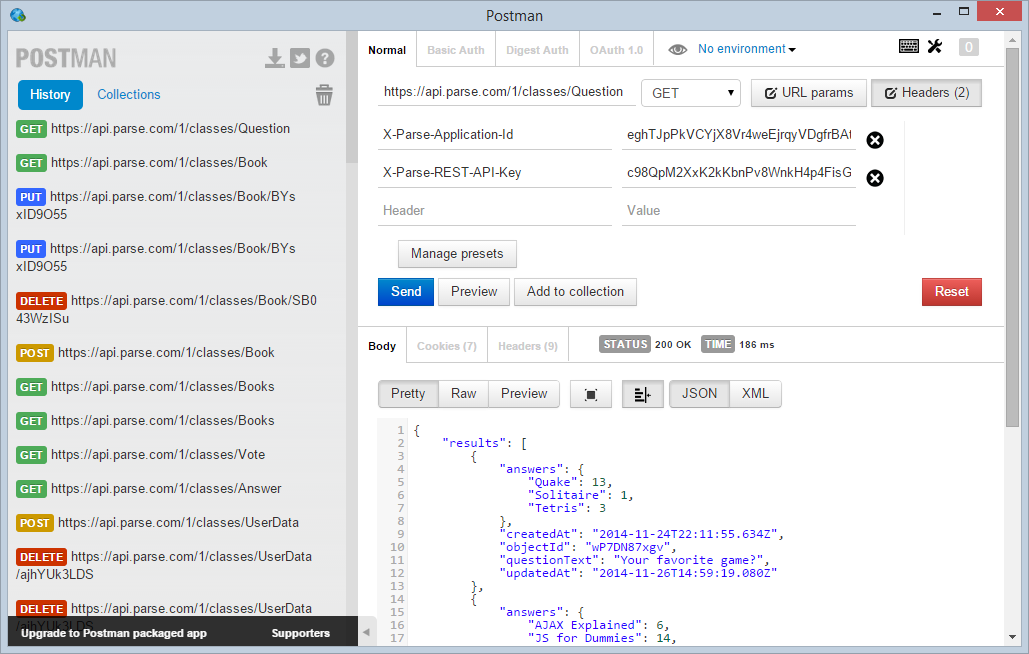
10 score

## Add Answers with Votes to the Questions

In your application at Parse.com add a new column in the **Question** class: **answers** of type **Object**. It will keep the answers for your question along with their votes as JSON object, e.g. **{"Quake":13,"Solitaire":1,"Tetris":3}**. Fill a few sample answers for your questions:



Test the "Questions" REST API generated by Parse.com:

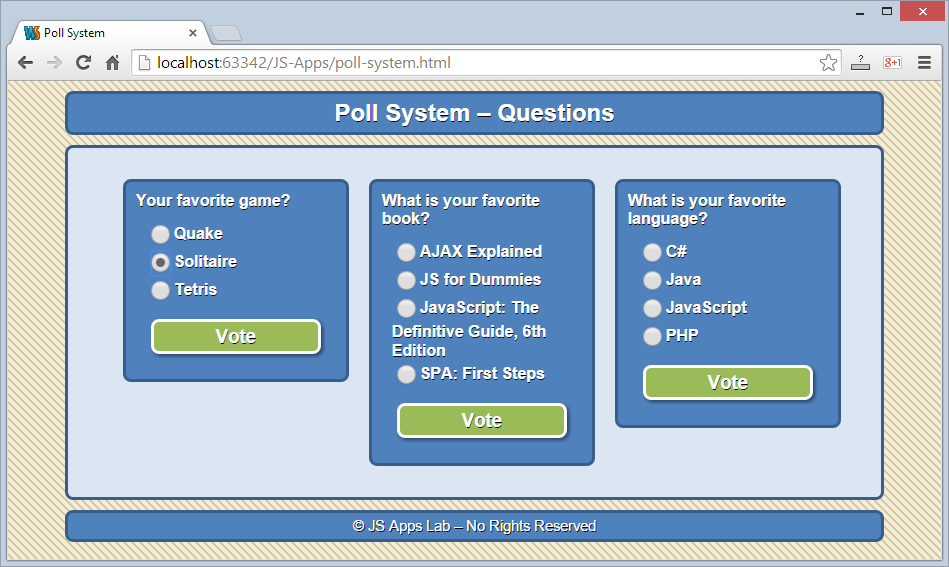


Submit a screenshot of the REST service call executed in your favorite REST client as result for this problem.

5 score

## List the Questions with Their Answers

Add a JavaScript code to display the answers for all questions in a form as radio buttons after loading them from the REST API of Parse.com:

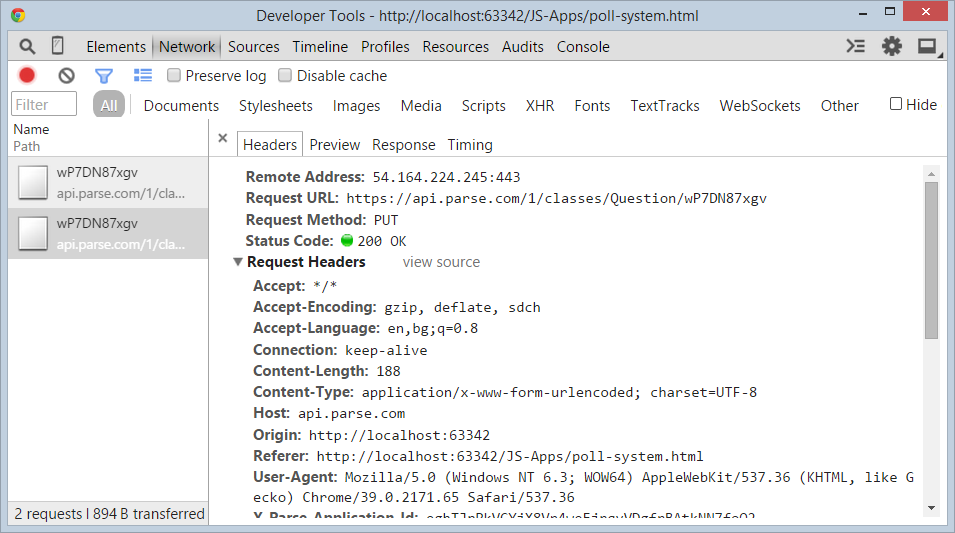


Submit the source code of your HTML5 application.

15 score

## Implement Voting

Add voting for an answer functionality. The easiest way to implement voting is by incrementing the number of votes for the selected answer in the selected question object and update the question object through the REST API of Parse.com. Note that the backend does not support "increment votes" functionality so you should update the entire question object. This approach has concurrency problems (e.g. when several people vote at the same time), but you can ignore them.



Submit a screenshot from your browser developer tools as result for this problem.

15 score

## Show Voting Results

Implement the functionality to show the voting results after voting for a certain answer. Show the question text, each answer and the voting results for each answer as progress bars. The progress bar for each answer should be proportional to the percentages of the votes for this answer calculated as part of the total votes for all answers in this question.



20 score