Online Judge Proxy Command Line Interface

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The Problem

- CSU Monterey Bay students practice for technical interviews and programming competitions using several platforms

- Each platform is different, some have functionality that others do not (i.e. feedback on time/space complexity, number of failed test cases, etc.)

- Teachers can not track student's progress

- Students are less motivated since resources are spread out

Kattis

- Closer to a traditional programming platform (e.g. Leetcode)

- Users can submit answers to questions

- Receive feedback on test cases passed

- Breakdown time and space complexities of submission

Codeforces

- Each question is part of a larger problem set contained in a contest

- Has a robust API however no submission method available

- Prompts include matrix algebra and differential equations

The Task

- Create a client package that submits solutions and provides feedbacks

- To be used in conjunction with platforms

- Ideally easy for students to setup and use

- After discussion, we decided that the command to the CLI tool should be:

```
oj-proxy [Path to Submission File] –id [problem ID] -p
[platform selected]
```

Creating the Command Line Interface

- The CLI tool uses two open source codebases to submit solutions

- So far students are able to submit to both Kattis and CodeForces

- They can also see how many test cases were passed

- As well as space/time complexity

Going Forward

Although the CLI tool is functional it is limited

- Some functionality to be added are the following:
  - *support for submitting to LeetCode*
  - *ability for teachers to view a student's submission*
  - *tracking consecutive submissions*
  - *providing more robust feedback to students*

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