Project Proposal

Girish Kumar
2016csb1040@iitrpr.ac.in

12-02-2018

Contents

1 About the Project

In this project we want to make a website which can be hosted on college servers and can be accessed on local network. Purpose of this site will be to provide a platform to the students where they can improve their skills and also do assignments in labs. Lab exams can be also taken on this site.

1.1 What is wrong with other on-line judges

To use on-line judges in a lab work hours one need the access of Internet, which increases the plagiarism. But if we have a our own on-line judge on a our local servers, which can provide basic functionalities of a site like Hackerrank, CodeChef, CodeForce etc., then we don't need Internet and can host lab-exams or competitive programs.

2 Features

The on-line judge will provide basic features like judging codes of languages C++, C, Python2, Python3, JAVA 8, Perl, PhP. Other features of the site are as follow:

- Code editor (Code Area)
- Syntax highlighting for supported programming languages.
- Sign in / Sign Up for students
- Save previous codes submitted by student.
- Give information about time and memory taken by the program.
- Hosting programming contest.
- Grading of the programs (Relative or Absolute)

3 Approach

This is the simple block diagram of the site. When user write the code with our

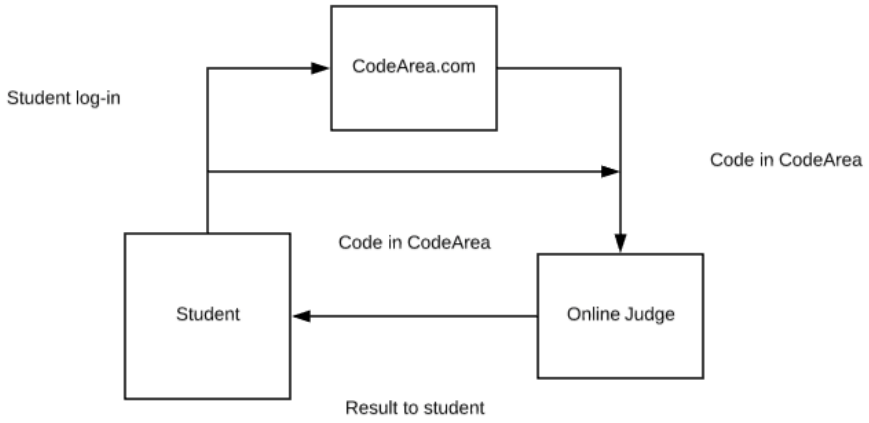

Figure 1: Block diagram of CodeArea

IDE and run the code then we send the code and the programming language selected to a frame on the the same page. This page write the code in a file on the server and then compile or run it using PhP on the server and the print the result on the frame page. If there is any error than it shows it as output. Support of the languages is limited to the languages installed on the server.

3.1 Sample Site

Here is the sample site designed to check the working.

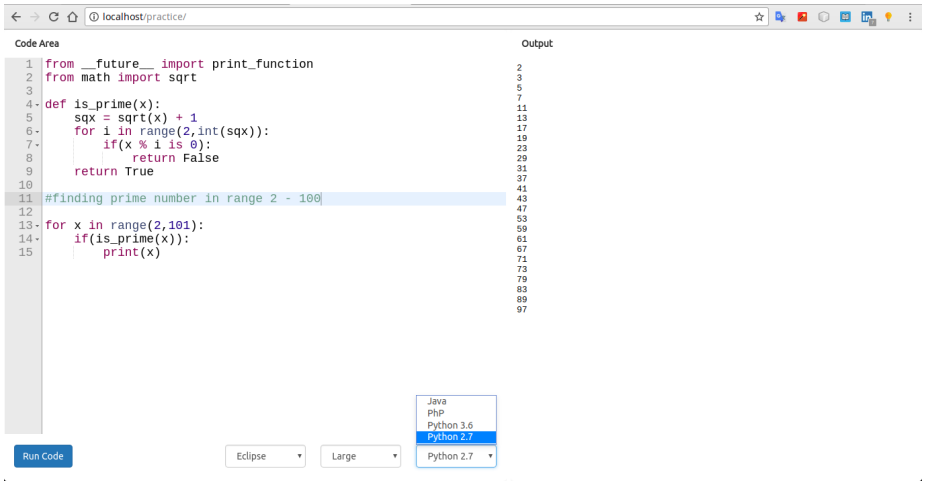

Figure 2: Sample of the site