
<Code Karin>

**<Virtual Classroom>
User Manual**

Version <1.5>

<Code Karin Virtual Classroom>	Version: <1.5>
User Manual	Date: <04/27/2022>
<Code Karin Vision>	

Revision History

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User Manual

1. Introduction

1.1 Purpose

The purpose of this user manual is to provide the necessary information to users who choose to participate as a student or instructor to effectively navigate and successfully use Code Karin's resources.

1.2 Project Overview

The goal of this project is to provide instructors and students at Texas Chirsitan University a platform with virtual classroom abilities. This includes the ability to create and delete virtual classrooms, add and remove students, add student restrictions, grade student work, add and remove problems from the problem sets: problem, solution, test set, and the ability to see a student's true name if an alias is in place. Students will have the ability to write and test code for practice problems, have access to grades, and the ability to set an alias in place of their real name. Ultimately Code Karin will be considered a success if students provide positive feedback to the product, the students engage in doing practices on the platform, the product is easy to manage by professors, if it's expandable, scalable, and flexible to be used by more users, and is secure.

2. System Structure

2.1 Types of Users

There will be two types of users, Student and Admin. Students will have access to limited functions whereas admin will have access to everything. These features include:

Student:

- Compete in coding contest
- View results in contest
- Discuss in discussion board
- Login

Admin:

- Manage classroom
- Manage student
- Manage user roles
- Manage contest
- Manage discussion board
- Manage student participation

2.2 System Organization

Listed below are the available components and the different features each one possesses.

Login

- Only available to student
- Sign in
- Sign out

Discussion Board

- Available to student and admin
- Access to classroom in order to speak to others

Coding Contest

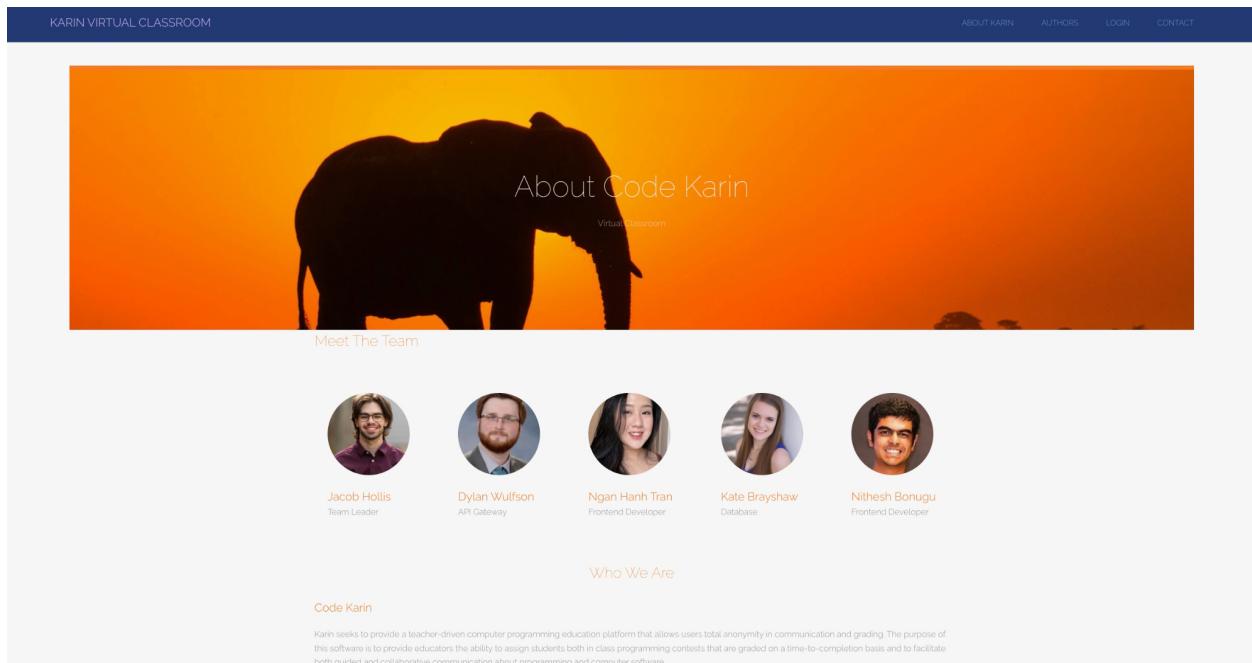
- Available to students
- Submission box to type answers in
- Submit button to submit code

3. Instructions for Students

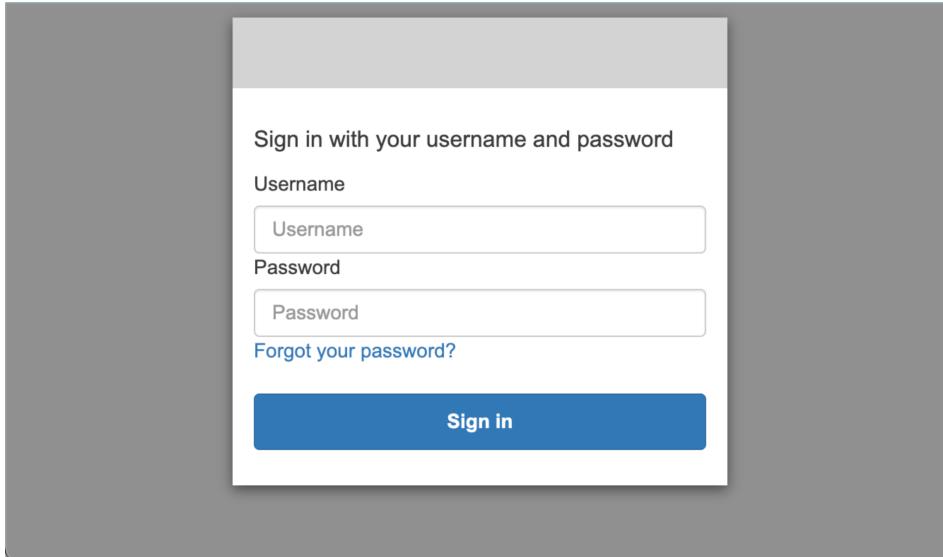
Here you will find all the necessary information on how to access Code Karin as a student.

3.1 Login

When a student wishes to gain access to Code Karin they must first login. To do this the user must click the login button on the top right corner. Indicated by the top navigation bar:

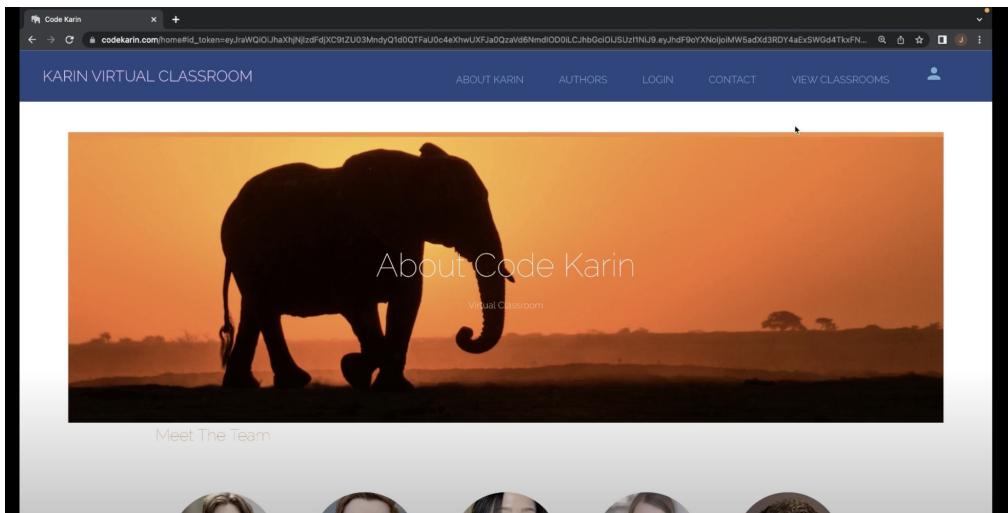


After Selecting the login button the user will be prompted with:

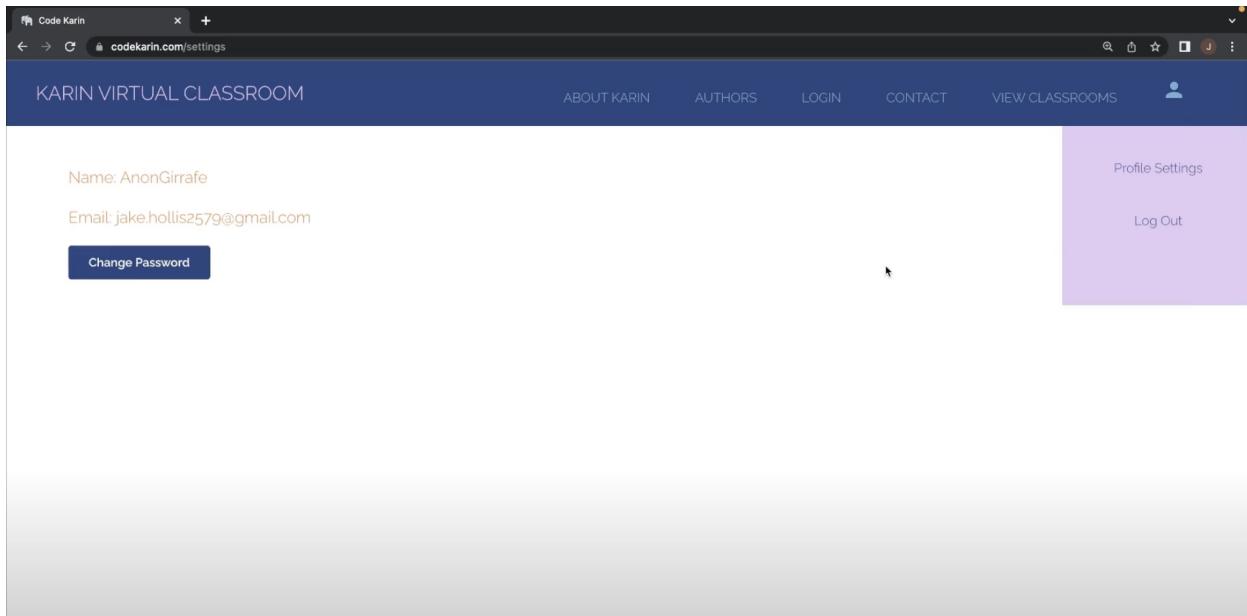


After login is successfully completed the user has access to classrooms, practice problems, and the coding contest. Once successful login has occurred the user will now have a “View Classrooms” tab available on the navigation bar like so:

If certain buttons are not present please refresh the page.

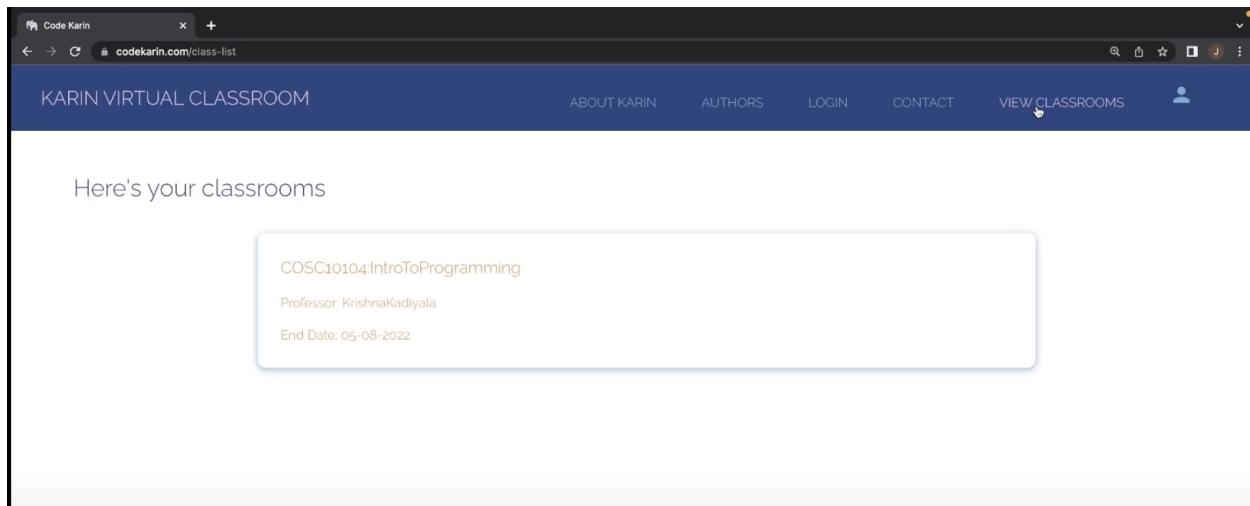


When a user is signed in they also have the ability to change their password by simply selecting the person icon on the top right navigation bar and selecting “Profile Settings”. They can then change their password by selecting “Change Password”. They also have the ability to logout from the drop down menu. As shown in the screenshot below:

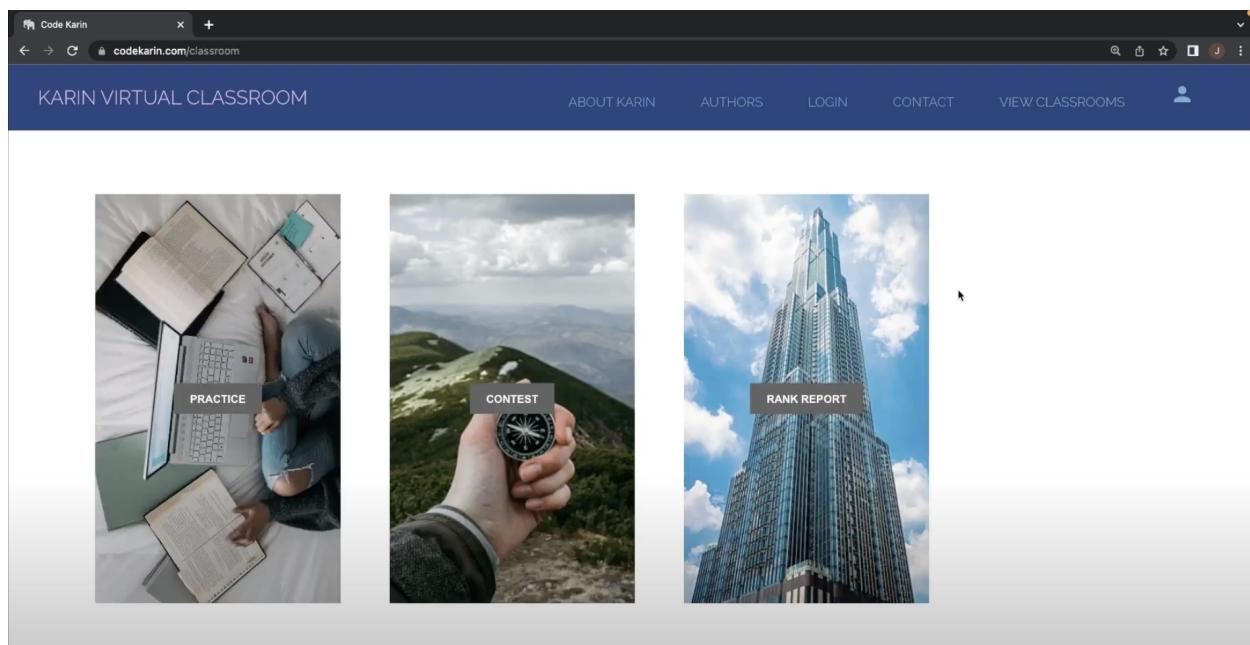


3.2 Complete Practice Problems

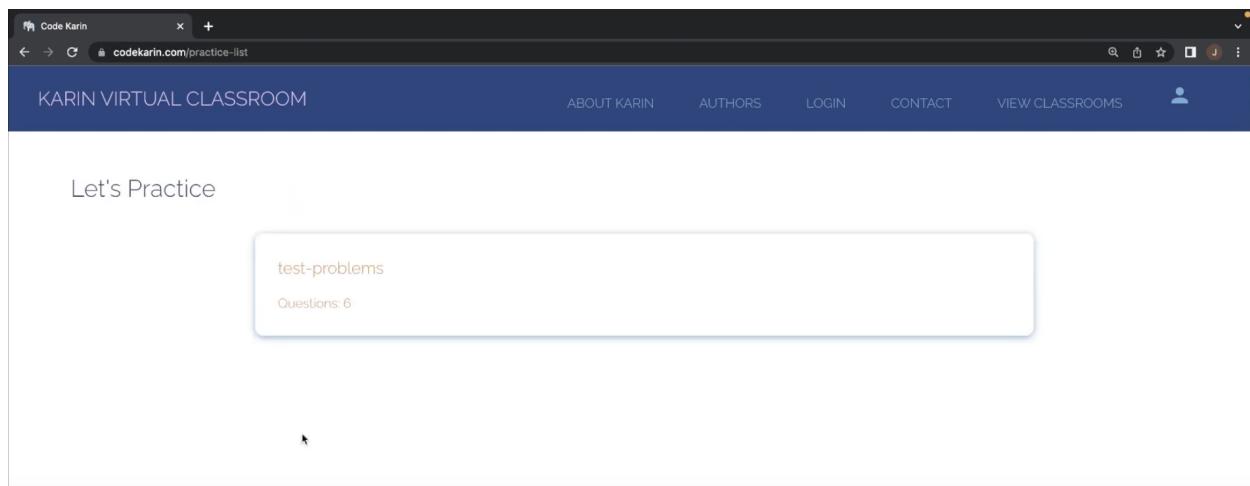
Once an authenticated user wishes to partake in practice problems he or she must select the “View Classrooms” tab. Once done the student will be shown this screen:



This is a list of every classroom available to the student. The student will then be required to select the appropriate classroom that he or she wishes to complete practice problems in. After selecting the desired classroom the authenticated user will be shown these three options:



The authenticated user then must select the “Practice” button located on the far right. Once selected the authenticated user will be prompted with a list of possible assignments they can choose from:



As indicated above there is one assignment available. When a user selects this assignment they will be brought to a list of practice problems found within the assignment that they can choose from:

A screenshot of a web browser displaying the 'KARIN VIRTUAL CLASSROOM' website at codekarin.com/practice-detail. The page features a dark blue header with navigation links for 'ABOUT KARIN', 'AUTHORS', 'LOGIN', 'CONTACT', and 'VIEW CLASSROOMS'. Below the header, a message reads 'Look what questions we can do today!!!'. Four practice problems are listed in boxes:

- test-problems/test-5**
Description: Write a function that has a string variable to hold your major, and a string variable that is assigned to the string TCU. Print those variables together in this format: CS, TCU.
- test-problems/test-2**
Description: Write a function to find the average of three numbers
- test-problems/test-1**
Description: Write a function to find and print integer a to the power of integer b
- test-problems/test-4**

Once the user has selected their desired practice problem they will be brought to the coding portion of the project:

A screenshot of a web browser displaying the 'Coding Page' at codekarin.com/code. The page title is 'Coding Page'. A practice problem is shown in a white box:
test-problems/test-3
Write a function to find and print the largest of the two numbers

The code editor area shows the following Java code:

```
Code
package main;

public class Code {
    Public int findMax(int num1, int num2) {
        /* Your code goes here */
    }
}
```

Here the user has the ability to view the practice problem in white text box at the top. And they can directly input their answers into the black console. Once a user is finished writing their answer they can select the “Run” button located at the bottom of the console:

```
Code Karin
```

```
codekarin.com/code
```

```
package main;
```

```
public class Code {
```

```
    public int findMax(int num1, int num2) {
```

```
        if(num1 > num2){
```

```
            return num1;
```

```
        }
```

```
        return num2;
```

```
    }
```

```
}
```

```
Run
```

```
Build complete, test results: b'-----\nTest set: main.Tester\n-----'
```

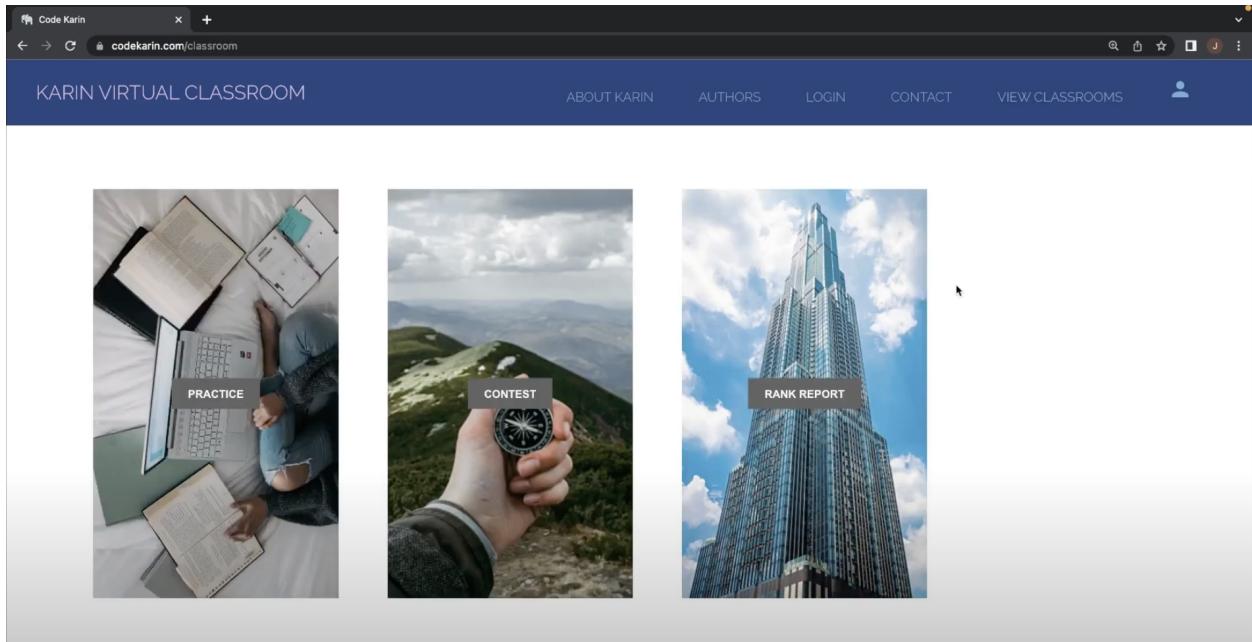
Once finished the user will know if they got the problem correct by the console found at the very bottom of the page. Use the scroll bar to see the right side of the console. A correctly answered question will be indicated by “Failures: 0, Errors: 0, Skipped: 0, ...” As shown below:

```
Run
```

```
-----\nTests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.018 s - in main.Tester\n-----'
```

3.3 Compete in Coding Contest

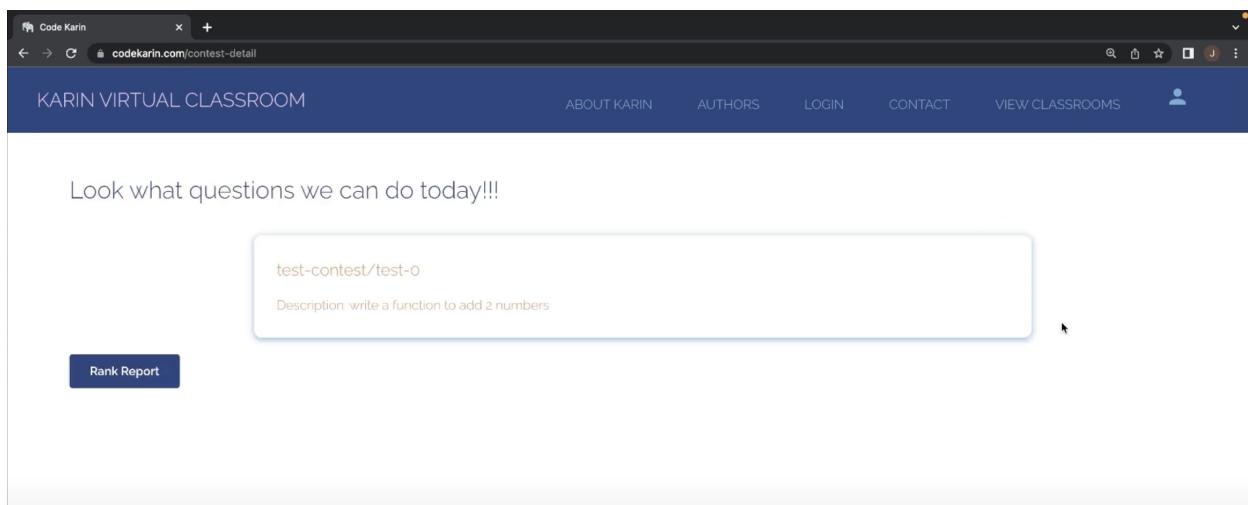
When a student wishes to compete in a coding contest. They first must login. View section 3.1 again for login information. Once they have logged in and selected “View C classrooms” and picked their desired classroom (as explained previously in the document). The user will be brought back to this page where they can select the “Contest” button:



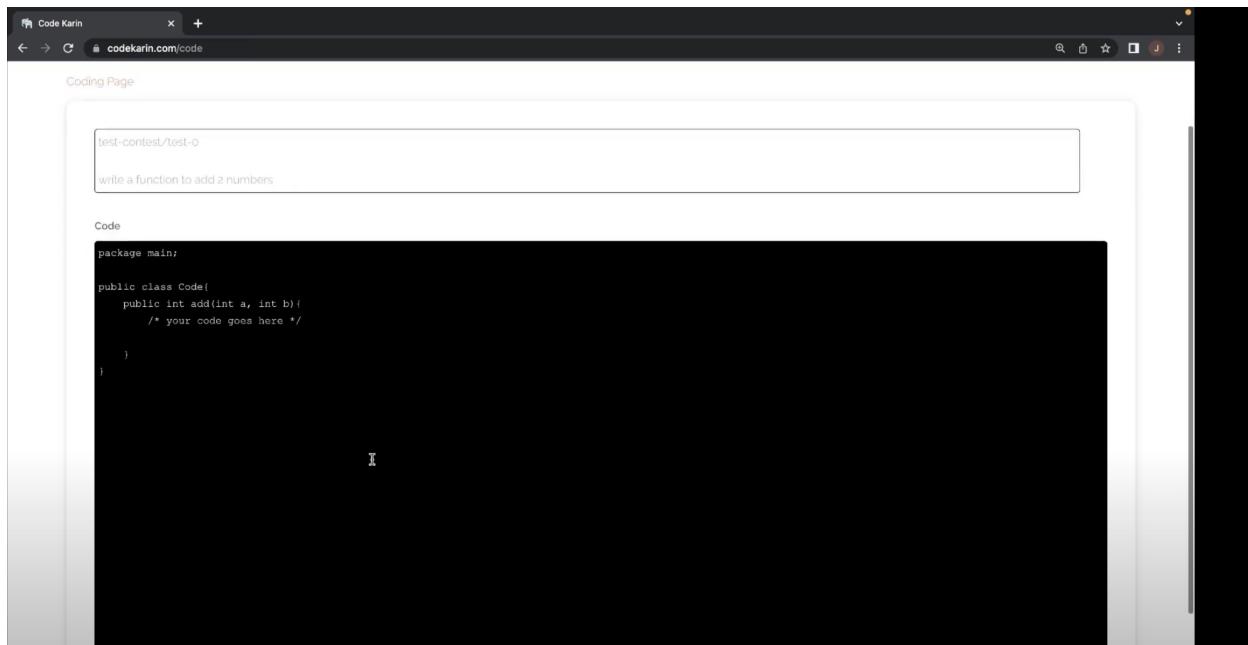
Once contest is selected the user can pick from multiple different contest as shown below:

A screenshot of the contest list page. The header is identical to the homepage. The main content area is titled "Contests" and shows a single entry: "test-contest" with "Questions: 1" and "DUE: 05-08-2022".

Once the desired coding contest is selected the user will have access to a list of coding contest questions as shown here:



After selecting the question the user will be prompted with the closing page where the question will be displayed in the above white text box and users will be able to write their answers in the black text box.



When the user is done they can select the “Run” button at the bottom of the page. Similar to last time when an answer is correct it will be indicated by what is highlighted in blue at the bottom of the last console:

A screenshot of a web browser window titled "Code Karin". The address bar shows "codekarin.com/code". The main content area contains the following Java code:

```
package main;

public class Code{
    public int add(int a, int b){
        return a + b;
    }
}
```

Below the code editor is a "Run" button. Underneath the editor, a terminal window displays the output of a command:

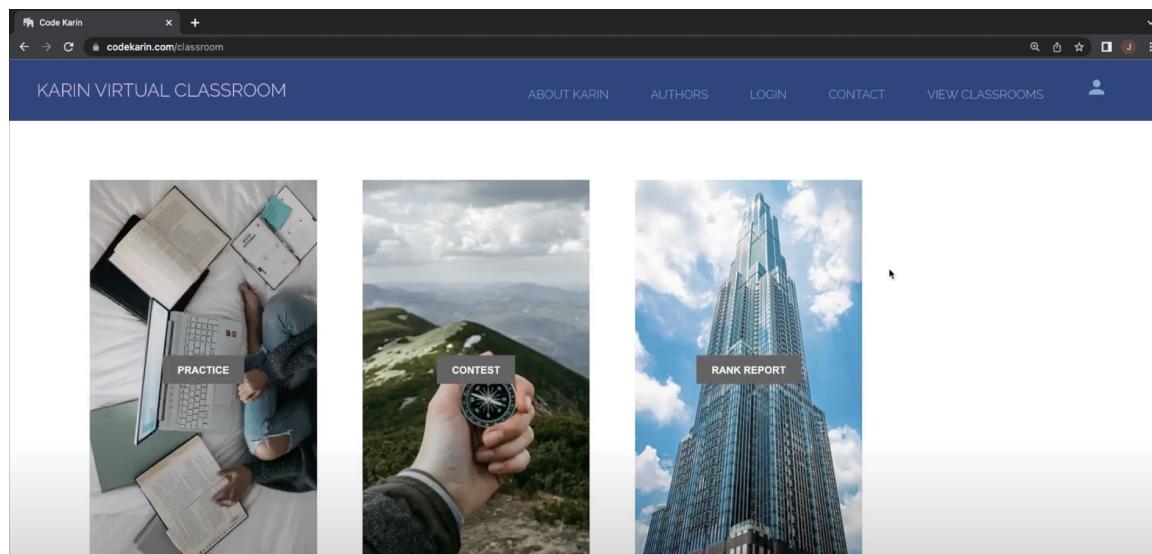
```
-----\nTests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.025 s - in MainTester\n
```

3.4 View Rank

If a user wishes to view their rank. There are two ways to complete this. One rank is for the number of correctly answered practice problems. The second rank is the number of correctly answered coding contest questions.

3.4.1 View Rank in Practice Problem

To view a user's rank after completing a practice problem the user must be logged in (explained in section 3.1). Once this requirement is met the user can view their ranking. This is done by selecting the “View Classrooms” page. Once the desired classroom is selected the user will be prompted with this page:



The user must select the “Rank Report” button found on the far right. After selecting this button the user will see their rankings as shown below:

A screenshot of a web browser showing the 'KARIN VIRTUAL CLASSROOM' website at codekarin.com/report. The page displays a table of student names and the number of finished problems. The table has two columns: 'Name' and 'Finished Problems'. The data is as follows:

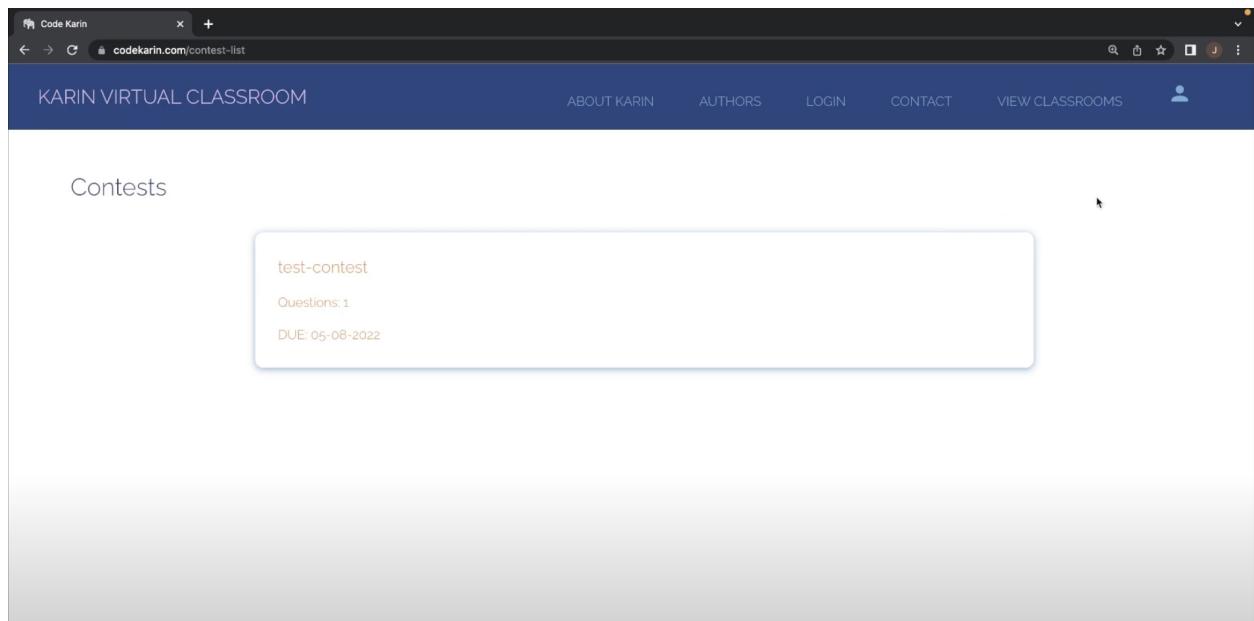
Name	Finished Problems
AnonGiraffe	4
AnonAngel	2
AnonBear	2
AnonFish	0
AnonPineapple	0
AnonGecko	0

3.4.1 View Rank in Coding Contest

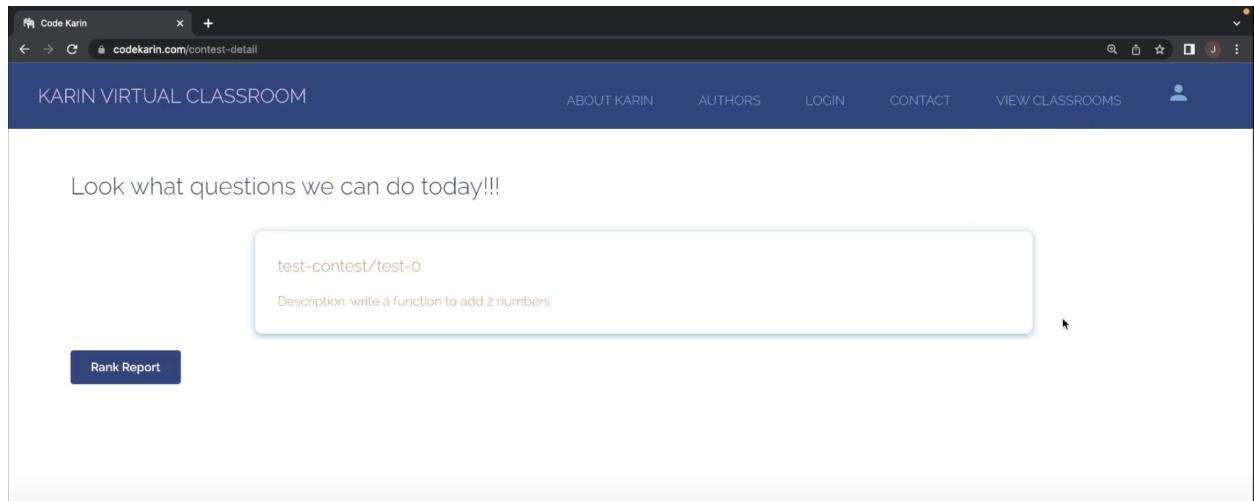
For a user to view their ranking in coding contest questions they must be logged in (explained in section 3.1). Once the user is logged in they must select “View Classrooms” and select their desired classroom. Once that is complete they will be shown this page:

A screenshot of a web browser showing the 'KARIN VIRTUAL CLASSROOM' website at codekarin.com/classroom. The page features three large, square cards arranged horizontally. From left to right, the cards are labeled: 'PRACTICE', 'CONTEST', and 'RANK REPORT'. Each card contains a small image related to its category: a person working on a laptop for 'PRACTICE', a hand holding a compass for 'CONTEST', and a tall skyscraper for 'RANK REPORT'.

Here they must select the “Contest” button. After selecting the contest button they must select their desired coding contest as shown below:



Once the necessary coding contest has been selected the user will be brought to a list of coding questions as shown here:



To view the students ranking in the coding contest questions the user then must press the “Rank Report” button located on the bottom left of the page. Once selected the user will be shown a page similar to this:

The screenshot shows a web browser window for the 'Code Karin' website at codekarin.com/contest-report. The page title is 'KARIN VIRTUAL CLASSROOM'. The navigation bar includes links for 'ABOUT KARIN', 'AUTHORS', 'LOGIN', 'CONTACT', 'VIEW CLASSROOMS', and a user profile icon. The main content area displays a table titled 'Finished Problems' with the following data:

Name	Finished Problems
AnonGiraffe	1
AnonAngel	0
AnonFish	0
AnonBear	0
AnonPineapple	0
AnonGecko	0

Below the table, there is a large, empty white space.