

CODERANGERS

USER MANUAL

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I. INTRODUCTION

CODERANGERS

CodeRangers is an online judge with a structured learning environment. In its current state it is primarily targeted for users who are new to competitive programming, and incorporates gamification in an attempt to increase their motivation. The structured learning environment guides and reinforces users in their learning by providing them with a path of problems based on their progress while the gamification features keep users engaged and active in the site.

SYSTEM REQUIREMENTS

Certain requirements need to be met in order to properly use CodeRangers, these are mainly:

Windows®7/8.1/10
Pentium® IV 2GHz or compatible
512MB RAM
Keyboard and Mouse
Latest version of Chrome or Firefox
Internet Connection

II. GETTING STARTED

SYSTEM ADMIN

A pre-created admin account is always added and can be used by using admin as the username and password.

CREATING YOUR ACCOUNT

CodeRangers requires its users to create an account in order for them to keep track of their progress. Note that as of this time, creating an account is done by admin users so user interface is at a minimum.

You can begin by accessing CodeRangers by logging onto www.coderangers.pro. To create an account, click on “sign up here”. Note that this feature may not be available, in which case your administrator will handle the creation of your account.



Enter your personal details and click register.

Registration Page

Username:

Password:

Email:

Register

[Already have an account? Log In here](#)

You will be redirected to the home page if account creation is successful. You will be notified otherwise.

LOGGING IN FOR THE FIRST TIME

You can begin by accessing CodeRangers by logging onto www.coderangers.pro. Enter your username and password in the corresponding fields and click on login.



If successful, you will be taken to the home screen. You will be notified otherwise.

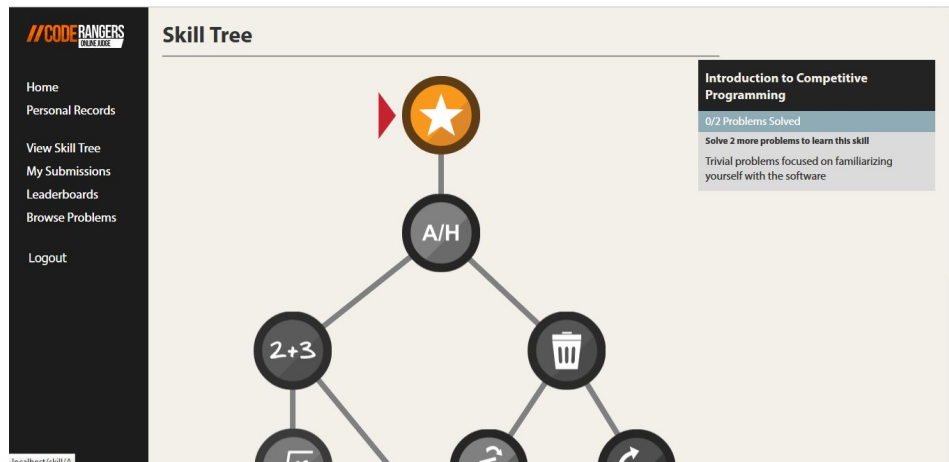
ANSWERING YOUR FIRST PROBLEM

CodeRangers is a platform that allows you to submit solutions to different programming problems. However there are a number of things to keep in mind when submitting solutions to problems.

From the home screen click on “View skill tree” on the left navigation panel.



A skill tree will be presented. Notice information is displayed upon mousing over some of the nodes and how other nodes are grayed out. The skill tree as well as the many other features of CodeRangers will be discussed in depth at a later time. For now, simply click on the topmost node where a red arrow can be seen pointing at.



You will be brought to the problems under that node. Click on the problem “Hello World” to solve your first problem.

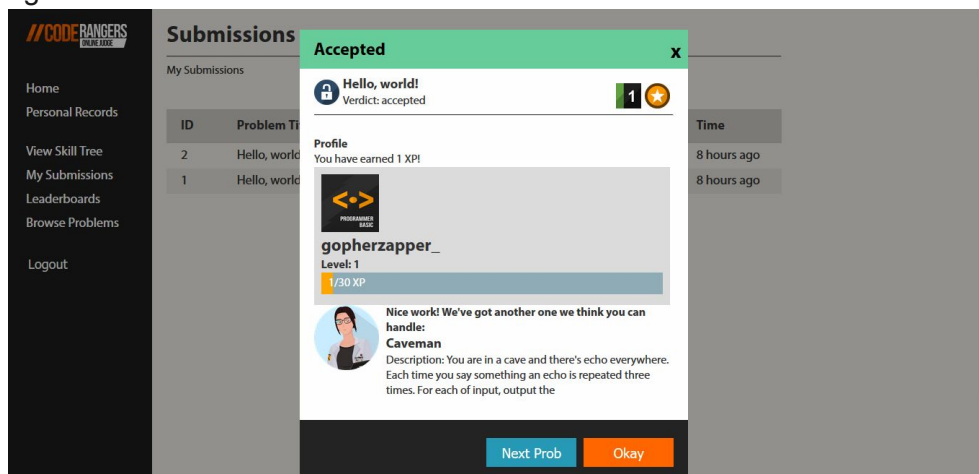
Problem	Difficulty	Status
Caveman	1	
Hello, world!	1	

A circular profile picture of a user is shown to the right of the table.

The problem as well as its details such as category and difficulty level are displayed. These will be discussed in further detail in the latter sections of this manual. For now read and understand the problem. Notice the sample input and expected output. This is a clue to what your program is expected to do. Develop a program which delivers the expected output. As of now CodeRangers supports C and Java. Place the program in the text box provided. Notice the textbox comes with a template for you to use, the template needs to be followed for the program to be checked by the judge properly. Note that you may create your program in an IDE of your choosing then copy paste it in the text box when finished.



Once you are happy with your program, click on the submit button. A popup notifying you if your solution is accepted or not should appear shortly. If the solution you submitted is wrong, you could try again. If you have solved the problem correctly, you will earn experience points for that problem. You will also earn a badge for acquiring the skill. How this works will be explained later. Congratulations, you have solved your first problem in CodeRangers.



III. USER INTERFACE AND FEATURES

GETTING AROUND

From the home page, you can navigate around the different parts of the website using the navigation bar to the left. Various links in the website (e.g. suggested problems) could also take you to different parts of the website. Each part will be explained in detail here.

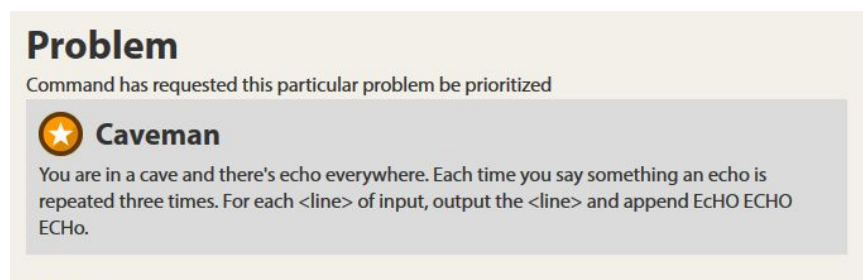
HOME PAGE

This is where you land upon logging in. The homepage displays some relevant statistics about your profile as well as providing easy access to these statistics and suggested problems to solve.



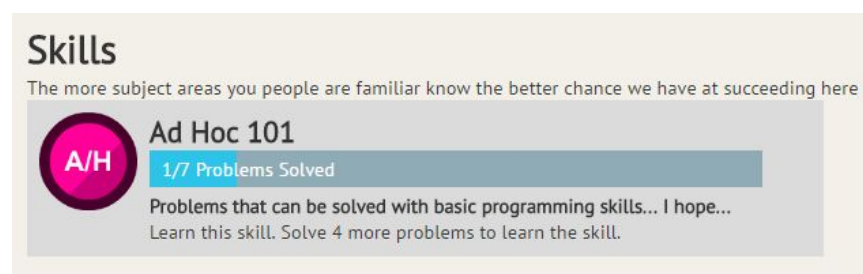
A. Suggested Problem

A certain problem which has not been solved yet but is unlocked is recommended here. You can easily access this problem to view its details as well as solving it simply by clicking on it.



B. Suggested Skill

This directs you to a skill that you have yet to learn/master that is currently available to you. Upon clicking, you will be directed to the said skill where you can choose a problem to solve within the skill.



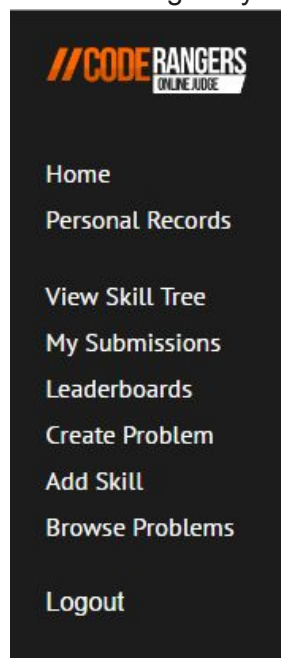
C. Profile

Displaying your profile in a nutshell, clicking on this directs you to your profile where you can see the full profile page; showing your badges, learned/mastered skills, experience points, and level.



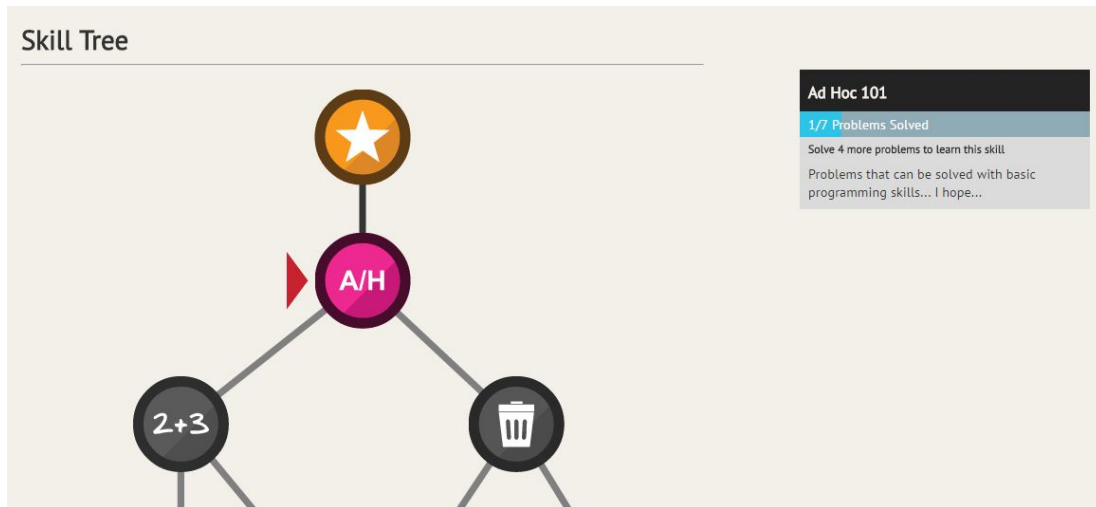
D. Navigation Bar

Your main mode of traversing within CodeRangers. The navigation bar will direct you to the different parts of CodeRangers depending on your needs, whether you want to view the leaderboards, to view your profile, browse for a problem, or simply go back to the home page. It is in here that you can also log out your profile.



SKILL TREE

The skill tree presents the different skills pertaining to the different types of programming problems. Initially only the top node is accessible signified by it being colored and the rest being grayed out. As you solve different problems skills eventually become learned. Acquired skills unlock the skills connected below them. If there are multiple skills parented to a node (ie: connected to the node from above) you will need to acquire both of those skills. Solving all problems under a skill masters it. There is no functional reward or consequence to this other than a shinier "mastered" badge in your profile which comes with bragging rights. A red arrow is pointed at the skill you are currently "in" this is simply the skill deepest in the tree. Its purpose is to serve as a guide to where you are at the moment although you may choose any skill as you please so long as it is not grayed out or locked. Clicking on the skill will bring you to it's page where you can view all the problems under the skill.



Mousing over a certain skill allows you to quickly see details on the skill. From the top, you have the name of the skill, a progress bar indicates the number of problems solved, the number of problems to solve to either learn or master the skill and a description of the skill.

Ad Hoc 101


1/7 Problems Solved

Solve 4 more problems to learn this skill


Problems that can be solved with basic programming skills... I hope...

VIEW SKILL

Upon clicking on a skill on the skill tree or from the main menu, you will be brought to this page. This page displays all the problems under that skill. At the top is the skills information banner which is the same information which is found when hovering over a skill in the skill tree; the skill icon, name, number of problems solved, number of problems to unlock the skill and a description of the skill.



Ad Hoc 101
0/7 Problems Solved
Solve 5 more problems to learn the skill.
Problems that can be solved with basic programming skills... I hope...

Problem	Difficulty	Status
Celebrity jeopardy	2	
Cost Cutting	1	
Division of Nlogonia	1	
Hajj-e-Akbar	2	
Lumberjack Sequencing	2	
Packing for Holiday	2	
Save Setu	2	



The list of problems is displayed directly below. Details include the problem, its difficulty level which ranges from 0 being the easiest to 3 being the hardest and the status which tells you if the skill is locked, unlocked and already solved. An arrow pointed at a certain skill is a recommendation on the skill to solve next but you need not solve that particular problem if you wish not to. You can view the problem page of the problem simply by clicking on the problem you wish to view.

Problem	Difficulty	Status
Celebrity jeopardy	2	
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Save Setu	2	




VIEW PROBLEM

Upon clicking on a problem in view skill or from the home page, you will be brought here. This page allows you to view the problem as well as submit a solution to the problem. The top contains details of the problem. A problem consists of a description of the problem containing a backstory, details regarding the problem and possibly some clues on how to solve it as well as a sample input and output the solution is expected to have.


At the moment, CodeRangers supports solutions written in Java and C. Note that formatting rules in UVA online judge also apply here. For the first few problems, a skeleton code in the text field serves as a guide although you are free to use any IDE then copy the solution to the text field. In fact, it is recommended that you do so for your convenience.

Clicking on submit problem will submit the solution. A notification regarding the submission if it was accepted or not will be displayed shortly.

 **Caveman**

1

Difficulty

 Skill

You are in a cave and there's echo everywhere. Each time you say something an echo is repeated three times. For each <line> of input, output the <line> and append Echo Echo Echo.

Sample Input

```
Hello
Bye
```

Sample Output

```
Hello Echo Echo Echo
Bye Echo Echo Echo
```

☒ Java ☐ C







```
1 import java.util.Scanner;
2
3 public class Main {
4
5     public static void main(String[] args) {
6         Scanner in = new Scanner(System.in);
7     }
8 }
9
```

Submit Query

LEADERBOARD

The Leaderboard is where one can see the progress of all the users ranking them based on their experience points. The leaderboard displays the rank, the current level of the users, the respective usernames and the accumulated xp per user. Through this, you can see the top achievers within CodeRangers and compare them with your own ranking. Clicking on a username would direct you to that user's profile page.

Leaderboard


Rank	Level	Username	XP
1		krizia_chiu	90
2		juliano_laguio	85
3		troy_mirafuentes	84
4		alexczar_delatorre	80
5		jaira_bat-og	79
6		ivana_lim	72

PERSONAL RECORDS

Personal records contain relevant information to your profile. To the left you could see you username, level and XP needed to advance to the next level. Below that are statistics on your problems solved. The majority of the screen are the skills that have been learned and mastered. As you solve problems and master skills in CodeRangers the wall eventually fills up with these skills. Your profile page is visible to other users of CodeRangers from the leaderboard so you can think of it as a wall where you get to show off your programming capabilities.

Personal Record

gopherzapper_
ID: PDR-42095K
F/N: 452-32B9




PROGRAMMER BASIC

Level: 1


1/30 XP

Experience	1
Problems Solved	1
Problems Attempted	1
Submitted Solutions	2

Unearned Skills



Learned skill Introduction to Competitive Programming (A)



Learned skill Ad Hoc 101 (B)




Learned skill Simple Math (C1)




Learned skill Garbage in, Garbage out (C2)




Learned skill More Math (D1)




Learned skill Text Twist (D2)




Learned skill Try Try Again (D3)




Learned skill Back to Basics (E)



Learned skill Even More Math (F1)



Learned skill Know your Data Structures I (F2)



Learned skill Greed is Good (F3)

SUBMISSIONS

Upon submitting a solution clicking my submissions in the navigation panel, you will be sent to this page. This page contains all submissions made by you. This allows you to keep track of them as some submissions, particularly those that require UVA to judge, may take a while to obtain a result. By clicking on View all submissions, you can view submissions made by other users as well. Clicking on the problem title would bring you to the view problem page of the corresponding title.

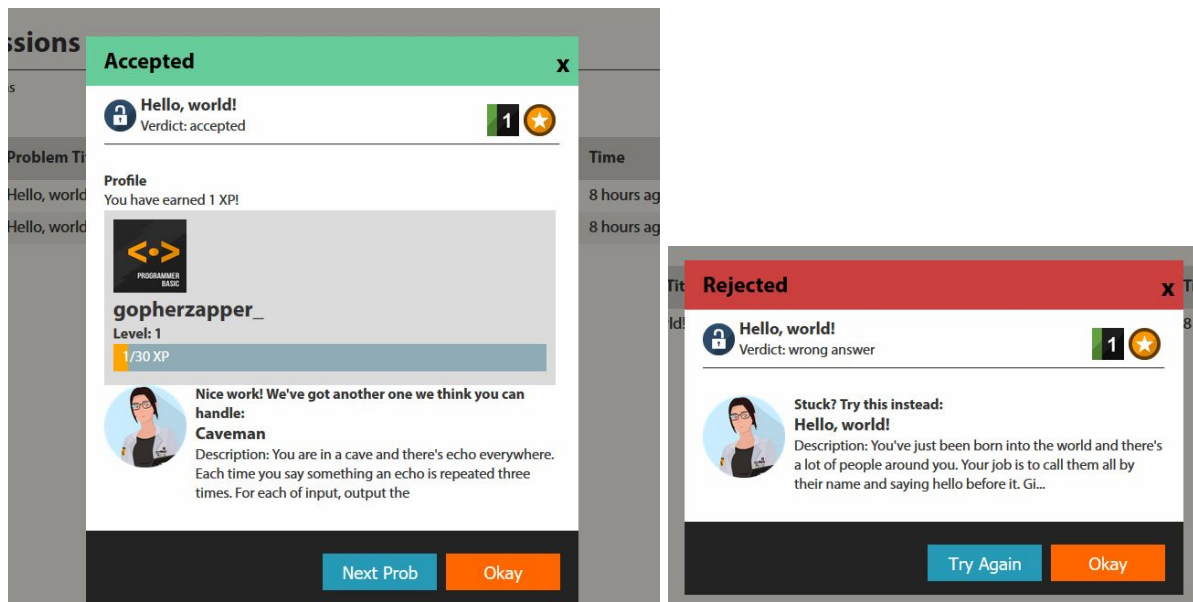
Submissions

[View All Submissions](#)

ID	Problem Title	Username	Verdict	Runtime	Time
2	Hello, world!	gopherzapper_	accepted	0.152	13 hours ago
1	Hello, world!	gopherzapper_	wrong answer	0.547	13 hours ago

VERDICTS

Upon submitting a solution to be judged, there are only be 5 possible verdicts. These verdicts are: Accepted, Wrong Answer, Time limit Exceeded, Runtime Error, and Compile Error. But for problems judged by UVa, Presentation Error is another possible verdict. Anything that is not Accepted is considered Rejected regardless of the verdict and will not add XP or mark the problem as solved. A modal notification will be presented after submitting your solution with the verdict posted near the top. The verdict can also be seen in the view submissions page.



EXPERIENCE POINTS AND LEVELS

Besides the skill tree, another gamification feature of CodeRangers is XP (experience points) and levels. Experience points are earned upon successfully solving a problem. Note that problems you have already solved as well as problems solved incorrectly do not earn experience points. The number of experience points earned from solving a problem is proportional to its difficulty level. A problem with difficulty level 2 will earn 2XP upon solving and so on. The progress bar indicates the number of XP needed to increase your level. Each level has a corresponding rank icon and title which increases in coolness as the rank increases. These are displayed on the leaderboard and directly affect your rank. The more XP you have accumulated the higher your rank will be in the leaderboards and the higher your rank in the leaderboards the more bragging rights you would have at your disposal to rub at your colleagues face next time you see them.



EMAIL NOTIFICATIONS

Email notifications are sent to the email you used to register after a certain period of time of being inactive. These are simply reminders for you to practice and there is no penalty for ignoring these. There is currently no option to turn this off.

IV. TROUBLESHOOTING

Problem:

CodeRangers would not accept my answer, but I am absolutely sure it is correct.

Solution/s:

- It is possible you may have missed an edge case. Think of possible cases that might make your program fail
- There may be a problem with the syntax in the solution, review the input and outputs carefully. It is important to note that the input and output syntax should be strictly followed in order for your answer to be accepted. Usually an extra space in the wrong place could cause all sorts of mayhem
- If none of these work, you may want to consider trying a different problem in the meantime and get back to the problem with a fresh perspective.

Problem:

I could not seem to have CodeRangers in more than 6 tabs.

Solution/s:

- Due to server limitations, a session can only support up to 6 tabs. CodeRangers does not usually need so many anyway so close the extra tabs.

Problem:

The UI seems weird or broken.

Solution/s:

- Ensure you are using the latest version of Chrome or Firefox.

Problem:

My submission has not yet been judged and it has been a while.

Solution/s:

- Some problems rely on UVA to be judged. It is possible that their server is offline or is experiencing load wait a little longer or try sending another submission.

Problem:

The text area in view problem where I can place my code is grayed out.

Solution/s:

- The problem you are viewing is still locked. Until you learn the prerequisite skills you will be unable to solve that particular problem.