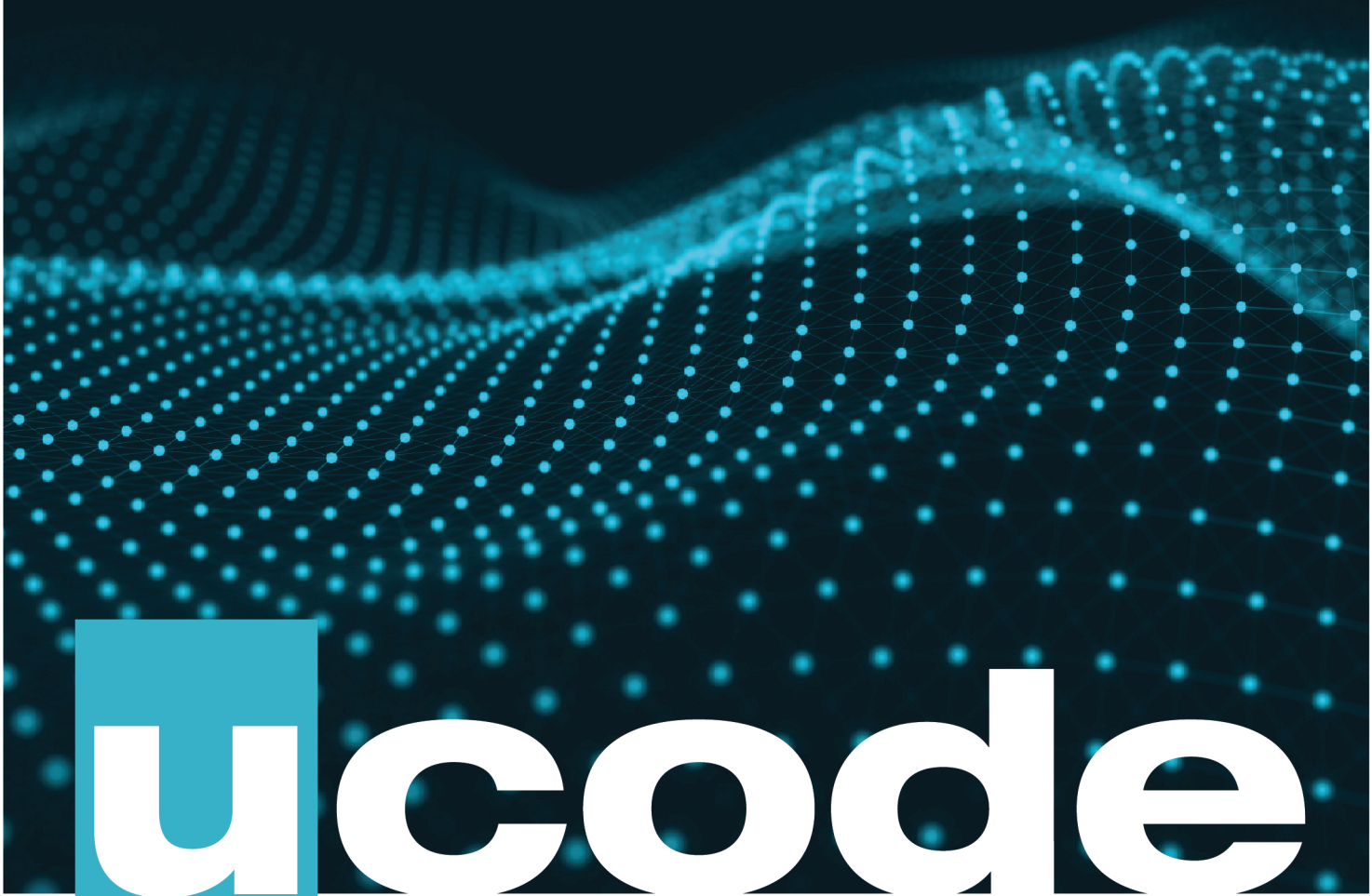
Race 00

Marathon C

November 8, 2019



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DESCRIPTION

Hi.

Your first team challenge starts right now.

Teamwork skills are extremely important today. Overcoming the challenges of working in a team, you will gain experience that will be useful to you in any field. Communication, conflict management, listening, reliability, respectfulness are all about teamwork.

Teamwork isn't as easy as it seems. Be ready.
Keep calm and work in a team.

BIG IDEA

Collaboration

ESSENTIAL QUESTION

How to be an effective team?

CHALLENGE

Develop a solution on `C` working in a team.

Investigate

GUIDING QUESTIONS

We invite you to find answers to the following questions. This will help you realize what knowledge you will get from this challenge and how to move forward.

Ask your team members and discuss the following questions together. You can find the answers in the Internet and share it with students around you.

We encourage you to ask as many questions about programming in teams as possible. Note down your discussion.

- Have you worked in a team before? What was your team experience?
- How are the options for organizing teamwork? What is a Teal Organisation?
- What skills and strengths need to become an effective team member?
- What tools can help you for the best teamwork?
- How to use `git` when you write code in collaboration? What gitflow you use?

GUIDING ACTIVITIES

These are only a set of example activities and resources. Do not forget that you have a limited time to overcome the challenge. Use it wisely. Remember that all team member must be involved into the process.

1. Meet with your team. Discuss how you organize teamwork. Create a channel for team communication.
2. Sit alongside one another. Read this Story in detail.
3. Create a work plan for this challenge. Make sure the entire team understands what they need to do.
4. Choose the gitflow for effective teamwork. We recommend you to use `git-flow-avh`.

ANALYSIS

You need to analyze all the collected information before you start.

- Race has to be carried out by an entire team.
- Each team member must understand the challenge and realization, and to be able to reproduce it individually.
- It is your responsibility to assemble the whole team. Phone calls, SMS, messengers are good ways to stay in touch.
- Be attentive to all statements of the story. Examine the given examples carefully. They may contain details that are not mentioned in the task.
- Perform only those tasks that are given in the story.
- You should submit only the specified files in the required directory and nothing else. In case you are allowed to submit any files to complete the task you should submit only useful files. Garbage shall not pass.
- You should compile C files with clang compiler and use these flags: `-std=c11 -Wall -Wextra -Werror -Wpedantic`.
- You should use only functions which allowed in a certain task.
- Usage of forbidden functions is considered as cheat and your challenge will be failed.
- You must complete tasks according to the rules specified in `the Auditor`.
- Your exercises will be checked and graded by students. The same as you. `Peer-to-Peer (P2P) learning`.
- Also, your exercises will pass automatic evaluation which is called `Oracle`.
- Got a question or you do not understand something? Ask the students or just Google that.
- Use your brain and follow the white rabbit to prove that you are the Chosen one!!!

Act

DESCRIPTION

Try to create positive feelings in the team. Do not be shy or subjective - be effective. Your partner may have skills different from yours. Mutual assistance is always recalled as a result.

SOLUTION DEVELOPMENT

Let's get started! And may the odds be ever in your Favor!

1. Clone your git repository, what is issued on the challenge page in the LMS.
2. Create the best solution for this challenge.
3. Distribute tasks between team members.
4. Explore new things for you. Talk, talk and talk again. Have fun:)

NAME

Save The One

DIRECTORY

`./`

SUBMIT

`race00.c, mx_printchar.c, mx_printstr.c, mx_strlen.c`

ALLOWED FUNCTIONS

`write`

LEGEND

Story begins right now.

Rebels group is approaching a one of the Machines Power plant. Power plants generate electrical energy for Machines. It looks like giant skyscraper composed of thousands of pods with humans.
In one of them should be The One. At least, Morpheus's trace program says so.

Your mission is to represent a map of the plant and mark The One on it.
`0` for pods with humans. `1` for The One. You can call him Neo.

DESCRIPTION

Write a function `race00` that will print a map on the standard output.
Size of the plant and Neo coordinates will be provided to the function `race00` as arguments.
Be care! Sometimes Machines build very strange plants.

If provided map size and Neo coordinates are incorrect, your program should print nothing.

Find how your function should look like in SYNOPSIS. We gave you an example of how you

should draw borders, how you should represent a map. Find it in CONSOLE OUTPUT section. Same style. Same logic. Even same characters.

We'll compile your function with our `main` as follows:

```
clang -std=c11 -Wall -Wextra -Werror -Wpedantic race00.c main.c mx_printchar.c mx_strlen.c mx_printstr.c -o race00
```

Do it! Save The One!

SYNOPSIS

```
void race00(int map_length, int map_width, int one_y, int one_x);
```

CONSOLE OUTPUT

```
>./race00 | cat -e     # for map 5x4 and The One at (1;1)
<=--=>$
*0000*$
+0100+$
*0000*$
+0000+$
*0000*$
<=--=>$
>./race00 | cat -e     # for map 4x1 and The One at (3;0)
<=>$
*0*$
+0+$
*0*$
+1+$
<=>$
>./race00 | cat -e     # for map 1x4 and The One at (0;0)
<=--=>$
*1000*$
<=--=>$
>./race00 | cat -e     # for map 3x0 and The One at (19;91)
>
>./race00 | cat -e     # for map 1x1 and The One at (1;1)
>
```

SEE ALSO

Matrix OST - Power Plant

Share

PUBLISHING

The final important and integral stage of your work is its publishing. This allows you to share your challenges, solutions, and reflections with a local and global audience.

During this stage, you will find how to get a global assessment. You will get representative feedback. As a result, you get the maximum experience from the work you have done.

What you can create to disseminate information

- Text post, summary from reflection.
- Charts, infographics or any other ways to visualize your information.
- Video of your work, reflection video.
- Audio podcast. You can record a story with your experience.
- Photos from ucode with small post.

Example techniques

- Canva - a good way to visualize your data.
- QuickTime - easy way to record your screen, capture video, or record audio.

Example ways to share your experience

- Facebook - create a post that will inspire your friends.
- YouTube - upload a video.
- GitHub - share your solution.
- Telegraph - create a post. This is a good way to share information in a Telegram.
- Instagram - share a photos and stories from ucode. Don't forget to tag us :)

Share what you learned with your local community and the world. Use #ucode and #CBLWorld on social media.