

# Race 01

Half Marathon Web

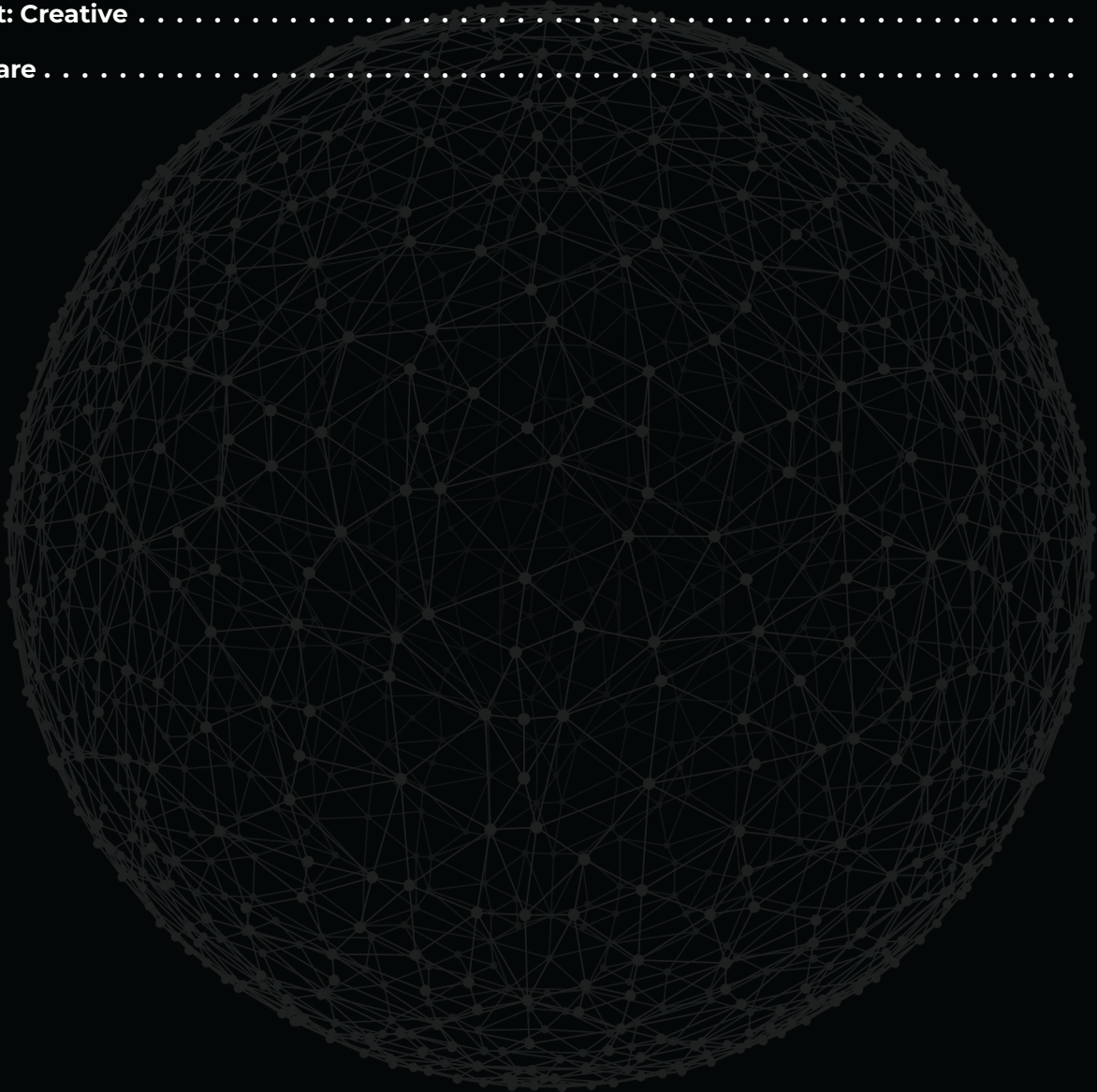
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 **code connect**

# Contents

Engage . . . . .	2
Investigate . . . . .	3
Act: Basic . . . . .	5
Act: Creative . . . . .	7
Share . . . . .	8



# Engage

## DESCRIPTION

Welcome to the last **Race!**

You've reached the last challenge of the **Half Marathon**, this is worth a thousand words.

Achieving goals is not so simple.

If you want to achieve something meaningful in your life, you will have to get out of your comfort zone. That's because meaningful things don't come easily. Still, don't let high expectations slow you down.

Do not expect everything you create to come out perfectly on the first attempt. But you should definitely strive for it!

Think about your ultimate goal, and then do everything you can (and even more) to achieve it. In case you are stuck, remember **the rule of 40%**: when your brain informs you that you've reached your limits, you've actually used only 40% of your resources.

## BIG IDEA

Knowledge consolidation.

## ESSENTIAL QUESTION

How does achieving small goals lead to great success?

## CHALLENGE

Sum up all the knowledge gained during the **Half Marathon**.



# Investigate

## GUIDING QUESTIONS

We invite you to find answers to the following questions. By researching and answering them, you will gain the knowledge necessary to complete the challenge. To find answers, ask the students around you and search the internet. We encourage you to ask as many questions as possible. Note down your findings and discuss them with your peers.

- How was your previous **Race** organized? Were you satisfied with teamwork?
- What is your favorite online card game?
- What tips could help you in working on this challenge?
- Is there any difference between website development and game development for the browser?

## GUIDING ACTIVITIES

Complete the following activities. Don't forget that you have a limited time to overcome the challenge. Use it wisely. Distribute tasks correctly.

- Read the story.
- Meet with your team. Discuss teamwork organization and communication.
- Discuss your experience of working collaboratively on **Race00**.
- Define what was poorly organized and fix it in the new dream team.
- Decide how to split the work in a way that is beneficial to each team member and the project in general. Listen to each other carefully.
- Discuss what will be on the cards. Search for images of Marvel characters.
- Find and play popular card games. Pay attention to the every little thing.
- Evaluate the main features of the game you played. Find some you want to implement in your game.
- Clone your git repository that is issued on the challenge page.
- Try to choose the best solutions.
- Distribute tasks between all team members.
- Start to develop the solution. Offer improvements. Test your code.
- Explore new things. Talk, discuss and communicate.

## ANALYSIS

Analyze your findings. What conclusions have you made after completing guiding questions and activities? In addition to your thoughts and conclusions, here are some more analysis results.

- Challenge has to be carried out by the entire team.
- Each team member must understand the challenge and realization, and 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.
- Analyze all information you have collected during the preparation stages.
- Submit your files using the layout described in the story. Garbage shall not pass.
- Pay attention to what is allowed. Use of forbidden stuff is considered a cheat and your challenge will be failed.
- You can proceed to **Act: Creative** only after you have completed all requirements in **Act: Basic**. But before you begin to complete the challenge, pay attention to the program's architecture. Take into account the fact that many features indicated in the **Act: Creative** require special architecture. And in order not to rewrite all the code somewhen, we recommend you initially determine what exactly you will do in the future. Note that the **Act: Basic** part gives the minimum points to validate the challenge.
- Complete tasks according to the rules specified in the following style guides:
  - HTML and CSS: [Google HTML/CSS Style Guide](#). As per section 3.1.7 Optional Tags, it doesn't apply. Do not omit optional tags, such as `<head>` or `<body>`
  - JavaScript:
    - \* [JavaScript Style Guide and Coding Conventions](#)
    - \* [JavaScript Best Practices](#)
  - PHP: [PSR-12: Extended Coding Style](#)
- The solution will be checked and graded by students like you. [Peer-to-Peer learning](#).
- If you have any questions or don't understand something, ask other students or just Google it.

# Act: Basic

## NAME

Great Battle

## DIRECTORY

```
./
```

## SUBMIT

```
All files you need for the challenge
```

## ALLOWED

HTML, CSS, JS, PHP, MySQL

## LEGEND

Who's stronger: the villains or the heroes? What if you bring together some heroes and villains, which combination is better? Today's race can give answers to these and other questions.

## DESCRIPTION

Create an interesting card game about the battle between Marvel characters. It should start with a user logging into an account. This is what enables the user to take part in the battle. Choose a mechanism of battle creation. It can be the creation of a room and waiting for the enemy, or the players can be compared automatically. It's up to you.

Gameplay:

- each **Great Battle** match is a battle between two opponents against each other
- the gameplay must be turn-based, with players taking turns to play cards they have on their hands
- each player is represented by an avatar (photo) and a login (nickname)
- each player uses a deck of cards from their collection
- each player has points of **Health** (e.g., 20 points) at the beginning of the match
- once **Health** is reduced to zero, the avatar is destroyed and the corresponding player loses the game
- each player's turn is time-limited (e.g., 30 seconds). It would be cool if the players could see how much time has already expired
- the goal of the game is to leave the opponent without **Health**
- the order of each game should be chosen randomly (you can add visual effects to show this process, e.g., toss a coin)

Cards and Deck:

- implement at least 20 different cards
- each card has a few parameters:



- points of attack
- points of defense
- card's cost (the stronger the card the higher its cost)
- all cards should display the avatar and alias of the card's character (Thanos, Iron Man, etc.), points of attack, defense, and cost
- all cards cost a certain amount of **Stones** - the currency of the game. The total **Stones** amount increases by one per each turn, but it should not be greater than 6

#### Battlefield:

- the **battlefield** (or **game board**) is the board where each player is represented and the action takes place
- you must implement some required UI elements around the **battlefield**, such as:
  - cards of the current player
  - their Infinity Stones
  - players themselves
- the player's avatar is displayed near the bottom of the **battlefield**, while that of the opponent is displayed near the top
- it is necessary to divide the board into two parts: for the player's and the opponent's active cards

#### SEE ALSO

Hearthstone

The Elder Scrolls: Legends

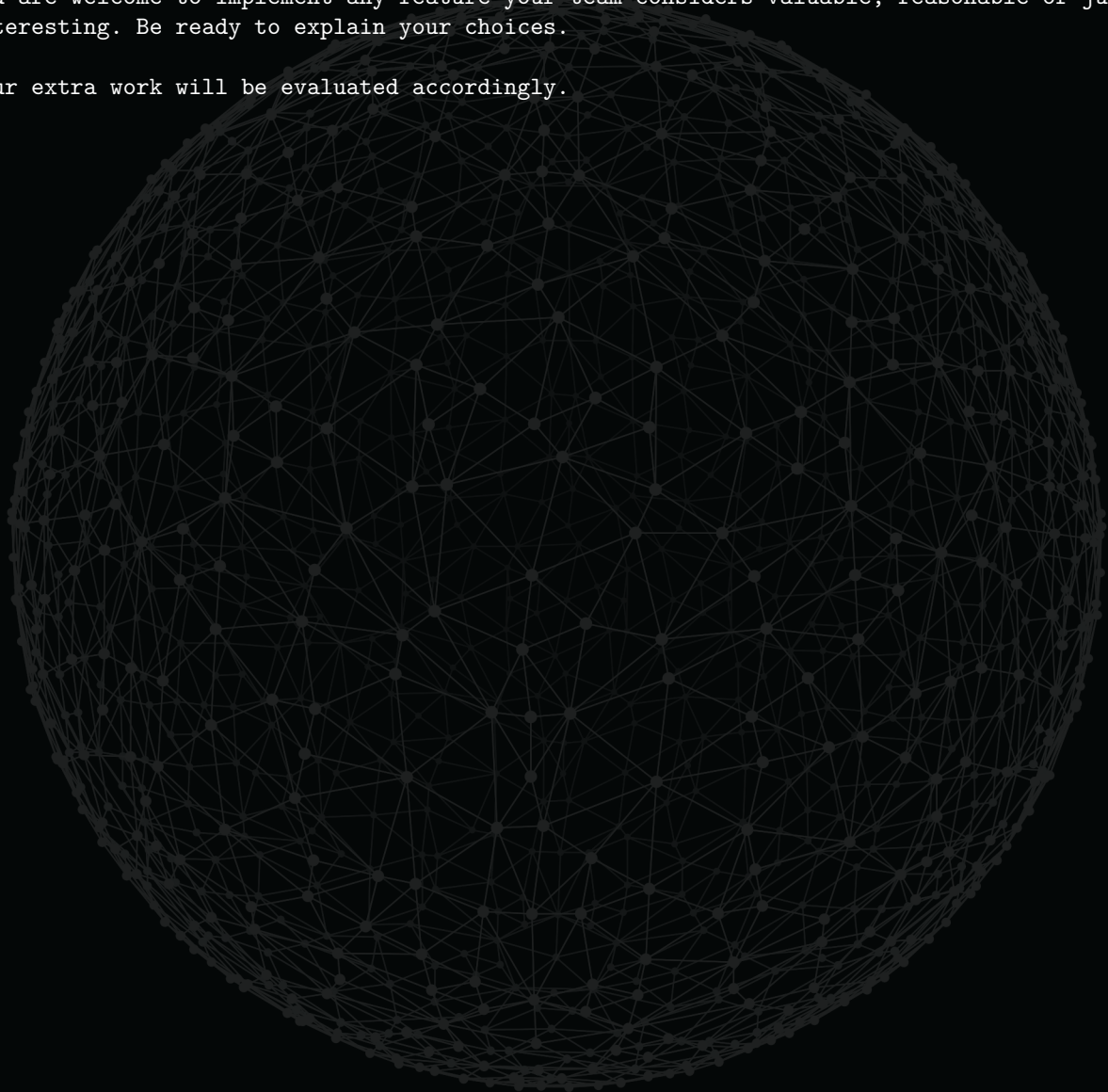
# Act: Creative

## DESCRIPTION

It is the place where your imagination and creativity plays a major role. Implement additional features to make the program better and more unique.

You are welcome to implement any feature your team considers valuable, reasonable or just interesting. Be ready to explain your choices.

Your extra work will be evaluated accordingly.





# Share

## PUBLISHING

Last but not least, the final stage of your work is to publish it. This allows you to share your challenges, solutions, and reflections with local and global audiences. During this stage, you will discover ways of getting external evaluation and feedback on your work. As a result, you will get the most out of the challenge, and get a better understanding of both your achievements and missteps.

To share your work, you can create:

- a text post, as a summary of your reflection
- charts, infographics or other ways to visualize your information
- a video, either of your work, or a reflection video
- an audio podcast. Record a story about your experience
- a photo report with a small post

Helpful tools:

- [Canva](#) - a good way to visualize your data
- [QuickTime](#) - an easy way to capture your screen, record video or audio

Examples of ways to share your experience:

- [Facebook](#) - create and share a post that will inspire your friends
- [YouTube](#) - upload an exciting video
- [GitHub](#) - share and describe your solution
- [Telegraph](#) - create a post that you can easily share on Telegram
- [Instagram](#) - share photos and stories from ucode. Don't forget to tag us :)

Share what you've learned and accomplished with your local community and the world. Use [#ucode](#) and [#CBLWorld](#) on social media.