Project brief Introduction to JavaScript - Spring 2025

CASE PROJECT (CP)

IN BRIEF

Your Case Project (CP) is the project that you will complete in teams for the end of the semester. It is an important way to implement and embody the learning from the course lectures so far, as well as building team culture for learning together and supporting each other as peers.

As Intro to JavaScript students you will focus on the technical implementation, working on functionality and responsiveness of the solution. You will need to document and share your process and what you've been learning in your team.

PURPOSE

The overall purpose of the Case Project is for you to practice and develop the understanding and abilities learned during your course and during the workshops as:

SELF-LEADERSHIP (ALL)

- Understanding of your own leadership and how to move forward
- Ability to develop and land a project proposal with your team.
- Ability to foster generative relationships with your team.
- Ability to create a strategy for a project with your team.

PROJECT DESIGN (ALL)

- Ability to conduct a project in an organizational context and of a professional field.
- Ability to make progress towards and achieve aims in a project.
- Ability to make sense of and communicate knowledge about the work being done.
- Ability to work on multiple parallel aspects of your life, across time and space.
- Understanding of how to contribute to transformation.

OVERVIEW

- **Duration**: Week 14-23. You choose the intensity of your work.
- **Groups**: You will organize in *teams of 2-3 students*. You are not allowed to do the project alone.
- **Assessment**: Your project is assessed as a team assignment. Each group will present their solution, explaining features, and any challenges faced during development in

regards to working in your teams.

- **Final presentation:** Week 23 during your last class on the 5th of June
- **Deliverables**:
    - o Oral group presentation and demonstration of the solution

TEAM RESPONSIBILITIES

In this project, you will work in groups of 2-3 students in cooperation to create a solution using HTML, CSS and JavaScript.

Groups will work on the digital implementation and development of the Case

In your group you *can* divide the tasks and you can choose to work on what you want to advance in individually. For this case your group need to cover all of the following tasks:

- Write HTML/CSS for layout and styling.
- Develop frontend components and features using JavaScript.
- Ensure functionality and responsiveness in the app.
- Debug and fix issues reported during testing.

AS A TEAM YOU ARE TO SOLVE THE FOLLOWING CASE

The goal of the project is to develop a **flash card study app**.

> *"A **flashcard** or **flash card** is a card bearing information on both sides, which is intended to be used as an aid in memorization. Each flashcard typically bears a question or definition on one side and an answer or target term on the other."*
>
> *Wikipedia Definition*

The aim of the final project is to give you an opportunity to develop a piece of software from scratch yourself. This means you have to go through some of the 7 stages of building software, namely:

1. Planning & analysis
2. Requirement definition
3. Design (*Note: This mainly means the way the app behaves, less so the way the app looks.*)
4. Development

5. Testing
6. *Deployment - voluntary.* It is sufficient to demonstrate the functionality of your project on one of the team members computer.
7. ~~Maintenance~~ - Not relevant.

Case Requirements

Functional

1. The application needs to reflect the use case of flash cards as a study aid, i.e.: there has to be a visible component with the question and a hidden component containing the answer and an option to make the hidden component visible.
2. The components representing the flash cards themselves have to look and behave like cards; This means that upon “revealing” the answer, the card flip has to be animated. Moving to the next card has to be animated too.
3. There has to exist a way for users to input new question-answer pairs and have them persist at least until the end of the browser session (until the browser tab/window is closed).
4. The application should have at least 2 pages: input new question-answer pairs and a learning session.
5. The application should randomize the order of the cards upon starting every learning session.
6. There has to exist a way to export the data (the contents of the cards) from the application into a standardized format (the most straightforward way would be JSON).

Non-Functional

1. The application has to be built with a responsive design, meaning it has to be usable on a variety of screen sizes.
2. The application has to be built using HTML, CSS and Javascript.

Extra credit

The following are tasks that are not required to complete

1. Two player mode. Implement a feature that supports the learning of 2 players in a quiz-like fashion with a point system. The specific implementation of this feature is up to your creativity. An idea would be to just have a specific set of cards for each player in the learning session and then the players would “pull” a card from their stack in turns, try to answer the question and after revealing the answer, the player would mark whether his guess was right or not. Points would be then handed out based on whether the answer

was right. At the end the game would compare the total points for players and declare a winner.
2. Deploy the application to a public or a private cloud. An option to consider would be: Github Pages, Netlify or Heroku

Things to consider:

- Learn how to use Google, as Google is your friend when programming. Popular websites you might find information from are Stackoverflow.com, mdn web docs or geeksforgeeks.
- Using large language models such as ChatGPT to help you. It's important that you ALWAYS understand the output of such tools as understanding the code you have written is going to be questioned as part of the examination. Therefore it's a good idea to ask about the theoretical concepts and pointers but not specifically for source code.
- Using HTML, CSS and Javascript libraries is encouraged. This can for example include libraries that help you handle animations (for the card behavior) or libraries that help you export and import the data into the application (although this is rather straightforward in plain JavaScript).
- Using higher level Javascript frameworks such as React or Vue is allowed but discouraged.
- Make sure to spend time planning and structuring your work. This assignment might seem overwhelming reading it now, therefore make sure you always focus on the next small achievable part of the whole project.
- Consider using a version control system to share code within the group. The one you should probably be using is Git and the platform you should consider using is either Github or Gitlab.
- Remember there is no backend in this application and all the data has to only persist for the duration of the browser session, therefore don't overthink it (if you're ambitious, you can implement some sort of "config" file that gets loaded locally upon the start of the app).

CHOOSE YOUR COLLABORATION APPROACH(ES)

- Use communication tools such as messaging platforms and video calls when meeting in person is absolutely not possible. Use project management softwares to facilitate ongoing collaboration, but remember that these tools are of no use without a proper process design in place such as SCRUM, or another of your preference.
- Participate in brainstorming and aligning sessions to develop concepts with technical feasibility.

- Work closely together to improve functionality of the app.
- Maintain comprehensive documentation covering technical aspects and collaboration processes.
- Conduct knowledge sharing sessions where you share insights, challenges, and solutions, fostering a culture of mutual learning.
- Explain technical decisions, highlighting how they enhance functionality and engagement.

FINAL PRESENTATION

The deliverable should be conveyed in a presentation of maximum 10 minutes in week 23 during your last class. With a demonstration of your app and how it works. Followed by each group presentation there will be a Q&A and feedback from your teachers to inquire into the project (questions will take a maximum of 10 minutes).

Oral assessment

● 10 minutes presentation by each group including demonstration of the app.

● 10 minutes clarifying questions and feedback from teachers.

RECONNECTING WITH THE PURPOSE

The overall purpose of the project is for you to practice coordinating a project through all its phases: organize with your team, plan, monitor, deliver, and receive feedback. Use the skills you're learning at ReDI School in a practical project. You should learn how to provide valuable services to clients through your work and get to know your team members better by working together on your projects.

IT IS ABOUT THE PROCESS, NOT ABOUT THE FINAL GOAL! AND REMEMBER TO HAVE FUN!