RMIT
UNIVERSITY

Further Web Programming
COSC2758 (semester 2, 2021)
Assignment 1

Assessment Type	To be attempted individually. Submit online via Canvas→Assignments→Assignment 1. Marks awarded for meeting requirements as closely as possible. Clarifications/updates may be made via announcements/relevant discussion forums.
Due Date	Week 6, Sunday 29th August 2021, 11:59 pm *Melbourne time*
Marks	25

1. Overview (you must read this first)

You are to attempt this assignment individually, **no group work is allowed**.

You will use React with JS to create a *client-side prototype of the web application*. **No database** is to be used at this stage.

The server-side implementation and full-stack development of the web application from assignment 1 will be completed in assignment 2.

The tasks are divided into *four* parts: PA (Pass), CR (Credit), DI (Distinction) & HD (High Distinction).

> The DI & HD section tasks will require self-research, you will not get straight answers in the course material. While we are happy to assist you on those tasks, most of the work and research must be done by you. This is done on purpose to prepare for you future work and rigours of the IT industry.

✓ If you find a specification open to interpretation, post a query identifying the specification in the corresponding discussion board for assignment 1. Software development in real life does not come with a definitive roadmap and flowcharts complete with instructions. More often than so, it is the job of the developer to clarify requirements from the client. For the purpose of this assignment and course, the lecturer is considered as the client.

All of us have been affected by the unfortunate COVID-19 scenario and its aftermath. It is often hard to concentrate and study; but as a student enrolled in this course, it is your responsibility to regularly attend lectorial, lab and consultation session(s).

- Bring your questions to online discussion board, consultation sessions
- Watch the online recordings on a regular basis if you cannot attend the live sessions.
- Do NOT start the work on assignment at the last minute.
- Do NOT ask for last minute extensions, these are often rejected. Extensions can only be granted for personal and medical reasons, provided you can supply some evidence.

2. Learning Outcomes

This assessment relates to all of the learning outcomes of the course which are:

- demonstrate proficiency with a web application development framework;
- implement a range of techniques and procedures for developing a small to medium-scale web application;
- design and manage the development life-cycle of a complete application.

3. Assessment details

Students often liaise with other fellow students, friends at university to discuss questions, queries, issues and suggestions about the courses they are studying. Often, this is done via text messages, apps, social media forums and personal conversations. While these may not be seen as an important part of student's educational journey by many; sometimes these networks serve a very crucial role thereby enabling a *community of practice*. There are other issues associated with having these discussions on external websites/forums as it may lead to all sorts of issues around ethics and in some serious cases- contravention of university policies and professional ramifications.

For all of the above reasons, you have been approached by a senior student club who have secured a funding to build a university-wide student social networking web application known as **Vibe Check** (VC).

Besides, the COVID-19 pandemic has made a massive impact on our lives. Many of us are reeling through emotional aftermath of the lockdowns and challenges posed by the pandemic. Public health actions, such as social distancing, are necessary to reduce the spread of COVID-19, but they can make us feel isolated and lonely and can increase stress and anxiety. **VC** will also provide a friendly network to keep in touch with each other during extended periods of COVID-19 lockdown. The first stage is to build a working prototype to display the features of VC to the student club committee.

Prototype features:

At this stage, VC will help the students to make a post, reply to other posts and maintain their profile details. The details are as follows:

3.1
VC should support the following features:

a. Frontend features of the prototype such as complete UI (user interface) with clearly distinguishable areas: *header, footer, main areas and navigation bar*
b. Landing home page
c. Sign up page that only performs validation and creates user
d. Sign in page
e. For logged in users
    i. user profile page, edit and delete profile details
    ii. a page to make posts
f. Feature that enables looged in users to reply to a post or create, edit, delete posts

3.2
All the data will be stored in data structures or HTML5's localStorage. **Use of databases** (MongoDB, Relational databases and/or Firebase) **is not allowed**.

3.3
The website must be fully styled and look professional. The content must make sense ie. use of *lorem ipsum is not allowed.*

3.4
The digital assets (images, icons, audio & video) must be outscourced from free websites. You should not steal someone else's assets to enhance the look and feel of your website. High-quality & free assets can be obtained from:

https://unsplash.com/ (Images)
https://uifaces.co/ (Avatars)
https://fonts.google.com/icons?selected=Material+Icons:home (Icons)
https://www.flaticon.com/ (Icons)

3.5
Do not add extra features at this stage. **Do not argue the benefits of using backend database and any other complexities for this assessment.** You will deal with these aspects of VC in the second assignment which deals with full stack development.

4. Tasks

⏰ In order to proceed to higher parts, you must complete all of the specifications in the lower part, you must not cherry pick specifications from various parts. As an example, complete all of the specifications in PA part before proceeding to CR part and so on.

Create a prototype for VC web application with React using JS *with the latest version*. The use of databases (MongoDB, Relational and Firebase) is not allowed.

The tasks are shown below:

PA part [13 marks]

a. (5 marks) **Styling and content of pages and landing page**

Set up the complete layout of VC. Your web application must have clearly distinguishable areas such as- *header, footer, main content area* and/or other *sections*. These areas must be broken into individual components.

The landing page of VC could be a brief information about the website's purpose, how to use the website and an appropriate image.

You will be marked on the styling, layout and how components are defined for this part. Writing bloated components, ungainly page design, not following general webdesign principles would lead to loss of marks.

b. (3 marks) **Sign-up page**

The Signup component will present a form with name, email, and password fields to the user for sign-up, a *suggested screenshot is shown below*:

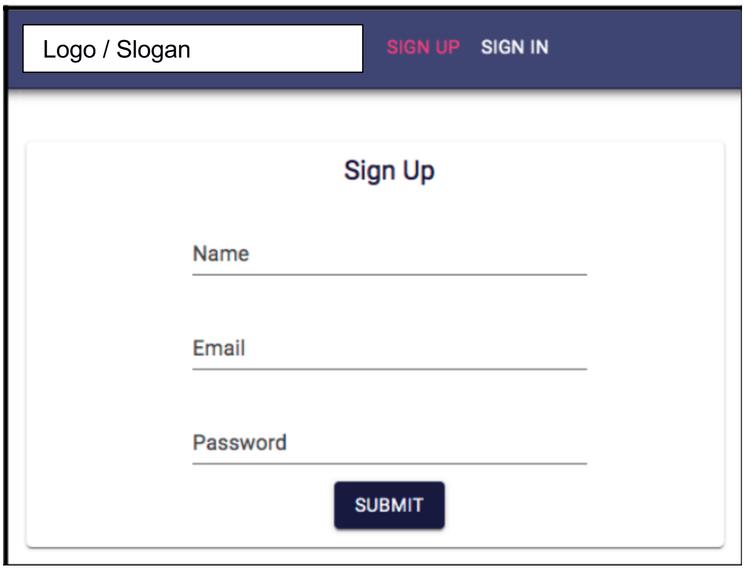


Figure 1: Sign- up

You may want to have a confirm password field, its implementation is optional.

Sign up form will perform all of the necessary validations and then save the user details in a data structure or localStorage. Validations to be performed-

- *name, email and password are necessary fields;*
- *email must be in a proper format*
- *the password must be at least six characters and should be a mix of uppercase and lowercase characters, numbers and punctuation.*

Provide a visual cue upon successful registration.

c. (2 marks) **Sign -in page**

The Signin component is also a form with only email and password fields for signing in:

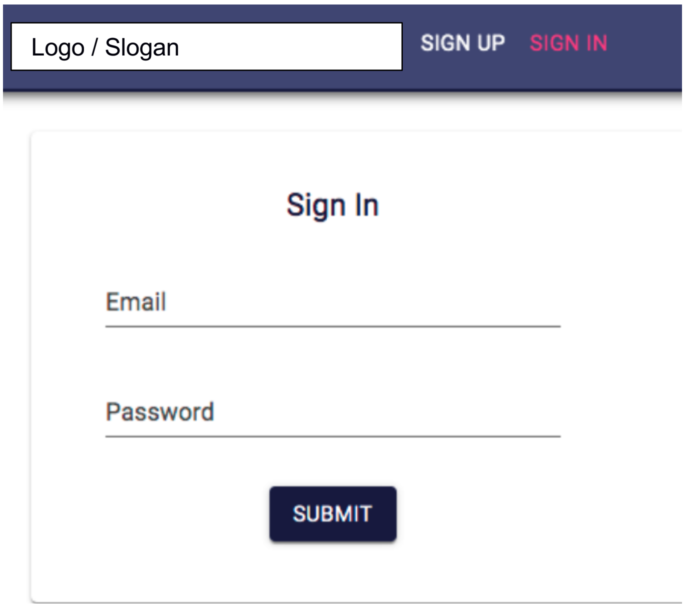


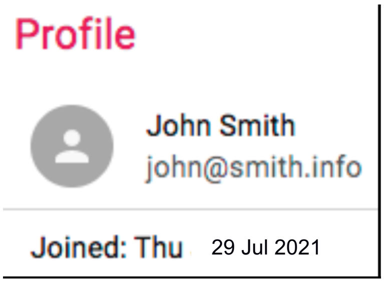
Figure 2: Sign- in

After the proper validations and checks have been performed, the user will be redirected to the *profile page.*

Provide a visual cue upon successful login.

d. (3 marks) **Profile page**

The Profile component shows a single user's information in the main content area. The completed Profile will display user details, and also the *date of joining*. The following screenshot shows a suggested screenshot:



John Smith
john@smith.info

Joined: Thu 29 Jul 2021

Figure 3: User profile details

CR part [4 marks]

e. (4 marks) **Profile management feature**

Modify the profile component to add edit and delete features.

When the user is signed in viewing their own profile, they will be able to see edit and delete options in the Profile component, as shown in the following screenshot:

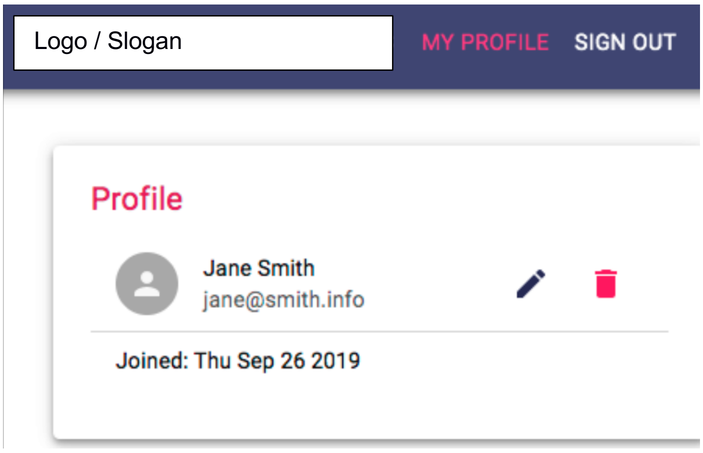


Figure 4: User profile management

The edit allows the authorised user to edit their own profile information in a form similar to the signup form.

The delete feature deletes the user. **This feature will have an impact on the subsequent requirements of the assignment, such as posts made by the users. If a user is deleted, all their posts must be deleted as well (posting requirement is in DI and HD parts).**

Provide a visual cue upon successful edit, delete operations- as an example (*it does not have be exactly like this, you may have a simpler cue*)-

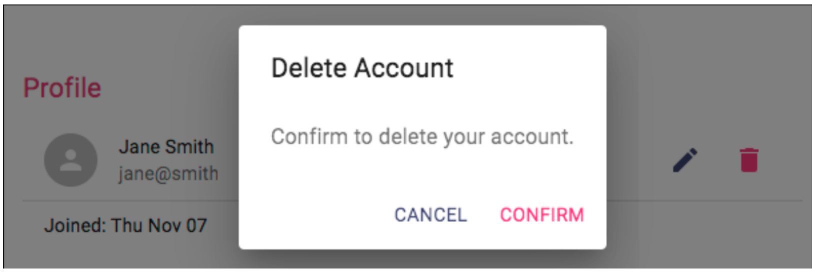


Figure 5: Visual cue for delete operation

Note: for the following (DI and HD sections), you will need to do some research and think→

DI part [3 marks]

f. (3 marks) **Posting page**

Add another link to the navigation bar for the logged in users. This link takes them to a posting page.

A user will be able to make a post.

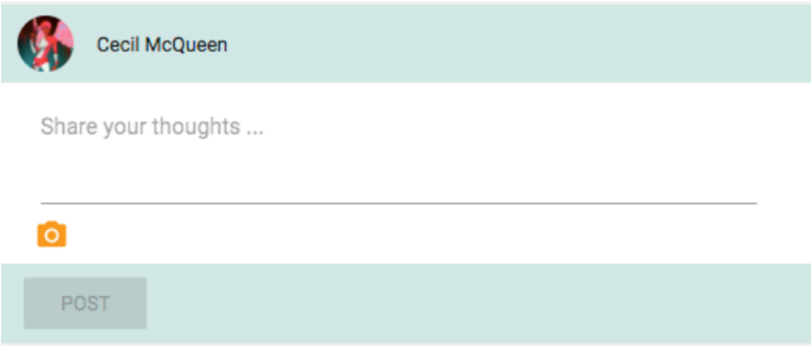


Figure 6: a form to make a post.

A post is pure text at this stage. You need to perform validation such as- post may not be empty. *There is no character limitation requirement at this stage*.

You will need to list all the posts made by a user.

HD part [5 marks]

Add the following features to VC (no suggestions for implementation and user interface is available here, this is the HD part and you need to think on your own):

g. (1 mark) User should be allowed to edit or delete their post.

h. (1 mark) User may reply to a post made by another user.

i. (1 mark) User will be allowed to add an avatar to their profile. This means that avatar will be shown against the username in the post.

j. (2 marks) User may be able to load an image with their post. This part is tricky- you need to find a clever solution around image location and storage. Ask questions such as: would it be image or the image Url? would you host images elsewhere and then upload via a Url call? would you look at blob Url?

5. Submission

- Zip ~~your PDF file,~~ all website files **EXCEPT NODE MODULES FILES** and README.txt file and submit single zipped archive with .zip extension via Canvas submission link for this assignment.

- ~~README file must contain the hosted URL of your website.~~

- ~~If the website is not functioning on hosted URL or it has not been hosted, you will be marked on your code and in that case, you will only receive 50% of the allocated marks to the task. Make sure that your assignment can run only with the code included in your zip file!~~

After the due date, you will have 5 business days to submit your assignment as a late submission. Late submissions will incur a penalty of 10% per day. After these five days, Canvas will be closed, and you will lose ALL the assignment marks.

Assessment declaration:

When you submit work electronically, you agree to the assessment declaration:

https://www.rmit.edu.au/students/student-essentials/assessment-and-results/how-to-submit-your-assessments

6. Academic integrity and plagiarism (standard warning)

Academic integrity is about honest presentation of your academic work. It means acknowledging the work of others while developing your own insights, knowledge and ideas. You should take extreme care that you have:

- Acknowledged words, data, diagrams, models, frameworks and/or ideas of others you have quoted (i.e. directly copied), summarised, paraphrased, discussed or mentioned in your assessment through the appropriate referencing methods,
- Provided a reference list of the publication details so your reader can locate the source if necessary. This includes material taken from Internet sites.

If you do not acknowledge the sources of your material, you may be accused of plagiarism because you have passed off the work and ideas of another person without appropriate referencing, as if they were your own.

RMIT University treats plagiarism as a very serious offence constituting misconduct. Plagiarism covers a variety of inappropriate behaviours, including:

- Contract cheating- paying someone to do your work
- Failure to properly document a source
- Copyright material from the internet or databases
- Collusion between students
- Posting assignment tasks on technical forums (*reddit, stack exchange, etc.*) and asking for solution(s)

For further information on our policies and procedures, please refer to:

https://www.rmit.edu.au/students/student-essentials/assessment-and-results/academic-integrity

7. Marking Guidelines

The marks allocated have been added to each of the tasks. **Please read rubrics for details**.