ASSESSMENT AND INTERNAL VERIFICATION FRONT SHEET (Individual Criteria)

(Note : This version is to be used only for assignments uploaded via Classter)

Course Title	Bachelor of Science (Honours) in Multimedia Software Development		Lecturer Name & Surname		
Unit Number & Title	ITMMD-506-2003 & Client-side Scripting				
Assignment Number, Title / Type	Assignment 1 / Develop a Single Page Application using VUE / Take Home				
Date Set	14/05/2021	Deadline Date	4/06/2021		
Student Name		ID Number		Class / Group	

Assessment Criteria	Mark
LO1 - Apply different animations and transitions effects within the presentation layer of a web application	
KU1 - Present content to the users in a pleasant and meaningful way	*5*
AA1 - Use transitions and animations to smooth changes between states	*7*
AA2 - Construct animations and transitions to focus user attention and improve perceived performance	*7*
SE1 - Design animations to make the User Interface more intuitive	*10*
LO2 - Develop a web application with state management in place and provides users authentication	
KU2 - Find a dummy backend where data can be stored	*5*
KU3 - Present a feature were users can access different sections of the web application depending on their role	*5*
SE2 - Design a web application which provides state management and hence provides a data structure to record the outcomes of the user's actions.	*10*
SE3 - Develop a feature were users can log in if their credentials are correct	*10*
LO3 - Implement using a JavaScript framework/library a web application that allows users to create, read, update and delete data	
KU4 - Show how a JavaScript framework can be used to build a web application and insert, update and delete data	*5*
AA3 - Apply filters to format the values data retrieved for display to the user	*7*
KU5 - Construct small, self-contained reusable components that can communicate and pass data	*5*
AA4 - Use a JavaScript framework to parse an exchange data format such as JSON data and display in the view	*7*
LO4 - Deploy a web application with proper navigation which can handle and validate user input data through forms	
KU6 - Show how routing allows users to navigate through the web application	*5*
AA5 - Use validation techniques to validate data input by the user	*7*
KU7 - Reproduce the web application into production	*5*
TOTAL	***100***

Notes to Students:
• This assignment brief has been approved and released by the Internal Verifier through Classter. • Assessment marks and feedback by the lecturer will be available online via Classter (Http://mcast.classter.com) following release by the Internal Verifier • Students submitting their assignment on Moodle/Unicheck will be requested to confirm online the following statements: **Student's declaration prior to handing-in of assignment** ❖ I certify that the work submitted for this assignment is my own and that I have read and understood the respective Plagiarism Policy **Student's declaration on assessment special arrangements** ❖ I certify that adequate support was given to me during the assignment through the Institute and/or the Inclusive Education Unit. ❖ I declare that I refused the special support offered by the Institute.

MCAST

UNIT ITMMD-506-2003– CLIENTSIDE SCRIPTING 2

ASSIGNMENT: DEVELOP A SINGLE PAGE APPLICATION USING VUE

Unit Level: MQF LEVEL 6

General Guidelines

- This is a Take Home Assignment.
- This is an open book assignment.
- Students must carefully read the tasks and the rubrics before they attempt the answers.
- Deadline of this assignment is the **4th of June 2021**.
- Plagiarism is strictly prohibited.
- Following assignment submission, the lecturer will hold submission reviews. Students will be expected to explain their code. The lecturer may decide not to award some or all marks if not satisfied that the work presented is the student's own.
- Milestone submissions and the final assignments are to be submitted electronically on Moodle. No hard copies are to be submitted.

Submit milestones as specified in the table below.

Milestone	Task	Date	Deliverable
1	Proposal	17th May 2021	Section A - Template document
2	Final submission	4th June 2021	All sections

SECTION A - Proposal Document Template

The aim of this document is presenting your idea of a project and listing the requirements that the system needs to have. The lecturer will in turn give you feedback and discuss with you in case any changes are necessary. **Kindly keep with the proposal deadline as specified by your lecturer.**

Write not more than one page outlining the features of your application. Make sure to include the following:

- What is the main objective of your SPA?
- What technologies you will use to develop the SPA? (Database, Javascript Framework, CSS Framework/UI Components Library, 3rd party libraries e.g. Axios, Vuelidate)
- Where you will host your SPA?
- What different access will logged in users (authenticated users) have?
- What online/public API will be used to retrieve data?
- What data will be stored in the database?
- What data will be updated, added or deleted from the database?
- How will VUEX (state management) be implemented in the web application?

SECTION B – Implementation

The submitted project complies with the proposal as specified in Section A.

Your application is to have, at least, the following, and these requirements must make sense in the context in which they are used:

1) Advanced Routing
2) Authentication
3) VUEX – State Management
4) Making use of a CSS Framework/ UI component libraries
5) Animations and Transitions
6) Connecting with the database (retrieve, update, delete and add)
7) Pagination of list retrieved (possibly from an API)
8) Http requests using fetch API or 3rd party library such as Axios
9) Retrieving data from a public API
10) Using forms and validation
11) Hosting online

Criteria

KU1	Present content to the users in a pleasant and meaningful way.
Add pagination to the list being retrieved. A maximum number of items should be displayed on each page (2 marks). User can then move to the next page or going back to the previous page only if these are available. If these are not available, no page numbers should be displayed. (3 marks)	

AA1	Use transitions and animations to smooth changes between states
Make use of the VUE transition component to: - Use page transitions when the user navigates between routes/pages (3 marks). - Display a message before a user deletes an item from the list. Provide a transition to provide more context of where the element came from. The user must confirm the deletion by clicking a button and then is redirected to the proper page (4 marks).	

AA2	Construct animations and transitions to smooth changes between states
Make use of the VUE transition component to apply group transitions to a list of elements Apply an animation when a new item is added (4 marks) to the list and when an item is deleted from the list (3 marks).	

SE1	Design animations to make the User Interface more intuitive
Write a minimum of 500 words on the different between CSS Frameworks and UI Component libraries and when are these used. Mention 3 CSS Frameworks and 3 UI Component libraries that support **VUE 3. Use Harvard Referencing and include references** (3 marks). Use UI component libraries to create the sign-up and login forms. Use animations to improve the User Experience and a CSS Framework across the web application to build a clean, responsive and consistent User Interface. Make use of a CSS Framework and a UI component library which support VUE 3 (7 marks).	

KU2	Find a dummy backend where data can be stored

You are not required to create a backend and write server-side code (e.g. Node.js and PHP) and code to connect with a database. However a service such as Firebase must be used (you are free to use any other option) where you don't have to write any code to store data. Data should be stored and retrieved successfully from this backend (5 marks).

SE2	Design a web application which provides state management and hence provides a data structure to record the outcomes of the user's actions

Use the VUEX library to store the information whether the user is logged in or not. Clearly use:

- mutations to have the logic to update the state (3 marks)
- getters to read the state (3 marks)
- actions to commit mutations (4 marks)

SE3	Develop a feature where users can log in if their credentials are correct

Create a registration form where a user enters at a minimum his/her name, mobile, email and password. This data should be then stored in the database (4 marks).

Create a login form where a user enters an email or mobile phone and a password. This data is sent to the server. If the data is valid (3 marks) and verified (3 marks) a token should be sent by the server to the frontend.

KU3	Present a feature where users can access different sections of the application depending on their role

Use the token sent by the server and attach it to the requests so that the server grants different access to other pages to logged in users and returns the appropriate data. If token is either invalid or missing access should be denied (5 marks).

KU4	Show how a JavaScript framework can be used to build a web application and insert, update and delete data

Create a single page application where a user can:

- Add data to a database (1 mark)
- Update data on a database (2 marks)
- Delete data from a database (2 marks)

AA3	Apply filters to format the values data retrieved for display to the user

Use method calls or computed properties to show:

- some data retrieved from the API in uppercase and in lowercase (2 marks)
- display only the initials of the user who is logged in (2 marks)
- display the + sign in front of the country code of the mobile number. (3 marks)

KU5	Construct small, self-contained reusable components that can communicate and pass data

Correctly create a component without any syntax errors for each of the following:

- To display list items (1 mark)
- To delete an item from a list (1 mark)
- To update an item from a list (2 mark)
- To add an item to a list (1 mark)

AA4	Use a JavaScript framework to parse an exchange data format such as JSON data and display in the view

Use lifecycle hooks to:

- render the list from the database on screen (3 marks)
- render in realtime any other data from an online provider (public API) that maintains certain information. Hence use an API (a secure and standardised interface) to request data from a 3rd party data provider (4 marks).

KU6	Show how routing allows users to navigate through the web application

Create a menu with at least 2 items. Browser should not refresh when a user navigates from one page to another. Use Vue Router (3 marks). All pages must have a back button which redirects the user to the previous visited page (2 marks).

AA5	Use validation techniques to validate data input by the user

Make use of a 3rd party library such as Vuelidate to display proper error messages when fields are not not filled correctly. The following rules apply:

- Disable the submit button until all fields are filled in correctly (1 marks)
- All fields are required (1 mark)
- The mobile should have a minimum length and a maximum length of 8 numbers (0.5 marks)

- The mobile must be numeric (0.5 marks)
- Password must be at least 3 characters long (0.5 marks)
- Email must be a valid email (1 mark).
- Name and surname must accept only alphabet characters (0.5 marks).

All the above fields must be included in the registration form. Style the error messages by showing text of error message, border and label in red. (2 marks)

KU7	Reproduce the web application into production

Deploy your Vue app online (3 marks). Code will still be executed on the browser, but it must be uploaded on a server using a static hosting provider (e.g. Firebase Hosting). Make sure to use the build command to build and optimize the application for production and generate the dist folder (2 marks).

---END OF ASSIGNMENT---