Software Requirements Specification Document

CULTURE HUB, TEAM 1, CS21B044, CS21B043, CS21B003, CS21B031, CS21B006

Note: This is a "living document", meaning its content will change with the implementation of the project. Use it to capture key project requirements and make sure that your product features match the requirements exactly – if you wish to add any features, they must be added first to the requirements. Changes in the document must be approved by the customer (mentor) and the instructor/TA in-charge.

Brief problem statement

Our project aims to develop a cultural website to address the issue of limited knowledge and understanding among people about diverse cultures around the world. Many individuals lack exposure to, and awareness of, cultures different from their own. This website seeks to bridge this knowledge gap by providing easily accessible and engaging content that educates and fosters cultural appreciation and understanding among users.

System requirements

Front-End:

- React: The front-end will be developed using React for creating dynamic and responsive user interfaces.
- HTML/CSS: Standard web technologies for structuring and styling the user interface.
- JavaScript: To enhance user interactions and handle client-side functionality.

Back-End:

- Node.js: The back-end will be built using Node.js for server-side scripting.
- Express.js: To create a RESTful API and handle HTTP requests.
- MongoDB: As the database to store content, user data, and other relevant information.

ChatGPT API Integration:

- Integration with ChatGPT APIs to provide conversational features and answer user queries related to different cultures.

Google API Integration:

- Integration with Google Maps API for location-based information and services.
- Integration with Google Translate API to provide multilingual support and translation features.

Authentication:

- User authentication using technologies like JSON Web Tokens (JWT) for secure user access.

Responsive Design:

- Ensuring that the website is responsive and accessible across various devices and screen sizes.

Users profile

(Identify who will be using the system, in what mode, and their profile in terms of familiarity with using computers and such software.)

Who will be using the System: The General Public from a diverse range of regions, religions, and cultures from all over the globe, comprising of adults, teens and old people. Any individual with the internet and enthusiasm to learn more about cultures around them.

In what mode: User mode

Familiarity with computers: wide range from unfamiliar to too familiar however most of them would fall under the above average category

Feature requirements (described using use cases)

Read the instructions below and fill in the table. Delete all the blue text turning it in.

(This is a numbered list of use cases that are the features of the system to be implemented. Each use case is an operation that the user can perform on/with the system. For each use case, provide a description (2-3 sentences) so you know what to build and so you can write a test case to demonstrate that your system provides that feature. For each use case, you will identify (during release planning) the release in which it will be implemented: R1 or R2. Typically, your project will have 10-15 use cases, but feel free to add or delete table rows if you decide to use finer-grain or coarse-grain use cases).

No.	Use Case Name	Description	Release
1.	Login and Registration	Users can securely create accounts by providing necessary information, including username, email, and password, during registration. They can then log in using their credentials to access system features and personalized data.	
2.	Feed	Curated collection of short videos in vertical format. This feature aims to provide easily accessible and engaging content that educates and fosters cultural appreciation and understanding among users	
3.	Stories	The users can view and interact with posts (stories) where users share information about their culture, which can include text, images, or both.	
4.	Post Content	The users can create and share posts (shorts or regular posts or quizzes) about cultural occasions, festivals, or events. These posts are displayed to other users interested in the particular culture or event.	
5.	Cultural Quiz	A quiz regarding the cultures for the users so that we(and they) can evaluate/get to know their level of understanding/knowledge regarding various cultures.	
6.	Culture Specific Chatbot	An interactive AI chatbot that knows the ins and outs of a particular culture to which the user can ask questions and raise their doubts.	
7.	Profile Page of User	The users can view and manage their profile information, including posts, stories, interactions, and privacy settings.	
8.	State-wise Culture Pages	We want to organize all the posts/stories related to a specific state/culture in one page so that it is easier and more accessible to users.	
9.	Search by type	Facilitated by a search bar, Users can search for different types of posts, shorts etc.	
10.	View Trending Posts	Users can watch trending posts, shorts based on some criteria (like no of views in the last 2 hr, location of the user).	
11.	Multi Lingual Support	Our web app would support multiple languages to interact with. Users can choose their preferred language but default would be english.	
12.			
13.			
14.			

Use case diagram

Read the instructions below and fill in the table. Delete all the blue text before adding this to your repository or turning it in to your instructor.

Draw the UML use case diagram for the system. Make sure the use cases shown in the diagram correspond to the use cases described in the previous section.

Use case description

Delete all the blue text and fill-in the template before adding this to your repository or turning it in to your instructor.

Use Case Number:	UC-05
Use Case Name:	Cultural Quiz
Overview:	A quiz regarding the cultures for the users so that we(and they) can evaluate/get to know their level of understanding/knowledge regarding various cultures.
Actors:	User, System
Pre condition:	The user is logged in to their account.
Flow:	Main (success) Flow: 1) The user clicks on the "Take Cultural Quiz" button. 2) The system presents the cultural quiz questions. 3) The user answers the quiz questions. 4) The system calculates the quiz score and provides feedback to the user.
	Alternate Flows:

	1) A. The user is not logged in. Therefore, the system prompts him/her to login or create an account. B. After successful login/account creation, the user is redirected to the quiz page(Step 2 of main flow).
Post Condition:	The user has completed the quiz and their answers and score have been recorded in the system.

Use Case Number:	UC-06
Use Case Name:	Culture-Specific Chatbot
Overview:	An interactive AI chatbot that knows the ins and outs of a particular culture to which the user can ask questions and raise their doubts.
Actors:	User, System, LLM like ChatGPT(connected to system through API)
Pre condition:	The user is logged in to their account.
Flow:	Main (success) Flow: 1) The user lets the system know that they want to access a specific chatbot. 2) The user initiates a chat with the Chatbot by typing a question or message. 3) The system sends the user's input to the LLM's API. 4) The Chatbot uses the LLM's API to process the user's query and generate a response. 5) The response from the Chatbot is displayed to the user. 6) The user either continues to ask further questions/send messages or at some point decides to terminate the process.
	Alternate Flows: 1)API Failure: A. If there is an issue with the LLM's API (e.g., API downtime or error), the system displays an error message to the user. B. The user is informed that the chatbot is temporarily unavailable, and they can try again later. 2)Login Failure: A. The user is not logged in. Therefore, the system prompts him/her to login or create an account. B. After successful login/account creation, the user is redirected to the chatbot page(Step 1 of main flow).
Post Condition:	The user has completed using the chatbot and has requested to access another page/close the site.

Use Case Number:	UC-08
Use Case Name:	State-wise Culture Pages
Overview:	We want to organize all the posts/stories related to a specific state/culture in one page so that it is easier and more accessible to users.
Actors:	User, System
Pre condition:	The user is logged in to their account.
Flow:	Main (success) Flow: 1) The user selects a specific culture or state from a list or search results. 2) The system retrieves and displays a dedicated page for the selected culture or state. 3) The page includes a visually appealing layout with information, articles, images, videos, and other multimedia content related to the chosen culture or state. 4) The user can scroll through the content, read articles, view images, and watch videos to learn more about the culture or state.
	Alternate Flows: 1)Page Not Found: A. If the state/culture the user requested for doesn't exist, the system will display a "Page Not Found" error. 2)Login Failure: A. The user is not logged in. Therefore, the system prompts him/her to login or create an account. B. After successful login/account creation, the user is redirected to the specific page they asked for(Step 2 of main flow).
Post Condition:	The user is done learning about the specific state/culture and has decided to navigate to another part of the web app or closed it.

Use Case Number:	UC-01
Use Case Name:	Login and Registration
Overview:	Users can securely create accounts by providing necessary information, including username, email, and password, during registration. They can then log in using their credentials to access system features and personalized data..
Actors:	User, System
Pre condition:	None
Flow:	Main (success) Flow: User navigates to the login/registration page. User selects the "Create Account" option.

	User enters the required information (username, email, password). User submits the registration form. The system creates the account and logs the user in.
	Alternate Flows :If the user is already registered, they can choose the "Log In" option instead of "Create Account." If the registration information is incomplete or invalid, the system displays an error message.
Post Condition:	The user is logged in, and their account has been created or authenticated.

Use Case Number:	UC-02
Use Case Name:	Feed
Overview:	Curated collection of short videos in vertical format. This feature aims to provide easily accessible and engaging content that educates and fosters cultural appreciation and understanding among users.
Actors:	User, System
Pre condition:	User is logged in to their account.
Flow:	Main (success) Flow: User accesses the "Feed" section. The system displays a curated collection of short videos. User can scroll through the feed, view videos, and engage with content (like, share, comment).
	Alternate Flows None
Post Condition:	The user has interacted with the content in the feed as desired.

Use Case Number:	UC-03
Use Case Name:	View Stories
Overview:	Allows users to view and interact with posts (stories) where users share information about their culture, which can include text, images, or both.

Actors:	User, System
Pre condition:	User is logged in to their account.
Flow:	Main (success) Flow: 1. The user navigates to the "Stories" section of the website. 2. The system presents a feed of cultural stories/posts shared by other users. 3. Each story includes a title, content (text and/or images), and the name and profile picture of the user who posted. 4. The user can click on a story to view it in full detail. 5. They can like, comment on, or share the story. 6. After viewing a story, the user can scroll to view the next story.
	Alternate Flows The user is not logged in. Therefore, the system prompts them to log in or create an account.
Post Condition:	The user has interacted with one or more cultural stories, and their actions (likes, comments, shares) have been recorded in the system.

Use Case Number:	UC-04
Use Case Name:	Post Content
Overview:	Allows users to create and share posts (shorts or regular posts or quizzes) about cultural occasions, festivals, or events. These posts are displayed to other users interested in the particular culture or event.
Actors:	User, System
Pre condition:	User is logged in to their account.
Flow:	Main (success) Flow: 1. The user navigates to the "Post Stories" section of the website. 2. The system presents a form where the user can input information about the cultural occasion, including title, date, description, and optional images. 3. The user fills in the required details and uploads images if desired. 4. After completing the form, the user clicks the "Post" button. 5. The system processes the post, associates it with the relevant culture or event, and makes it visible to users interested in that culture or event. 6. For posting shorts, it is similar. 7. The user navigates to the "Post Stories" section of the website.

	8. Then we start a 30 second video recorder and after 30 seconds, we take a confirmation from the user if they want to post it and if they agree we post it, else we reject it. 9. For posting quizzes,the user navigates to the "Post Stories" section of the website. We take input from the user about the occasion for which the quiz is planned and will allow the user to create questions, which other users can answer or discuss in the comment section of the quiz post.
	Alternate Flows The user is not logged in. Therefore, the system prompts them to log in or create an account.
Post Condition:	The user has successfully created and posted content about a cultural occasion or event, and the post is visible on the feed to other users interested in the same culture or event.

Use Case Number:	UC-07
Use Case Name:	Profile Page of User
Overview:	Allows users to view and manage their profile information, including posts, stories, quizzes, interactions, and privacy settings.
Actors:	User, System
Pre condition:	User is logged in to their account.
Flow:	Main (success) Flow: 1. The user navigates to their "Profile Page." 2. The system displays the user's profile information, including name, profile picture, and a brief bio. 3. A section displays the user's posts, stories, quizzes and the number of likes and shares on each post. 4. The user can click on "Edit Profile" to update their name, profile picture, bio, and privacy settings. 5. In the privacy settings, the user can choose which information to keep private and visible only to followers. 6. The user can view the number of followers they have and whom they are following. 7. The user can also see a list of their posts, stories and quizzes. 8. Clicking on a post, story or quiz allows the user to view it in detail.
	Alternate Flows

	None
Post Condition:	The user has successfully viewed and managed their profile information, including posts, stories,quizzes and privacy settings. The changes are reflected on their profile page.

Use Case Number:	UC-9
Use Case Name:	Search by type
Overview:	Facilitated by a search bar, Users can search for different types of posts, shorts etc.
Actors:	User, System
Pre condition:	User is logged in to their account.
Flow:	Main (success) Flow: User access the "Seach Bar". The system displays some recommended words. User can search for a keyword System displays a set of different content related to the keyword. Different content could be posts, shorts, stories etc. *
	Alternate Flows None
Post Condition:	* After user types a word, If it is a sensible word then only we should show some content.

Use Case Number:	UC-10
Use Case Name:	View Trending Posts
Overview:	Users can watch trending posts, shorts based on some criteria (like - no of views in the last 2 hr).
Actors:	User, System
Pre condition:	User is logged in to their account, Location of the User.
Flow:	Main (success) Flow: User goes to any of the content type like posts, stories, shorts At the top, there would be a section called trending

	Users can click it or by default it would be in that particular section and view the content.
	Alternate Flows None
Post Condition:	None

Use Case Number:	UC-11
Use Case Name:	Multi-lingual-support
Overview:	Our web app would support multiple languages to interact with. Users can choose their preferred language but default would be english.
Actors:	User, System
Pre condition:	User is logged in to their account, Location of the User.
Flow:	Main (success) Flow: User goes to any of the content type like posts, stories, shorts At the top, there would be a section called language changer Users can click it or by default it would be in that English section and view the content in preferred language ,using google translator..
	Alternate Flows None
Post Condition:	None