|  |  |
| --- | --- |
| **LinguaLearn | Translation App** | An innovative language learning application that offers a multitude of features to facilitate and enhance the language learning experience. Whether you're a beginner or an advanced learner, this app provides a versatile platform to engage with and master a new language.  Meher Amir(22i1973) | Sahil Kumar(22i2048) | Raiha Adnan (22i1875) |

|  |
| --- |
| **Subject**: Software Development Project |
| **Project** **Name**: LinguaLearn - Translation App |
| **Group** **Members**: Meher Amir(22i1973) | Sahil Kumar(22i2048) | Raiha Adnan (22i1875) |
| **Deliverable** **Number**: D2 |
| **Date of Submission**: November 23, 2023 |

**Main Body**

**a. Project Title and Introduction**

LinguaLearn is a language learning and translation application designed to assist users in learning new languages and enhancing their translation capabilities. LinguaLearn is a versatile language learning and translation software that offers a comprehensive platform for language enthusiasts and those seeking efficient translation services. It allows users to select the language they wish to learn, tailoring content and interactions accordingly, making it accessible for learners from diverse linguistic backgrounds. What sets LinguaLearn apart is its interactive AI conversations, which simulate real-life interactions in the target language, enabling users to engage with AI characters in real-time conversations. Additionally, the software employs speech recognition technology to evaluate users' pronunciation and fluency, providing immediate feedback and enhancing speaking skills. Offline mode ensures uninterrupted learning, even in areas with limited connectivity, and the vocabulary builder offers cultural insights and etiquette advice to deepen users' understanding of language nuances. With translation services, progress tracking, and a holistic approach to language learning, LinguaLearn offers a comprehensive language learning and translation experience that caters to a wide range of user needs. This document outlines the contents for Sprint 1, where we aim to develop key features and functionality of the app. Sprint 1 serves as the foundation for the LinguaLearn application, setting in motion the development of key features that make the app a powerful language learning and translation tool. It emphasizes personalization, interactivity, and feedback to enhance the language learning experience. As this sprint progresses, the app will be closer to offering users a comprehensive platform for learning new languages and improving their translation skills.

**b.User Stories**

Certainly, let's explain the selected user stories for development in Sprint 2 and their associated sub-user stories:

**1) Vocabulary Builder:**

**User Story:** Users aspire to expand their vocabulary systematically, and LinguaLearn's Vocabulary Builder feature is designed to meet this need.

**Sub-User Stories:**

**• Intuitive Vocabulary Interface:** This sub-user story focuses on creating an intuitive and visually appealing interface for the Vocabulary Builder. The objective is to provide users with a seamless experience as they navigate and engage with vocabulary-building activities. The interface should be designed for clarity and ease of use.

**• Diverse Word Offerings:** LinguaLearn's Vocabulary Builder will curate a diverse and comprehensive list of words and phrases. This involves compiling and regularly updating a rich repository of vocabulary items that cover various contexts, ensuring that users have exposure to a wide range of language nuances.

In summary, the Vocabulary Builder feature is designed to provide users with an engaging and personalized pathway to expand their language proficiency. The intuitive interface, diverse word offerings, and personalized learning experience collectively contribute to LinguaLearn's commitment to facilitating effective vocabulary building.

**2) Text-to-Speech:**

**User Story:** To enhance language comprehension and pronunciation, users wish to have a Text-to-Speech feature in LinguaLearn.

**Sub-User Stories:**

**• Implementation of Text-to-Speech Technology:** This sub-user story focuses on the successful implementation of Text-to-Speech (TTS) technology within LinguaLearn. The TTS system should accurately convert written text into spoken words, ensuring a natural and clear pronunciation.

**• Integration into Language Learning Material:** LinguaLearn's Text-to-Speech feature will be seamlessly integrated into language learning materials, such as vocabulary lists, sentences, and conversational dialogues. This integration will provide users with an auditory reference for correct pronunciation and language rhythm.

**3) Progress Bar:**

**User Story:** Users seek a visual representation of their language learning journey, and the Progress Bar feature in LinguaLearn is designed to provide a clear and motivating indicator of their achievements and advancement.

**Sub-User Stories:**

**• Visual Progress Representation:** This sub-user story emphasizes the implementation of a visually intuitive Progress Bar within LinguaLearn. The Progress Bar will serve as a graphical representation, allowing users to track their completion status, achievements, and overall progress in real-time.

**• User-Friendly Interface:** The Progress Bar's interface should be user-friendly, easily accessible, and seamlessly integrated into the overall design of LinguaLearn. It should offer a straightforward and transparent view of the user's language learning journey**.**

The inclusion of milestone markers and a user-friendly interface enhances the overall usability and effectiveness of this feature, encouraging users to stay engaged and committed to their language learning goals. These features focus on enhancing spoken language skills, offering real-time feedback, and ensuring that users have access to clear and accurate pronunciation references. These selected user stories and their sub-user stories represent critical components of LinguaLearn's functionality in Sprint 2. The development team will work on implementing these features, ensuring that the application aligns with the vision of offering a comprehensive language learning and translation experience. Each user story contributes to making LinguaLearn a valuable tool for language enthusiasts and learners.

**c. Structured Specifications for User Story and Design**

**1) Vocabulary Builder:**

**Objective:**

Develop a Vocabulary Builder feature to systematically expand users' language proficiency.

**Specifications:**

* Design an intuitive and visually appealing interface for the Vocabulary Builder component.
* Compile and maintain a diverse and regularly updated list of words and phrases.
* Ensure compatibility with multiple language offerings within LinguaLearn.

**2) Text-to-Speech:**

**Objective:**

Implement a Text-to-Speech feature to aid language comprehension and pronunciation.

**Specifications:**

* Successfully integrate Text-to-Speech technology within LinguaLearn.
* Seamlessly embed the Text-to-Speech feature into language learning materials.
* Ensure the clear and natural pronunciation of words and phrases.
* Provide compatibility with various language (total of 35 to 40) materials and offerings.

**3) Progress Bar:**

**Objective:**

Offer users a visual representation of their language learning progress through an interactive Progress Bar.

**Specifications:**

* Design and implement a visually intuitive Progress Bar within LinguaLearn.
* Ensure the Progress Bar's integration into the overall user interface for easy accessibility.
* Implement real-time updates to reflect users' progress accurately.
* Enhance user engagement by providing a transparent and motivating view of their language learning journey.

These structured specifications outline the key objectives and detailed requirements for each user story, guiding the development process of each feature within the LinguaLearn application.

**Design:**

1. Activity diagram
2. Use case diagram
3. Sequence diagram
4. Class diagram

**d. Scrum Board**

We have set up our Trello board to manage the Sprint 1 tasks. The Trello board will be managed by our team leads. Here are the three snapshots as requested:

**Snapshot 1:**

**Snapshot 2:**

**Snapshot 3:**

**e. Implementation screen shots**

**f. Work Division:**

**1. Team Lead (Scrum Master): (Sahil Kumar)**

Sahil plays a pivotal role in the agile development process by facilitating various aspects of the team's workflow. During Sprint Planning, he takes the lead in guiding the team through the selection of user stories and the setting of sprint goals, ensuring that the team is aligned with project objectives. He maintains a proactive presence in daily stand-up meetings, where he ensures that team members report their progress, and any impediments are promptly addressed. Task coordination is another area where Sahil excels, making sure that responsibilities are clear and well-distributed among team members. Additionally, he meticulously manages the Trello board, ensuring that it accurately reflects the status of tasks and user stories, providing the team with a clear and organized view of their project's progress. Sahil's contributions are instrumental in keeping the team on track and delivering high-quality results in an agile development environment.

**2. Designer (UX/UI Specialist): (Meher Amir)**

Meher plays a crucial role in enhancing the user interface and experience design of the LinguaLearn app. She dedicates her efforts to crafting visually appealing and user-friendly interfaces by creating wireframes, mockups, and design prototypes for the application. Her collaboration with the development team is vital, as it ensures that design elements are seamlessly integrated into the app, resulting in a cohesive user experience. Meher follows an iterative design approach, allowing her to adapt to changing requirements and continuously refine the design throughout each sprint. Her commitment extends to actively participating in Sprint Reviews, where she presents her completed design work to stakeholders and team members, gathering valuable feedback to further enhance the app's usability and aesthetics. Meher's contribution significantly contributes to the overall success of the LinguaLearn app by providing an engaging and well-crafted user experience.

**3. Project Manager (Product Owner Role): (Raiha Adnan)**

In the agile development process, Raiha plays a crucial role in ensuring the success of the sprint. She collaborates with the team to prioritize user stories, focusing on delivering the most valuable features in Sprint 1. Raiha also places a strong emphasis on requirement clarity, ensuring that user stories are well-defined with clear acceptance criteria, which serves as a guide for the development team. During the Sprint Review, she works closely with the team lead to accept user stories as "done." Additionally, Raiha excels in stakeholder communication, effectively managing feedback and expectations. On the other hand, the development team takes charge of implementing the technical aspects of selected user stories, actively participating in daily stand-up meetings to share progress and coordinate efforts. They engage in collaborative problem-solving with the team lead to overcome any impediments and embrace iterative development, making continuous improvements based on feedback and changing requirements throughout the sprint. Together, Raiha and the development team ensure a well-organized and adaptive sprint process.

This work division ensures that each team member has clear responsibilities and that their roles align with the Scrum framework. It facilitates efficient collaboration, allows for adaptability, and helps meet the sprint objectives effectively. Additionally, it's essential to maintain open communication among team members to ensure a successful Sprint 1. This document outlines our progress in Sprint 1 and provides the necessary information and artifacts as per the project requirements.