**Platform – Android**

**Distribution – Google play store**

**Introduction of the Project**

Dyslexia is an unexpected difficulty in reading in children and adults who otherwise possess the intelligence, motivation, and schooling considered necessary for accurate and fluent reading. Dyslexia (or specific reading disability) is the most common and most carefully studied of the learning disabilities, affecting 80 percent of all those identified as learning-disabled .

One in five students, or 15-20% of the population, has a language-based learning disability. Percentages of children at risk for reading failure are much higher in high poverty, language- minority populations who attend ineffective schools. According to the National Assessment of Educational Progress (NAEP), 38% of all fourth-grade students are “below basic” reading skills. They are at or below the 40th percentile for their age group. 80% of children with an IEP have reading difficulty and 85% of those are Dyslexic.30% of children with Dyslexia also have at least a mild form of AD/HD .

In Sri Lanka, minimum attention is paid to specific learning disorders like dyslexia by both health and education sectors. Limited awareness of stakeholders results in very late identification of dyslexia in early school stages due to which it is estimated to range from 5% to 17% among school- aged children A population-based study in Rochester, Minnesota, reported cumulative incidence rates of reading difficulties to range from 5% to 11% .

With major concerns in countries like Sri Lanka even their native language (Sinhala)has been neglected by the dyslexic students where primary school students face several problems related to sounds recognition, reading comprehension, sentence construction, pronunciation, applying grammar rules and insufficient support from family. The results reveal that male students encounter more problems as compared to female students .

Even though there are some apps developed in Sri Lanka which are focused on the Sinhala language learning there are many things that are needed to be changed in them asper an example dyslexia for numbers is not much focused in mobile applications , “Hapana” Sinhala learning app, "ARUNALU” Learning ecosystem to overcome reading disabilities in Sinhala language due to Dyslexia are some of the systems that are developed to overcome this gap.

But as per the research is done regarding the current systems used in the Sri Lankan schools to work with dyslexia kids do not match the standards of the technology so with this research, the main objective is trying to make a mobile application which would help the primary kids (age 06- 08) to develop there Sinhala language skills.

**Scope of the Project:**

The project aims to develop a mobile application targeted towards primary school children in Sri Lanka, specifically those aged 6-8, who struggle with dyslexia and encounter difficulties in developing their Sinhala language skills. The primary focus will be on improving reading comprehension, pronunciation, grammar, and overall language fluency. However, it's essential to acknowledge the limitations and constraints of the project. These may include:

* Language Specificity: The application will primarily focus on the Sinhala language, limiting its applicability to regions or communities where Sinhala is the primary language of instruction.
* Age Group: While the target age group is set to 6-8 years old, the application's effectiveness may vary among individual users within this age range.
* Accessibility: The project acknowledges potential accessibility challenges, such as limited access to smartphones or technology infrastructure in certain communities.
* Resource Constraints: The development of a comprehensive application requires adequate resources, including funding, expertise, and time. Limitations in any of these areas may impact the project's scope and implementation.

**User Roles:**

* Primary Users: Students aged 6-8 with dyslexia, who struggle with various aspects of Sinhala language learning, including reading comprehension, pronunciation, and grammar.
* Secondary Users: Teachers and parents will play a supportive role in the application's usage. They may assist in guiding students, monitoring progress, and providing feedback.
* Admin

**Functionalities:**

* Customized Learning Paths: The application will offer personalized learning paths tailored to the individual needs and learning styles of dyslexic students.
* Interactive Exercises: Various interactive exercises and activities will be provided to improve reading comprehension, sound recognition, sentence construction, and grammar.
* Multisensory Approach: Incorporating a multisensory approach, the application will utilize auditory, visual, and kinesthetic elements to enhance learning effectiveness.
* Progress Tracking: Teachers and parents will have access to features that allow them to monitor students' progress, identify areas of improvement, and provide targeted support. Gamification: To enhance engagement and motivation,
* gamification elements such as rewards, badges, and progress levels will be integrated into the application.
* Accessibility Features: The application will include accessibility features such as text-to-speech functionality, adjustable font sizes, and color contrast options to cater to diverse user needs.

**Feasibility Study:**

* Technical Feasibility: The technology required for developing a mobile application with the specified functionalities is readily available. However, it's essential to ensure compatibility across various devices and operating systems.
* Economic Feasibility: While the initial development costs may vary depending on the complexity of the application, ongoing maintenance and updates will incur additional expenses. Funding sources need to be identified to support both development and sustainability.
* Operational Feasibility: The application's management and sustainability will rely on effective project planning, resource allocation, and stakeholder collaboration. Establishing partnerships with educational institutions, government agencies, or NGOs can facilitate the dissemination and adoption of the application. Additionally, revenue streams such as freemium models or partnerships with educational content providers can contribute to long-term sustainability