

# PROJECT PROPOSAL

## “SPEAK UP”



Group B 71 :

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# IN PARTNERSHIP WITH PLYMOUTH UNIVERSITY

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**Module Code:** PUSL 2021

**Module Name:** Computing Group Project

**Coursework Title:** Proposal Submission

**Deadline Date:**  
25/10/2023

**Member of staff responsible for coursework:**

**Program:**

*We confirm that we have read and understood the Plymouth University regulations relating to Assessment Offences and that we are aware of the possible penalties for any breach of these regulations. We confirm that this is the independent work of the group.*

**Signed on behalf of the group:**  
NNS Lokuhetty

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## Project Overview

The project's goal is to develop an inclusive and empowering app, especially for differently abled kids. It will incorporate adaptive learning algorithms, interactive kids' games, and multimedia content to create a fun and personalized learning experience. We clearly saw the requirement for the usability of apps that differently abled children use in Sri Lanka. To guarantee usability for all users, the app will offer an accessible user interface (UI) with capabilities such as voice commands and gesture-based interactions.

The main target users are differently abled kids, and the app will cater to their unique requirements and learning methods. It will provide a range of activities and content that can be tailored to individual progress and preferences. They will be interactive and accessible, allowing kids to actively participate and learn through play. In another aspect, it will be quite beneficial to parents who have children with different abilities. Even in some unsettling times, parents will be able to keep their children engaged in some specific activities specially made for differently abled children at home while staying in their comfort zone. This app will definitely help to ease the weight parents are carrying.

In terms of technologies and tools, the project may utilize mobile app development frameworks like Flutter. Adaptive learning algorithms will be integrated to personalize the content based on each child's needs. Multimedia elements such as videos, images, and audio will be incorporated to enhance engagement and understanding. Accessibility features provided by the operating system, such as Voiceover will ensure inclusivity.

Overall, the project aims to create an app that promotes learning, engagement, and social interaction for differently abled kids which will empower them to explore their potential, enhance their skills, and connect with a supportive community. It's an exciting initiative that seeks to harness the power of technology to make education more accessible and enjoyable for all.

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## Introduction

Our mission is to create an inclusive and empowering learning experience for these amazing children. We believe that every child deserves the opportunity to learn and thrive, regardless of their abilities.

Our app will revolutionize the way differently abled kids engage with educational content. We studied and understood that each child is unique, with their own learning style and pace. That's why our app will offer adaptive learning, tailoring the content and activities to meet the individual needs of each child. Personalized learning paths will ensure that every child can progress at their own speed and achieve their full potential.

Learning should be fun and exciting, which is why our app will incorporate interactive games and activities. These games will not only entertain but also enhance cognitive skills. We want to provide a holistic learning experience that promotes overall development.

As we identified, accessibility is the main problem they have; accessibility will be the top feature of our app. Our app will integrate multimedia elements such as videos, images, and audio to create a multi-sensory learning environment. Our goal is to make sure that every child can fully engage with the content and have equal access to education.

We understand the importance of user-friendly interfaces and prefer color palettes, especially for differently abled children. Our app will have an intuitive design with features like voice commands and gesture-based interactions. This way, kids with limited mobility or dexterity can navigate through the app easily and independently.

But it doesn't stop there. They will be able to enjoy their achievements. We are truly passionate about this project and believe it has the potential to make a positive impact on the lives of differently abled kids. We're excited to embark on this journey and create an app that will empower these incredible children to reach for the stars.

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## Objectives

### 1. Enhance accessibility: -

The app aims to provide a user-friendly interface and adaptive features that ensure accessibility for differently abled kids. This includes features such as voice commands, gesture-based interactions, and customizable settings.

### 2. Foster Inclusive Learning: -

The app will offer a diverse range of educational content that caters to different learning styles and abilities. It will promote inclusivity by providing materials that are engaging, relatable, and relevant to the experiences of differently abled children.

### 3. Personalized Learning Experience: -

The app will utilize adaptive learning algorithms to tailor the content and activities based on the individual needs and progress of each user. This personalized approach will help maximize learning outcomes and keep the children motivated.

### 4. Interactive and Engaging Activities: -

The app will feature interactive games, quizzes, and multimedia elements to make the learning experience enjoyable and engaging. These activities will be designed to promote critical thinking, problem-solving, and creativity.

### 5. Empowerment and Independence: -

The app aims to empower differently abled kids by fostering a sense of independence and self-confidence. Through interactive features and positive reinforcement, it will encourage children to take ownership of their learning journey.

By achieving these objectives, the project seeks to create an inclusive and empowering learning environment for differently abled kids.

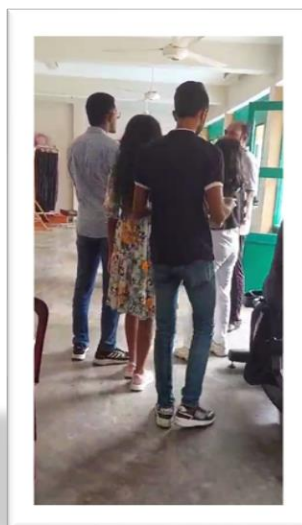
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## Target Users



The target users of this project are children with different abilities, such as physical, cognitive, sensory, or learning disabilities. We want to ensure that our app is accessible and beneficial for children with a wide range of needs. By tailoring the content and activities to their individual abilities, we aim to create an inclusive learning environment where every child can thrive and reach their full potential. Our ultimate goal is to provide a fun, engaging, and empowering educational experience for differently abled kids.

We did background research on the differently abled kids and personally met them at a specialized school. The National Centre for Children with Cerebral Palsy and Other Developmental Disorders is a non-profit institute powered by Dilmah Tea (Foundation, 2023). We were able to identify common requirements that all of those children had. Accessibility was the main requirement.



## Technologies and Tools

Our app for differently abled kids incorporates a range of features and technologies to enhance their learning experience. Some specific features include:

1. Adaptive Learning:

- The app utilizes adaptive algorithms to personalize the content and activities based on the individual needs and progress of each child.

2. Interactive Games and Activities:

- Engaging games, quizzes, and interactive activities are designed to make learning fun and enjoyable for kids.

3. Accessible Interface:

- The app provides a user-friendly interface with adaptive features such as voice commands and gesture-based interactions to ensure accessibility for all users.

4. Multimedia Content:

- The app offers a variety of multimedia elements like videos, images, and audio to cater to different learning styles and preferences.

5. Social Interaction:

- The app encourages children to connect with peers, educators, and mentors, fostering collaboration and communication within a supportive community.

The proposed technologies and tools for the app could include mobile app development frameworks like React Native or Flutter (Google, 2010), adaptive learning algorithms, multimedia integration using libraries like ExoPlayer or AVFoundation, and accessibility features provided by the operating system such as VoiceOver.

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## Application features and description

1. User-friendly login page:
    - The app will have a login page specifically designed for differently abled kids, making it easy for them to access the app.
  2. Interactive games:
    - The app will feature engaging and interactive games tailored to the common needs and abilities of differently abled kids.
  3. Educational content:
    - The app will provide educational content, including some easy reading materials.
  4. Accessibility options:
    - The app will include accessibility features such as adjustable sizes, voice-guided story readings, and color contrast settings to ensure inclusivity.
  5. Personalization:
    - The app will offer personalized experiences, allowing kids to customize their preferences.
  6. Progress tracking:
    - The app will have a progress tracking feature to monitor and celebrate the achievements of differently abled kids.
  7. Parental controls:
    - The app will provide parental controls to ensure a safe and controlled environment for kids to use the app.
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# Time plan

(Anon., 2023)

Computing Group Project

Oct 25, 2023

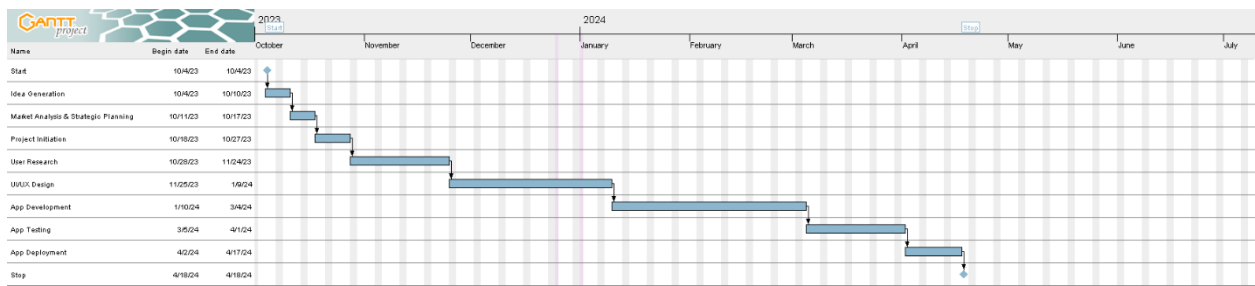
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Project manager	
Project dates	Oct 4, 2023 - Apr 18, 2024
Completion	0%
Tasks	10
Resources	0

Tasks

Name	Begin date	End date
Start	10/4/23	10/4/23
Idea Generation	10/4/23	10/10/23
Market Analysis & Strategic Planning	10/11/23	10/17/23
Project Initiation	10/18/23	10/27/23
User Research	10/28/23	11/24/23
UI/UX Design	11/25/23	1/9/24
App Development	1/10/24	3/4/24
App Testing	3/5/24	4/1/24
App Deployment	4/2/24	4/17/24
Stop	4/18/24	4/18/24



## References

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