



English School Mate

2020_69



Supervisor

Mr. Dhammika de Silva

Co Supervisor

Mrs. Anjali Gamage

Background / Research Gap

- English is the most spoken language in the world and the third most communicated native language on Earth.
- In Sri Lanka, English is the third most spoken language, after Sinhala and Tamil. It is the second language of most Sri Lankans.
- Since the British Colonization, English has become a part of the Sri Lankan society, and in present day context, it is considered an important skill and competency, to be able to read, write and speak in English.
- Young children aspire to gain competence in English language since it has become a must- have skill in the job market.
- But in most areas in Sri Lanka, resources are not available for children to learn English, and it is often considered as a hard thing to acquire proficiency in English.

Application Features	Dulingo[2]	Memrise[3]	BBC Learning [4] English	Hello English[5]	English School Mate
Vocabulary Improvement Game	✓	✓	✗	✓	✓
English Writing	✗	✓	✓	✗	✓
Spoken English	✗	✗	✗	✗	✓
Activity Prediction	✗	✗	✓	✗	✓

Research Problem



- **There are students from rural areas whose English communication skills, brain development capacity and thinking ability are very low.**
- **Many students face difficulties in writing, and make frequent errors in grammar because of their lack of grammatical skills.**
- **Students in rural areas have a big issue in their English spoken skills which is a must to cope with the society.**
- **In rural areas there are only a few of teachers and few resources to try different teaching methods and there isn't a proper guide.**

Why English School Mate ?



It is a Comprehensive solution addressing today's problem of lack of English knowledge in students of rural areas.

- **Brain Development Game**
- **Written English Module**
- **Spoken English Module**
- **Activity Prediction Controller Panel**

Objectives



Main Objective

- To implement a solution to encourage students to learn and be fluent in English

Sub Objectives

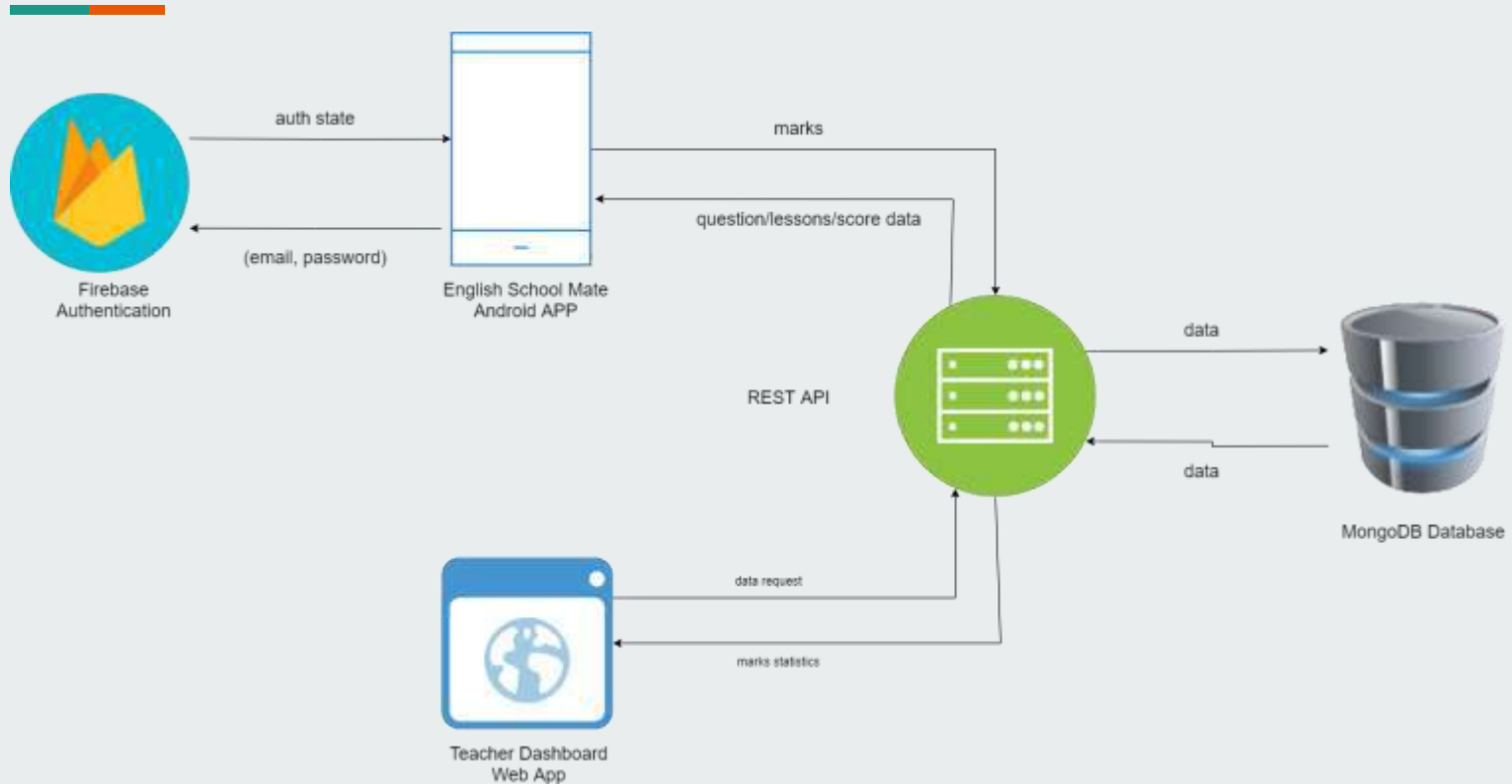
- To build a brain development game
- To implement Written English exercises and correction model
- To implement Spoken English exercises and correction model implementation
- Teacher Dashboard Implementation
- ML model for predicting the score for written and spoken quizzes



Audience

- **Our product mainly targets students in rural areas of Sri Lanka, who is lacking knowledge in the English Language, proper guidance and resources.**
- **The product is also available to any student who is willing to learn English.**

High Level Architecture





Shehan D.S
IT17102056





Brain Development Game

Background/Research Gap

- English language has become more popular since it is the international language.
- Students must learn English to succeed in their future life.
- Students are interested in educational games.
- Lack of teachers and lack study materials in rural areas.

<i>Research</i>	<i>Covered areas</i>	<i>Our application covered areas</i>
Typing game to learn English	<ul style="list-style-type: none">• Vocabulary skill improvement.• Distance learning facility.	<ul style="list-style-type: none">• Vocabulary skill improvement through high quality graphical interfaces using the game.• Distance learning facility.• Focus on grade 6 to 9 students.• Brain improvement techniques through the game.
Contextual game for improving English	<ul style="list-style-type: none">• Vocabulary skill improvement.	<ul style="list-style-type: none">• Not only the vocabulary skill but also brain improvement skills through the game.

Research Problem.



- **Lack of knowledge and competency in English language is one of the main reasons for unemployment.**
- **In The students who are in rural areas are not getting the proper resources, therefore cannot meet the requirements or improve their English language skills.**
- **Brain Development games improves the thinking capacity and English language skills at the same time.**
- **It is an interesting, educational and fun way to learn English, also quite appealing to students.**



Specific and Sub Objectives

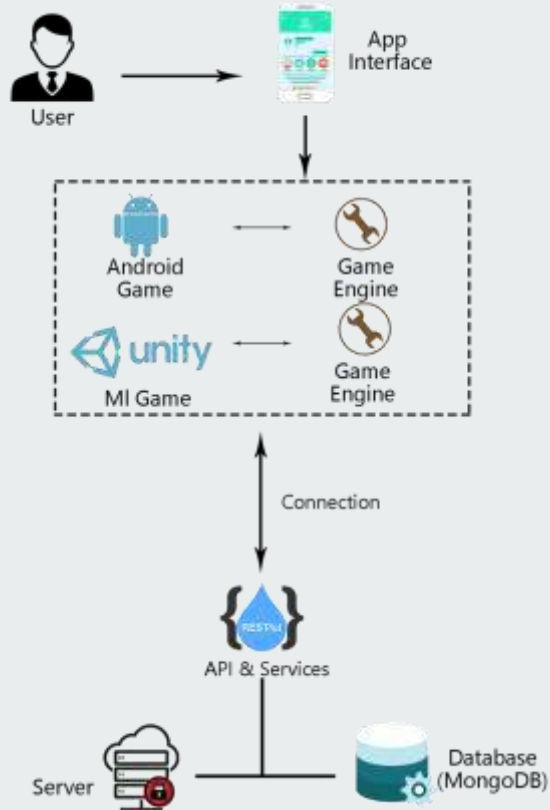
Main Objective

To develop mobile based games to improve and evaluate English vocabulary and thinking capacity of grade 06 students.

Sub Objectives

- To identify the technologies to develop brain development games.
- To connect game engines with the game applications.
- To build the connection with game application and the server.
- Implementation of a user-friendly environment to allow the users to operate the system with minimum knowledge to gain maximum Performance.

Methodology



Achievements

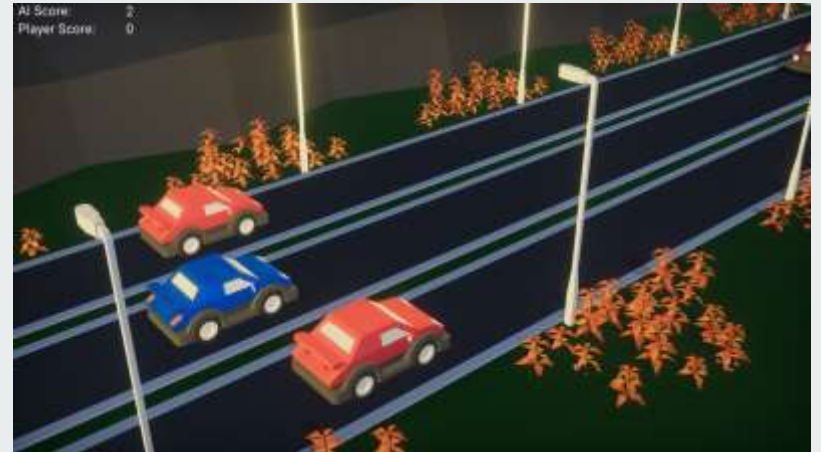
- Successfully developed the unity game.
- Successfully build the android game.



IT17102056



ShehanD.S



2020_69



Sankalpa H.A.B
IT17155212





Written English Module

Background/Research Gap

- English language skill has an empowering influence on professional success and social relationships.
- The students must perceive the importance of English, specially in the aspect of writing.
- Writing fosters the ability to explain and refine ideas to others and ourselves.
- However, there are many students who are unable to grasp the writing aspect due to many reasons, specially Grammar.

Application	English learning	Entertainment	Brain Improvement	Thinking ability
Dulingo	✓	✓	×	×
Magic Land	✓	×	×	✓
Vocab game	×	✓	×	×
Our proposed application	✓	✓	✓	✓

Research Question



- **Lack of Grammatical knowledge and practice in English writing.**
- **Lack of Grammar and English knowledge in rural area students.**
- **Lack of teachers and resources to implement various teaching methods in rural areas.**
- **Providing students an affective, affordable solution to improve their English writing skills**

Specific and Sub Objectives



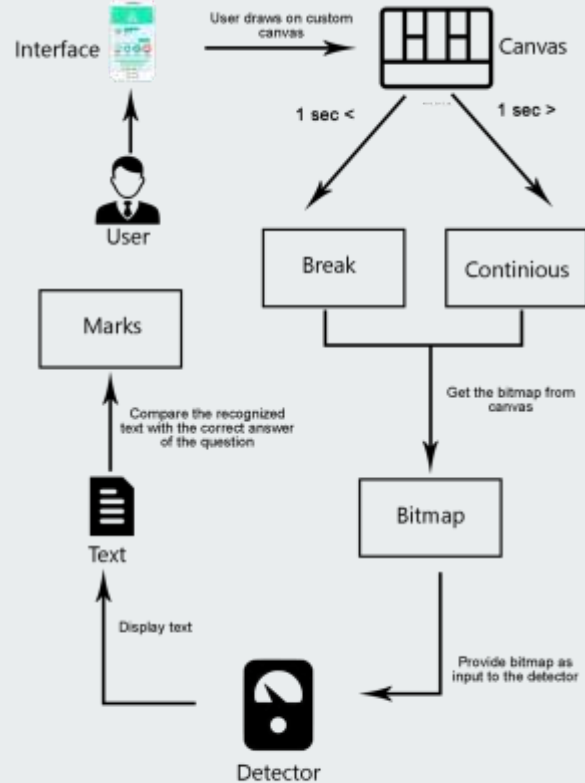
Main Objective

To develop a hybrid solution to improve and evaluate the Written English abilities of the grade 06 students.

Sub Objectives

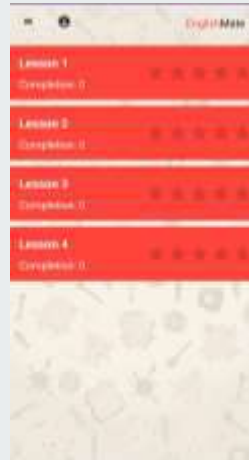
- Collection of lessons relevant to the grade 06 English syllabus.
- Categorization of lessons based on the identified aspects of Written English language.
- Selection of relevant types of questions and construction of exercises based on the identified criterias.
- Maintaining the functional independence of the component to make sure that the final product can be switched accordingly.
- Implementation of a user-friendly environment to allow the users to operate the system with minimum knowledge to gain maximum Performance.
- Development of the Written English component to function based on minimum resources consumption but maximum efficiency.
- Ensure that the solution is easily accessible and portable while maintaining the security.
- Adoption of a commercially valuable development structure and a sustainable outcome.


Methodology



Achievements

- Collected the lessons relevant to the grade 06 English syllabus.
- Categorized the lessons based on the identified aspects of Written English language.
- Selected the types of questions and construction of exercises based on the identified criterias.
- Successfully develop the Wriiten English module.





Divyanjali S.N.S
IT17400596





Spoken English Module

Background/Research Gap



- **Everyone needs a language to communicate with others so speaking is one of the major aspects in any language.**
- **Speaking English allows you to truly broaden your world, from job opportunities to flexibility, to relate to people from every country.**
- **Knowing the language makes every trip way more interesting.**
- **Education is incredibly important to enhance yourself but learning English also improves the standard of life.**

Research Question



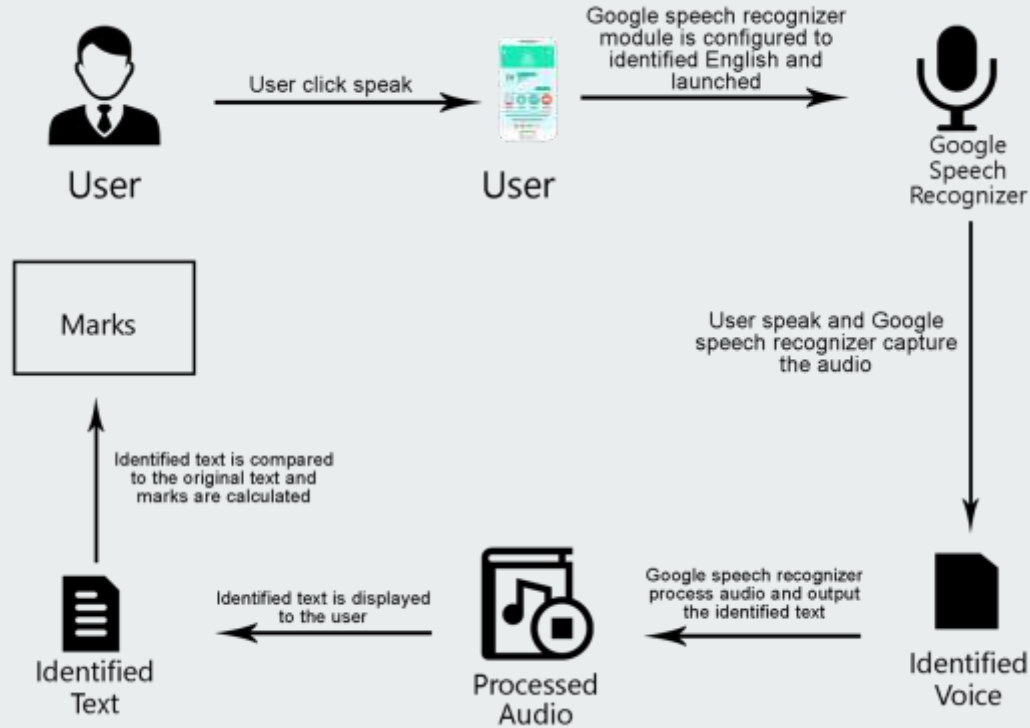
- **Lack of spoken English practices**
- **Lack of spoken English knowledge in rural area students**
- **Lack of teaching properties**



Specific and Sub Objectives

- **Categorization of lessons based on the identified aspects of Spoken English language.**
- **Improving and evaluating the Spoken English skill of the students.**
- **Maintaining the functional independence of the component to make sure that the final product can be switched accordingly.**

Methodology



Achievement



- **Collected the lessons relevant to the grade 06 English syllabus.**
- **A group of students gather one teacher**
- **Increase spoken English knowledge within the technological knowledge**
- **Implementation of a user-friendly environment to allow the users to operate the system with minimum knowledge to gain maximum Performance.**



Madushani N.G.H

IT17027670





Activity Prediction Controller Panel



Background/Research Gap

- **Students have big issues in learning English, they face lots of difficulties.**
- **Students in rural areas lack English teachers to teach English.**
- **So for that reason we decided to implement this and here , activity prediction and controller panel is a solution for the lack of teachers.**
- **Students individually , with the prediction function, can check how many marks a student can obtain before doing the quiz.**



Research Question

- **Lack of teachers**
- **Force the students for good learning environment.**
- **Get an idea of students' learning process**
- **Any one can easily teach their students using this.**
- **Visualize students overall performance in one dashboard**

Specific and Sub Objectives



Main Objective

To build a system to predict the results and activities using several factors of the grade 06 students.

Sub Objectives

- Collected the several data using different factors.
- Refer all the data
- Get the idea of teaching methods and students levels
- Maintaining the functional independence of the component to make sure that the final product can be switched accordingly.
- Implementation of a user-friendly environment to allow the users to operate the system with minimum knowledge to gain maximum Performance.
- Using all the factors make predictions of students level and teacher easily understand what are the activities must offer to the relevant students
- Visualization all the results and overall the performance using several graphical techniques like bar chart pie chart

Methodology

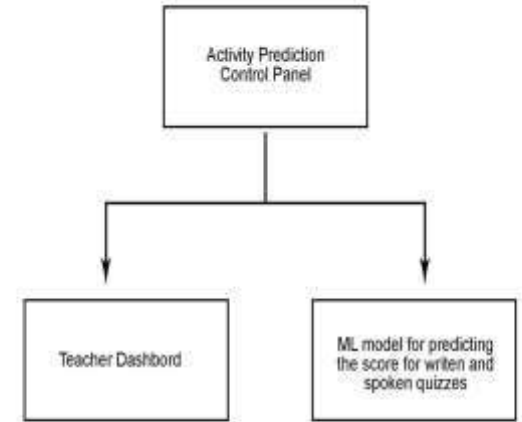


Teacher Dashboard


- Will contain information on the overall performance of a set of students assigned to the teacher.

ML model for predicting the score/activity for written and spoken quizzes

- Data collected through Google Forms
- Data Cleaning and Dataset Creation
- Data preprocessing and developing a model using Jupyter notebook as the IDE
- Sklearn and pandas libraries will be used for models and utilities needed for data preprocessing, training models, model evaluation



Achievements

- 
- **Collect all the details of the students and refer with it.**
 - **Get a good idea about teaching methods**
 - **Implement user friendly environment**
 - **Implement this application to increase the efficiency and speed processing**
 - **Use the graphical techniques reduce the time required by the guiding party.**

References



[1] "English language", En.wikipedia.org, 2020. [Online]. Available: https://en.wikipedia.org/wiki/English_language. [Accessed: 19- Sep- 2020].

[2]"Learn a language for free", Duolingo, 2020. [Online]. Available: <https://www.duolingo.com/>. [Accessed: 23- Sep- 2020].

[3]"Learn a language. Meet the world. | Memrise", Memrise.com, 2020. [Online]. Available: <https://www.memrise.com/>. [Accessed: 23- Sep- 2020].

[4]"BBC Learning English - BBC Learning English - Homepage", BBC Learning English, 2020. [Online]. Available: <https://www.bbc.co.uk/learningenglish/>. [Accessed: 23- Sep- 2020].

[5]"Hello English : Learn English | Best English Speaking App", Helloenglish.com, 2020. [Online]. Available: <https://helloenglish.com/>. [Accessed: 23- Sep- 2020].



Any Questions?



Thank You!!