**IT Application Project**

Done by: Xavier Wee, 231247F

Kai Goh, 231129U

Zamirul, 231060U

Kai Jie, 231057M

# **Introduction**

Singapore has always been developing its country to become a smart nation, and one of the most important industries in Singapore is education. Although there are many government-owned education websites such as McOnline and Student Learning Space (SLS), there are many weaknesses that can hinder a student’s learning capabilities. We wish to create an application that is not only able to help students who have trouble focusing or understanding lessons but also creates difficult questions for students to test their understanding. We also noticed that a very important skill that most students lack is time management. Time management is crucial to a person's success and should thus be honed and developed at a young age, which is why we will include a timetable/schedule in our app. While many other calendar/schedule apps exist, ours will be integrated into the educational website. With the help of MOE and schools, Schedules would now be automated to include holidays, exam periods, and even daily questions for students to do should they be in a rush.

# **Business problems and Our solutions**

Problem 1: In the education sector industry, not everyone has an equal level of understanding capabilities, some students learn slower, while some learn faster.

Problem 2: Students have difficulty focusing in class as they may find it monotonous and boring

Solutions 1&2: Our app will combine the strengths of McOnline and SLS to include engaging games for students to use to learn while hosting difficult questions for students to test their capabilities

Problem 3: Teachers have a lot more responsibilities to uphold than what meets the eye. Not just teaching and marking students, they also have to counsel students, deal with parents, and even do school projects not related to education!

Solution 3: Although difficult, we can use AI to relieve the teacher with marking. Due to rare but concerning mistakes AI could make, it will NOT be used for exam papers, only for homework, quizzes, and tests. By training the A.I. until it can discern if the student’s answer is similar to the teacher's answer, teachers will be

relieved of this time taking tasks and will have more time for any other work they have

Problem 4: Students these days do not understand time management. Time management is crucial for students in the future and is a necessary skill to hone and master.

Solution 4: Within the app, we will develop a calendar section.  
When the calendar is first opened, there will be a tutorial encouraging the user to customise the calendar themselves, such as including birthdays, study periods, etc.

# **Results**

Github link: <https://github.com/3lectroBlazes/IT-Application>

Trello Link: <https://trello.com/b/4Jz8wgaQ/edubuddy>

Although we are unable to create an actual AI due to the limitations of Scratch, I believe the animation in the app perfectly demonstrates how we can create a fully functional AI for marking papers  
  
All our games have successfully solved our first and second issues, as the entertainment sector of our educational games will grab users' attention, who will be able to learn and have fun.

Finally, our calendar, although pretty basic, should still allow students to plan their own study schedules.

# **Discussion**

Despite the success of our game, our team does not think this will be good enough for the future, and there are 2 issues that, when solved, will give many opportunities for future developments

Firstly, there are many improvements that can be done to our Game.

There may be a way for us to create a fully functional AI in our game, as we will have more time, and hopefully more resources to make it work.

Graphics wise, although the design is quite simple for kids, we would love to put more detail to grab more attention to our games

There are also small bugs and glitches in our game that, although does not heavily affect gameplay, can be quite annoying. With more time, we can definitely remove all the issues.

There is also creating to help the other subjects that we did not do such as Chemistry and Physics.

For the application, we believe we should’ve integrated more features into the app.

Finally, we must also think of how to make our game long lasting. We have thought of maybe creating daily questions in our Calendar function, or creating different test questions for students to forever challenge themselves

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