# Proposal

SCHOOL DATABASE

**Group Members**


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# INTRODUCTION

Change is inevitable and same goes with how we live and learn. We rely so much on ourselves and other people that we overlook how much technologies can make our lives specifically students' lives better. New technologies are game changers. That's why most universities are using it. Modern technologies and software are being implemented into their systems every day while our school still use the old traditional learning approach for students and teachers.

# PROBLEMS

Royal University of Phnom Penh is far behind the competition in term of the technologies that are being used. In fact, we don't even have a database that enables students to view their grade in previous semesters, or one that allows teacher to see how many students there are in a particular class. It's time to change and revolutionize our learning approach by implement this so called "New technology" into our school.

# SOLUTION

To response to this issue, our team decided to build and implement our own school database, which will drastically improve our school system and at the same time, becomes beneficial for everyone including students and lecturers. Our team's project is cost-efficient meaning that our school doesn't need to hire expertise to get the job done. Therefore, it's a win-win situation, since our team can gain experience from completing the project, and we can save thousands of dollars from building the database as well.

## 1. OUR APPROACH

We've tried every possible way to create a good and reliable database. Because we have the vision to change and have a clear understand of what problem we have to deal with, our team decided that the tables listed below will be in our database.

- students: This table will include all necessary data about students such as id, name, birthday, phone and so on.
- grades: A table that stores student's grade on each subject
- courses: Course's id, duration, description and other information about the course goes here.
- teachers: This is where we store teachers' information including courses' id
- subjects: This table includes information about subject's maximum scores, lecturers and so on.

  PS: Some tables might be added or modify in our final database.

## 2. REQUIREMENT

As mentioned above, our project will definitely be cost-efficient. However, that doesn't mean our team don't need resources to bring our database into reality. These are two things that have to be put into consideration, which are data, time, and a lot of data.

First, we'll be starting with a few data to demonstrate the capability of our database. Next, comes optimization. With enough data and time, we'll be able to optimize our code to be faster and more memory-efficient. Making sure that our system can run own minimum memory requirement will be our priority. After that, we'll be doing a few tests with our database and make some adjustments before completing our database system. Finally, we'll implement an API built specifically for our database.

In order to ensure a success in implementing our own database for the school, we've developed a manageable timeline as shown below:

- March 7th – March 20th 2021: System Analysis
- March 21th – April 3rd 2021: Data implementation
- April 4th – April 14rd 2021: Project Finalization
- April 15th – April 21st 2021: Project final report

# BENEFITS

Our team's database will change the way students and teachers in our school interact with technologies, and we're sure they will love it as much as we do. Our system will definitely be modernized and most importantly, it also gives us a step up the game and to join the competition again. Almost every university has made database and API for their students to used, and it's about time we make ours. Additionally, the use of database and API will provide other educational benefits for our students such as:

- Providing a better and modern learning approach by giving the opportunity for students to use database system
- Improving our school standard by implementing new technologies like databases compared to other famous universities
- Providing convenience and improve accessibility meaning that authorized users can get data at any time and any where
- Give students a better understanding of data manipulation and the importance of data security by using database system
- Encourage students to improve and extend our database functionality in future, which in turn give them experience and further increase their knowledge of database system.

# CONCLUSION

In summary, our school is far behind the competition. We need some minor improvements on what technologies that are being used and how they can be used. Not having our own database for accessibility and availability is problematic, but our team has found the most suitable solution, which is also cost-efficient. With the given time and minimum resources and investment, it can deliver beneficial impacts on the whole school.

Nothing stays the same, everything changes and we strongly believe that the minor changes we make every day by implement new technologies can dramatically change our school's reputation and the overall learning quality for the students.

# OUR TEAM

| Name | Role |
|---|---|
| **Seng Chetra** | Project Manager and System Analyzer |
| **Pun Mengly** | Database Designer and System Analyzer |
| **Phat Chetra** | Data implementor and Tester |
| **Try Sorta** | Data implementor and Tester |