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Proposal

Blackboard Kids (TEMP)
Group 3: Nicholas Foley, Steven Truong, John Ross

Motivation/Introduction:

During the Covid-19 pandemic all students from college to K-12 must take classes from home to in order to protect themselves and others from the virus. This difficult time has presented a lot of challenges for our education system, especially in the online schooling of younger students. There are limited resources available to teachers makes it difficult to organize class and handout the necessary work. Google Classroom is one of the current choices for many teachers, but it comes with some problems. For example, it does not currently implement the use of google calendar making it difficult to organize work.¹ Not only is it difficult to organize the class, it also hampers the development of the important teacher-student relationship.² Our product aims to alleviate some of the difficulty that comes with online learning by providing an organized way for teachers and students to communicate. This could alleviate stress from teachers, students, and parents as it will enable more open pathways of communication and a create a better way to organize the work the students need to complete.

Methods to be used:

- Login and Registration system, with a database that encrypts all sensitive information. Try to make intricate as possible to get better at SQL and building out DBs.
- Calendar system with notifications. We could use Google Calendar API as a shortcut, but that'd take the fun out of it.
- In browser voice/video chat with screen share.
- Full-on website design
- File upload system where students can upload files for their teachers to grade
- Text to speech implementation
- Gradebook
- Achievement System

Testing design:

John's mother works for the Newton Public School district and has gotten a lot of complaints about the current system in place for parents. They are constantly barraged with emails, and there is no currently organized way on how to do stuff. After asking my mom what she'd like to see in this web application, she gave me a few of the following suggestions. Some may be repetitive.

¹ Pappas, C. (2020, April 27). Google Classroom Review: Pros And Cons Of Using Google Classroom In eLearning. Retrieved May 27, 2020, from <https://elearningindustry.com/google-classroom-review-pros-and-cons-of-using-google-classroom-in-elearning>

² Ludvik, D. (2019, May 20). Emerging theme: Teacher-child relationships. Retrieved from <http://earlylearningnetwork.unl.edu/2019/05/20/teacher-child-relationships/>

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- A Calendar with Assignments. We can use some sort of Google Calendar API, or develop our own from scratch. She said she'd like to see one that is able to send notifications, have some sort of customization to it for different topics in learning.
- Direct Meeting Rooms – She said that Zoom works well, however with the recent security flaws that it has been called out to have, some sort of in-browser implementation of video conferences with teachers and students would be a neat feature as well.
- Some sort of text-to-speech system would be nice, so students that have trouble reading can be able to listen to instructions to teachers. Or even when teachers send notifications on email, a mp3/mp4 can be sent so a student can hear or see their teacher talking about the lesson, making it more personal, since that student-to-teacher relationship is important, especially to young students.
- The last thing John's mother asked was not to make the program too complicated, as in its current state, many students have trouble navigating the websites and are discouraged. So, I think our project shouldn't be made not as complicated with little features but should be tested so students are able to easily navigate it. I can test it on my younger cousins (elementary school-middle school) once we get a more solid product.

Member roles:

Leader rotations of Nick Foley, John Ross, and to Steven Truong every week.

Timeline:

User Design	Week 2
Milestone 1 – User System, DB, Login/Registration form working	Week 3
Milestone 2 – Calendar, Assignment Submission, Text to Speech, Email/Browser Notifications, mp3/mp4 files hosted	Week 4
Milestone 3 – Voice/Video Calling, Screen sharing, any additional features we may have along the way	Week 6
Milestone 4 – Complete product	Week 8

Milestone:

1. UI Design - Design of the website with HTML/CSS
2. Minimum Viable Product – The minimum required functionality of the website
3. Beta – A couple of features implemented
4. Complete product - All features implemented

Alternative plan:

- Difficulty Integrating Accounts into the Website – If we were to run into major problems in the creation of individual accounts, we could instead go by a course code and password.
- Easy to use UI and UX – Developing and easy to use UI and UX for children may prove difficult. Adults users are already good at finding unique ways to break things, child users are even better. To fix this we will have to rigorously test the site to ensure very minimal room for errors

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References

- Ludvik, D. (2019, May 20). Emerging theme: Teacher-child relationships. Retrieved from <http://earlylearningnetwork.unl.edu/2019/05/20/teacher-child-relationships/>
- Pappas, C. (2020, April 27). Google Classroom Review: Pros And Cons Of Using Google Classroom In eLearning. Retrieved May 27, 2020, from <https://elearningindustry.com/google-classroom-review-pros-and-cons-of-using-google-classroom-in-elearning>