

Math tutor for elementary kids

Overview:

Our objective for writing this program was to help kids of all grade levels, i.e., my niece and nephew, by assisting them in their basic arithmetic and improving their test times. Our goal was to create a simple program that let kids can easily use, that encourages parents to invest educational apps, and improves academic studying overall. During the process of developing the software, we ran into a few problems. We wrote the program in C++ hoping to use QtCreator to implement the GUI for kids to use. Unfortunately, the QT library does not support C++ code, so we had to learn QT library language and utilize our C++ knowledge to efficiently creating a working GUI.

Functionality:

As of 12-01-2018, the program can only load four basic math function that most elementary kids use. Those functions are addition, multiplication, division, and subtraction. The program simply will generate two random numbers for the function of choice. Once the arbitrary integers are generated the solution is calculated. The user must then select from four RNG integers while only one is the proper answer to the problem. The program keeps track of the number of correctly chosen answers, however, when an incorrect option is selected the streak is broken and reset to 0.

Case Tools:

- We use GitHub as a version control and a way to keep track of changes for our project.
- #discord for communication.
- Excel for database management.
- Qtcreator-open source library to create GUI
- Trello – apps to keep track of tasks for the project.
- Xcode- for code development

Product testing:

To build software for kids, we took the program to my niece and nephew's elementary school and let the kids try the program. I let ten kids try the program, each with about 10 minutes on any category they chose. At the end of the test, I asked for their opinions and surveyed to get real-time feedback. Seven out of 10 kids they enjoy playing this game 2 with no interests and one dislike.

Future development:

In the future, we hope to expand into more advanced math to help everyone who is struggling with math. We will keep this program as open source and will let the public pitch in and help develop a program to help everyone with math.