

Flash Mental

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1 Purpose

The primary objective of this project is to help students honing their mental math skills in preparation for the flash mental competition. This small application will have similar format to how the competition will be, except the fact that the students or teachers have the control to the setting of the speed of how fast the numbers will show on the screen as well as how large they would like the numbers to be. To me, I think this is really useful as this application can help both beginner level students and advanced level students to train for the competition. Another main purpose of this project is to help me and other teachers to utilize this in classrooms so that it would be easier to use instead of preparing slides that will show the flashing numbers (which requires a great amount of time).

2 How to Use the Program

To use this program, you will need to first go through with installation. This is perhaps the hardest part of the process to get my application unfortunately, because I have no clue how to distribute this app on multi-platform since this is my first project with pygame. There are two ways to install this application, the first is to clone this repository onto your local device, the second is to download the zip file of this repository, or you can download a binary/executable file through the release section of the repository (only applicable for MacOS apple silicon and Windows machine). I will go through step by step for each of the following.

2.1 Cloning the repository

To clone the repository, you must first have git installed through terminal. This process is very simple and can be searched how to do on the web. Once you have git installed, you may type in your terminal:

```
$ git clone https://github.com/ATOMiNATiON/flashMental.git
$
```

Once git has finished, you will find out that you will have all the files that are in my repository. The second step is to now install Python onto your machine, and pip install pygame (Can easily be done and searchable on google). Now the last thing is to go into the *src* folder. The next and final steps are to run the following command in the terminal based on your machine:

if you are running macos:

```
$ python3 flash.py
$
```

if you are running on windows:

```
$ python flash.py
$
```

The game should then start immediately on the screen

2.2 Downloading the zip file

The second option of getting this application is to download the zip file (also install Python onto your machine as well as installing the library pygame). This one is a bit easier to do because you just have to click the green icon on the repository that says *Code*, and select *Download zip*. Once you have that, you can extract the files and open up the src folder in terminal and run the following commands based on your machine:

if you are running macos:

```
$ python3 flash.py
$
```

if you are running on windows:

```
$ python flash.py
$
```

The game should then start immediately on the screen

2.3 Downloading a binary/executable file

This final step is special because you can only use this method if you have a *1. MacOS apple silicon* or *2. Windows machine*. You do not need to install Python or any python libraries (pygame) when using this method and is much faster than all the other methods described above. If you pass the requirements stated in the first sentence, then let's begin. You go to the repository and try to locate a place called *releases*. From there, just find the executable file good for you machine and that's it!

3 Program Design

I will be using the Pygame library to create this flash mental math game.

References