Magic Cube's Algorithms Database	Angelo J. Román de Jesús	29/08/2022

Problem Background

- Cubers often forget some of the algorithms they use to solve their magic cubes.
- Some cubers write down their algorithms on a piece of paper, but they might not have it in hand for when they need it.
- It is possible to write down the algorithms on a smartphone, but the notes get messy as more magic cubes are stored.

Target

Create a platform where users will be able to store all or some of the algorithms they use to solve magic cubes. It won't be focused only on the popular 3x3 magic cube, it'll also allow less known cubes like the ivy cube, square-1 and more. The magic cube's algorithms must be properly organized as it is expected that users store lots of them and then retrieve them without much searching.

Causes

Problem: Cubers struggle looking up algorithms in a piece of a paper or messy notes on their smart devices. **Why?**

- Cubers learn to solve more and more cubes every day, so they need to store some algorithms. **Why?**
- Cubers often forget algorithms and struggle to relearn them. **Why?**
- Relearning happens often as cubers focus on solving new cubes and stop solving some other cubes for some period of time. **Why?**
- It's hard and annoying to practice with every cube every day just to not forget the algorithms. **Why?**
- Cubers lack a platform where all their algorithms can be stored and properly organized for when they need them.

Countermeasures

- Create a platform that stores magic cubes algorithms
- Allow users to select a cube, and add as many algorithms to each step of solving that cube as they want, for example the user might know multiple ways to execute an action on the cube like flipping the corners in the front with corners on the back and the user will be allowed to store as many algorithms as they want for that specific action.
- The user interface will be properly organized and easy to use, in order to avoid clusters of algorithms there will be a list with cubes and when one of the cubes are clicked there will be a list of all the different steps to solving that cube. The user looks for the step they need and clicks it, then there will be a list of all the different algorithms the user has stored for that step with a name beside it.

Check/Evaluate

- Cubers are able to easily store their magic cube's algorithms in the platform without making a cluster.
- Cubers find it easy to retrieve these algorithms whenever they might need them.
- Cubers are less worried about forgetting algorithms and therefore more motived to learn how to solve more cubes because they can easily relearn any algorithm they forget.

Act/Standardize

- Try different ways to make the UI look organized and neat after storing lots of algorithms.
- Find the best way to store all the algorithms while using as least storage as possible.