Title: MEDapp

From: Group 5

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GITHUB: <https://github.com/TheCoderE/MEDappGroup5/blob/main/FINAL%20CODE.py>

**Background:**

In nearly every household there is some form of medical cabinet holding an array of medicine and health-related products. However, these cabinets are often unorganized, filled with expired and duplicated medicines. Often, people lose track of what is in their cabinet and end up purchasing medicine they already have, resulting in wasted income. This project aims to solve these challenges by creating an app-based tool that allows users to digital check whether they already have the medicine, notify them when the medicine expires, and create a data record of their cabinet.

**Concept of the Project Medical Application:**

The concept of the MEDapp is to use python code to create an application that allows the scanning of medicine barcodes and informs the users whether they have the medicine and if the medicine is usable or expired and how to dispose of it. The aim is to create a convenient application for patients using new solutions that allows patients to read a QR Code and find their medications and whether they are expired or eligible for usage. The MEDapp makes the lives of patients easier by providing them a platform where the medicines can be found in a matter of seconds, as a result, time to access is reduced, and fuel consumption is reduced by eliminating unnecessary trips to a medical practice.

**Work organization (how did we organize the work):**

As a team, we broke down the project requirements to its core ideas and principles. From here, we defined the objects and tasks and divided the work evenly between group members to achieve efficiency. The two members were generally assigned to each task, as a means to ensure solutions could be discussed and effectively solved.

**Technical Description:**

Our MEDapp is run from the latest version of Python software using a variety of important modules that assist in the execution of the code. Kivy, an open source library for app development, is used to enable notifications and running of the camera application to scan QR codes. Additionally, the personal online database is stored through a CSV file, as data can be implemented and extracted by the python program. Users can interact with the code to retrieve and import medicine information to their online database. If triggered, the code will launch a notification through Kivy to inform them if the medicine has expired and how to dispose of it. Kivy is also used in collaboration with Zbar, an open source software used to read QR and barcodes, which allows QR codes to be scanned to read the assigned information. MEDapp ability is limited due to modules and software implemented and the lack of complete integration.

**Considerations for Future use:**

In the foreseeable future, the MEDapp application could continue to take a more active role in managing the medical landscape. This means that the MEDapp could be improved by technology that combines data on a patient's medical history, real-time health monitoring and integration to health insurance. Furthermore, decentralized technological improvements could support the app to be integrated to other systems and thereby enhance the technical capabilities of MEDapp and become user-friendly.