**Household Hub project detailed description**

# Quick Overview

This project aims to develop a system for managing household devices. The system will allow users to:

* Register device information (name, category, make, model, purchase date, etc.)
* Store documents related to the device (guaranty documents, receipts, etc.)
* Add notes and other relevant details to the device
* Quickly find a device.
* Manage possible device categories.

This project provides a centralized platform for tracking and managing household devices, making it easier for users to organize their device information.

This project is a web application developed with Python and Flask.

# Definitions

**Flask:** Flask is a lightweight web application framework that can be used to develop web applications in Python. This framework is very small and easy to learn.

**Device:** It could be any device. It could be a TV, a car, a gaming console, a mug, etc. It could be anything that the user may want to keep track of. A device may belong to a category.

**Category:** It is a classification for a device. Categories are fully customized. Some categories include Computers, Phones, Gaming Devices, etc. The user can add/edit/remove categories.

# Installing and running the project

1. This project was developed in Python. To run the project, make sure that Python is installed on the computer. Refer to [Download Python | Python.org](https://www.python.org/downloads/) for the installer download.
2. Currently this project only depends on a Python package named [Flask](https://flask.palletsprojects.com/en/stable/). To install Flask, you can run the command **pip install flask.**
3. To run the project, open a terminal. Point to the HouseholdHub directory. And run the command **python app.py** (see image 1).That command will initialize the Flask app, and it will output to the terminal some URLs that can be used to launch the web application. Pressing Ctrl and clicking the URL will open the browser and launch the website.

A screen shot of a computer code

Description automatically generated

Image 1 Running the project.

# User interface

Launching the website will land on the home page of the Household Hub application. The home page will display a small dashboard with numbers related to the registered devices. For example, in Image 2 below you can see the home page rendering two sections. One section tells how many devices there for each category are. In addition, another section will tell how many devices are there according to their warranty expiration status. Some devices may have their warranty expired, other devices’ warranty may expire within a year, etc. The home page and all other pages will contain 3 menus: Home, Find Devices, and Manage Categories.

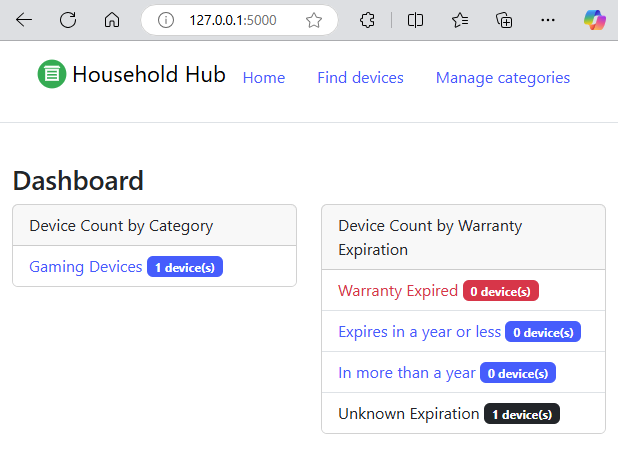


Image 2 Home Page

Clicking on ‘Manage Categories’ will render a page where the user can see all registered device categories. In addition, the user will be able to add categories, delete some of the categories, or edit a category (see image 3). Clicking on the ‘Add Category’ button will render a page where the user can add a new category. At this moment, the only information supported regarding a category is the name (see image 4). Clicking on the edit button next to a category will allow the user to edit the category name. Clicking on the delete button next to a category will delete the category only if the category is not in use by a device.

A screenshot of a device

Description automatically generated

Image Manage Categories

A screenshot of a computer

Description automatically generated

Image Add/Edit Category

Clicking on ‘Find devices’, will render a page where all the devices are listed (see image 5). The Devices page has several sections. The first section is a set of filters where the user can filter devices by name and/or category and/or Warranty expiration status. Setting one of the filters will refresh the device listing section according to the filter set. Under the filters section, you will find the device listing section where all the registered devices will be listed. Each device has the option to edit its information or remove the device. This page also has a button to add a brand-new device.

A screenshot of a computer

Description automatically generated

Image Find Devices

Adding a new device will render the page in image 6. From there, the user can input the device information such as name, category, purchase price, warranty notes, warranty expiration date, and related documents and links.

A screenshot of a computer

Description automatically generated

Image Adding a new device.

After a new device is added, the application will navigate back to render all devices. Displaying the new device added and a confirmation message indicating that a new device was added (see Image 7). Editing an existing device has a similar flow.

A screenshot of a device

Description automatically generated

Image Rendered devices after a new device was added.