“Random Acts of Kindness” Setup

For Kindness Challenges with receipt printer Epson TM-T88V

Overview

A mini PC is inside each printer station. On the computer, a Python program starts with the computer and prints a new receipt every time the “Enter” key is pressed. A Photon 2 microcontroller sends a simulated “Enter” key press when the button is held down for long enough. The Photon 2 also controls the LED strip. The Photon could be swapped out with an arduino pro micro in the future if people are more comfortable with that.

The challenges are .txt files stored in 3 folders: easy, medium, and hard. The folders are stored in a OneDrive folder in “the cloud” so that they are accessible across the PCs. The login info is listed lower down in this document. We should be able to add/delete challenges from the OneDrive and the printers should update automatically.

Parts

- Epson TM-T88V receipt printer
- Mini PC - 3x
- Photon 2 (or Arduino Pro Micro)
- WS2812 (neopixel) “Neon” LED strip
- ~~Mini Stick PC~~ - Decided not to use these.

PC Login Info (same for all mini PCs)

Admin Username:
REDACTED

General Login: Visitors

No password required

Installing Printer Drivers

1. Go to the epson driver page for the TM-T88V
2. Download “Advanced Printer Driver v5.13+” and unzip it.
3. Follow the instructions in the PDF. Start with printer off/unplugged.
4. Turn on the printer and see if it connects?
5. Go to Start>Epson Advanced Printer Driver 5>Epson APD5 Utility for TM-T88V
6. Change any printer settings there/add any logos. Below only needs to be done once on a printer.
    a. Added Explora BW Bar logo (Explora, x studio, brillante)
    b. Changed the print density to 130%
    c. Changed the print speed to Level 8
    d. Pick which logo prints (under “Automatic Paper Cut” settings)
7. Go to printers and open printer properties. Under “General,” go to preferences. Under “Feed and Cut” add 0.5 inch to the end of document.

Printing from Python

- Install Python - download here
- Open “PrintChallenge.py” in a text editor or IDLE editor
- Go to *pathName* and update the path with the real location of your “Challenges” folder.
- Replace all backslashes (\) with double backslashes (\\). (“\u” is an escape character or something, so “\User” makes it mad)
- Make sure there are double backslashes on the end (“...Challenges\\”)
- Basic Printing Example Code (FYI):
    - >>import os
    - >>os.startfile("C:\\Users\\dstromberg\\Downloads\\TestPrint.txt", "print")
- Set window focus in python
    - Open Windows Command line and type “pip install pygetwindow”

Getting Python code to run on startup

(taken from here - a couple answers down):

- Type **Win+R**
- Type **shell:startup**
- Copy your python file ("myFile.py") into the startup directory
- Make sure to copy the correct file for the PC (easy, medium, or difficult challenges)
- It should run next time you startup

Getting windows computer to login automatically w/o password

(link here)

- Go to **Start>Run**
- Type **Regedit.exe**, press enter
- Go to **HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\WindowsNT\CurrentVersion\Winlogon** subkey in the registry
- Go to **Edit>New>String Value**, type in **AutoAdminLogon** (this may already exist)
- In the **Edit String** dialog box, type **1** and hit **OK**
- Double click **DefaultUserName** (or make a new **String Value**), then type in the username to login with, and press OK. For our PCs, "Visitors" is the login we will use.

- ***** Next 2 only necessary if you require a password to login. *****
    - Create a new **String Value** (like above) with the name **DefaultPassword** and press OK.
    - Double click **DefaultPassword**, in **Edit String**, type in the password. Press OK.

- Close Registry Editor and restart the computer. It should auto login now.
- **Note:** I created a non-admin account on the PCs that do not require a password to login. Hopefully this maintains some level of security.

Onedrive setup on PCs

- The PCs are all signed in to the same microsoft account so that they can pull from the same set of challenges and we can update them easily from another computer.
- Onedrive login:
    - **REDACTED**

Remote access to PCs

- I installed Rust Desk on the PCs so that we can access them remotely. Here's the login info:
- Computer 1: "EZRandActsKind"
    - **REDACTED**
- Computer 2: "MedRndActsKind"
    - **REDACTED**
- Computer 3: "HardRndActs3"
    - **REDACTED**

Other

- Turn off all notifications - if another window gets the focus, enter won't work. BUT, the code will refresh the window every 10 sec, so it probably isn't a problem.
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