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import tkinter as tk
from tkinter import messagebox, filedialog
import sqlite3
import grcode
import barcode
from barcode.writer import ImageWriter
from PIL import Image, ImageDraw, ImageFont
import os
# Database setup
conn = sqlite3.connect("inventory.db")
cursor = conn.cursor()
cursor.execute("""
CREATE TABLE IF NOT EXISTS products (
  id INTEGER PRIMARY KEY AUTOINCREMENT,
  name TEXT NOT NULL,
  price REAL NOT NULL.
  code TEXT NOT NULL UNIQUE
""")
conn.commit()
# Generate barcode image
def generate barcode(code, path):
  ean = barcode.get('code128', code, writer=ImageWriter())
  ean.save(path)
# Generate QR code image
def generate_qrcode(data, path):
  img = grcode.make(data)
  img.save(path)
# Export label as image
def export label(name, price, code):
  barcode_path = "barcode.png"
  grcode path = "grcode.png"
  generate_barcode(code, "barcode")
  generate grcode(f"{name} - ${price}", "grcode.png")
  # Create label canvas
  label = Image.new('RGB', (400, 200), 'white')
  draw = ImageDraw.Draw(label)
  font = ImageFont.load default()
  draw.text((10, 10), f"Name: {name}", fill='black', font=font)
  draw.text((10, 30), f"Price: ${price}", fill='black', font=font)
  draw.text((10, 50), f"Code: {code}", fill='black', font=font)
  # Paste barcode and QR code
  bc_img = Image.open(barcode_path).resize((180, 60))
  gr img = Image.open(grcode path).resize((100, 100))
  label.paste(bc img, (10, 80))
  label.paste(qr img, (250, 50))
  # Save final label
   output_path = filedialog.asksaveasfilename(defaultextension=".png", filetypes=[("PNG
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files", "*.png")])
  if output path:
    label.save(output_path)
    messagebox.showinfo("Success", f"Label saved to {output path}")
# Save product data
def save product():
  name = name_var.get()
  price = price_var.get()
  code = code var.get()
  if not name or not price or not code:
    messagebox.showerror("Error", "All fields are required.")
    return
  try:
       cursor.execute("INSERT INTO products (name, price, code) VALUES (?, ?, ?)",
(name, float(price), code))
    conn.commit()
    export_label(name, float(price), code)
     messagebox.showinfo("Saved", "Product saved and label exported.")
  except sqlite3.IntegrityError:
     messagebox.showerror("Error", "Code must be unique.")
  except ValueError:
     messagebox.showerror("Error", "Invalid price format.")
# GUI setup
root = tk.Tk()
root.title("Inventory Label Tool")
tk.Label(root, text="Product Name").grid(row=0, column=0, padx=10, pady=5)
tk.Label(root, text="Price").grid(row=1, column=0, padx=10, pady=5)
tk.Label(root, text="Code").grid(row=2, column=0, padx=10, pady=5)
name_var = tk.StringVar()
price var = tk.StringVar()
code var = tk.StringVar()
tk.Entry(root, textvariable=name_var).grid(row=0, column=1, padx=10, pady=5)
tk.Entry(root, textvariable=price var).grid(row=1, column=1, padx=10, pady=5)
tk.Entry(root, textvariable=code_var).grid(row=2, column=1, padx=10, pady=5)
tk.Button(root, text="Save and Export Label", command=save product).grid(row=3,
columnspan=2, pady=15)
root.mainloop()
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