import tkinter as tk

from tkinter import messagebox

import random

import string

def generate\_password():

length = length\_var.get()

if not str(length).isdigit() or int(length) < 4:

messagebox.showerror("Invalid Input", "Please enter a valid length (4 or more).")

return

length = int(length)

characters = string.ascii\_letters + string.digits + string.punctuation

password = ''.join(random.choice(characters) for \_ in range(length))

password\_var.set(password)

def copy\_password():

root.clipboard\_clear()

root.clipboard\_append(password\_var.get())

messagebox.showinfo("Copied", "Password copied to clipboard!")

root = tk.Tk()

root.title("Password Generator")

root.geometry("400x200")

root.resizable(False, False)

length\_var = tk.IntVar(value=12)

password\_var = tk.StringVar()

tk.Label(root, text="Password Length:", font=("Arial", 12)).pack(pady=5)

tk.Entry(root, textvariable=length\_var, font=("Arial", 12), width=10, justify='center').pack()

tk.Button(root, text="Generate Password", font=("Arial", 12), command=generate\_password).pack(pady=10)

tk.Entry(root, textvariable=password\_var, font=("Arial", 12), width=30, justify='center').pack(pady=5)

tk.Button(root, text="Copy to Clipboard", font=("Arial", 12), command=copy\_password).pack(pady=5)

root.mainloop()