Password Generator

In [3]:
```python
from tkinter import *
import random
import string

# Initialize the main application window
root = Tk()
root.title("PYTHON PROJECT - PASSWORD GENERATOR")
root.geometry("400x300")
root.resizable(0, 0)
root.config(bg="green")

# Heading label
Label(root, text='PASSWORD GENERATOR', font='arial 15 bold', bg="gray").pack(pady=1

# Bottom label
Label(root, text="PythonProjects", font='arial 10 bold', bg="gray").pack(side=BOTTO

# Password length label and input
Label(root, text="PASSWORD LENGTH", font='arial 10 bold', bg="black", fg="white").p
pass_len = IntVar(value=12)  # Default length
Spinbox(root, from_=4, to_=32, textvariable=pass_len, width=15).pack()

# StringVar to hold the password
pass_str = StringVar()

# Function to generate password
def Generator():
    password = []
    length = pass_len.get()

    if length >= 4:
        # Include at least one of each character type
        password.append(random.choice(string.ascii_uppercase))
        password.append(random.choice(string.ascii_lowercase))
        password.append(random.choice(string.digits))
        password.append(random.choice(string.punctuation))

        # Fill the rest with random characters
        for _ in range(length - 4):
            password.append(random.choice(string.ascii_letters + string.digits + st

        random.shuffle(password)  # Shuffle to remove predictability
    else:
        # For lengths less than 4
        for _ in range(length):
            password.append(random.choice(string.ascii_letters + string.digits + st

    pass_str.set("".join(password))  # Set password in text field

# Function to copy password to clipboard
```

```python
def Copy_password():
    root.clipboard_clear()
    root.clipboard_append(pass_str.get())
    root.update()  # Keeps clipboard data after app closes

# Button to generate password
Button(root, text="Generate Password", command=Generator).pack(pady=5)

# Entry field to show the generated password
Entry(root, textvariable=pass_str, width=35, font=("consolas", 10)).pack(pady=5)

# Button to copy password to clipboard
Button(root, text="Copy to Clipboard", command=Copy_password).pack(pady=5)

# Run the Tkinter event loop
root.mainloop()
```

```python
def Copy_password():
    root.clipboard_clear()
    root.clipboard_append(pass_str.get())
```