ASSIGNMENT NO:2

In [ ]:
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In [1]:
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pip install captcha pillow
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Requirement already satisfied: captcha in c:\users\shrey\anaconda3\lib\site-packages
(0.7.1)
Requirement already satisfied: pillow in c:\users\shrey\anaconda3\lib\site-packages
(10.4.0)
Note: you may need to restart the kernel to use updated packages.
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In [2]:
```
from PIL import Image, ImageDraw, ImageFont
from IPython.display import display
import random
import string

# Function to generate random captcha text
def generate_captcha_text(length=6):
    chars = string.ascii_letters + string.digits
    return ''.join(random.choices(chars, k=length))

# Function to create and display CAPTCHA with color logic
def create_colored_captcha(captcha_text):
    width = 300
    height = 100
    font_size = 42
    spacing = 10

    # Load a truetype font (ensure it's available in your system or project)
    try:
        font = ImageFont.truetype("arial.ttf", font_size)
    except IOError:
        font = ImageFont.load_default()

    # Create white image background
    image = Image.new('RGB', (width, height), (255, 255, 255))
    draw = ImageDraw.Draw(image)

    x = spacing
    for char in captcha_text:
        if char.isupper():
            color = (0, 0, 255)     # Blue for uppercase
        elif char.islower():
            color = (0, 128, 0)     # Green for lowercase
        elif char.isdigit():
            color = (255, 0, 0)     # Red for digits
        else:
            color = (0, 0, 0)       # Fallback to black

        # Random y position for distortion
        y = random.randint(20, 40)
        draw.text((x, y), char, font=font, fill=color)
```

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        x += font_size + spacing

    return image

# Function to show CAPTCHA and verify user input
def verify_captcha():
    captcha_text = generate_captcha_text()
    captcha_img = create_colored_captcha(captcha_text)

    print("🔒 CAPTCHA (enter below):")
    display(captcha_img)

    user_input = input("Enter the CAPTCHA text: ").strip()

    if user_input == captcha_text:
        print("✅ CAPTCHA verification successful!")
    else:
        print("❌ CAPTCHA verification failed. Correct text was:", captcha_text)

# Run
verify_captcha()
```

```
🔒 CAPTCHA (enter below):
```


```
✅ CAPTCHA verification successful!
```

In [ ]: