CIS 515: COMPUTER GRAPHICS
LAB – 8
UNIVERSITY OF MICHIGAN – DEARBORN
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1) Task 1 Text Watermark

```
from PIL import Image, ImageDraw, ImageFont

def add_watermark(input_image_path, output_image_path, watermark_text):
    original_image = Image.open(input_image_path)

    draw = ImageDraw.Draw(original_image)

    font = ImageFont.truetype("arial.ttf", 55)

    bbox = draw.textbbox((0, 0), watermark_text, font = font)
    text_width = bbox[2] - bbox[0]
    x = original_image.width - text_width - 10
    y = 10

    watermark_color = (255, 255, 255)

    draw.text((x, y), watermark_text, font = font, fill = watermark_color)

    original_image.save(output_image_path)
    original_image.show()

if __name__ == "__main__":
    input_image_path = "./fall_michigan.png"
    output_image_path = "output_image_with_watermark.png"
    watermark_text = "Greeting from Michigan!"

    add_watermark(input_image_path, output_image_path, watermark_text)
```

2) Image Watermark

```
from PIL import Image


def add_watermark(input_image_path, watermark_image_path, output_image_path,
watermark_blend_weight, position=(0, 0)):
    original_image = Image.open(input_image_path).convert('RGBA')

    watermark_image = Image.open(watermark_image_path).convert('RGBA')

    if watermark_image.mode != 'RGBA':
        watermark_image = watermark_image.convert('RGBA')

    watermark = Image.new('RGBA', original_image.size, (255, 255, 255, 0))

    watermark.paste(watermark_image, position, mask=watermark_image)

    watermarked_image = Image.blend(original_image, watermark, alpha=watermark_blend_weight)
   # watermarked_image = Image.alpha_composite(original_image.convert('RGBA'), watermark)
```

```
    watermarked_image = watermarked_image.convert("RGB")
    watermarked_image.save(output_image_path)
    watermarked_image.show()

if __name__ == "__main__":
    input_image_path = "fall_michigan.png"
    watermark_image_path = "UMD.png"
    output_image_path = "output_image_with_blend_watermark.png"

   watermark_blend_weight = 0.15

    watermark_position = (10, 10)

    add_watermark(input_image_path, watermark_image_path, output_image_path,
watermark_blend_weight, watermark_position)
```