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Assignment-2 (CS-9124)

1. Create a new document in a word processing application. Next, type in a line of text and copy the line five times. Now change each line into a different font. Recopy the entire set of lines three times. Finally, change the size of the first set to 10-point text, the second set to 18-point text, and the third set to 36-point text.

▪ Which of the smallest lines of text is most readable? ▪ Which line of text stands out the most?

Hello World

Hello World (most readable)

Hello World

Hello World

Hello World

Hello World

Hello World

Hello World

Hello World

Hello World

Hello World

Hello World (most standing out)

Hello World

Hello World

2. Create a 24-bit PNG file programmatically: Write a simple program to generate a small BMP file (e.g., a 10x10 grid with alternating red and blue pixels). Save the file and verify it by opening it in an image viewer.

```
from PIL import Image
def create_bmp():
    # Image dimensions
    width, height = 10, 10
    print(f"Image dimensions set to {width}x{height}.")

    # Create a new image with mode 'RGB' (24-bit)
    image = Image.new("RGB", (width, height))
    print("New image created with mode 'RGB'.")

    # Generate pixels (alternating red and blue)
    pixels = image.load()
    print("Pixel access object created.")

    for y in range(height):
        for x in range(width):
            if (x + y) % 2 == 0:
                pixels[x, y] = (255, 0, 0)  # Red
                print(f"Pixel at ({x}, {y}) set to Red.")
            else:
                pixels[x, y] = (0, 0, 255)  # Blue
                print(f"Pixel at ({x}, {y}) set to Blue.")
    image.save("alternating_red_blue.bmp", "BMP")
    print("BMP file saved successfully: alternating_red_blue.bmp")
create_bmp()
```

README.md bitmap.py alternating_red_blue.bmp

```python
from PIL import Image

def create_bmp():  1 usage
    # Image dimensions
    width, height = 10, 10

    # Create a new image with mode 'RGB' (24-bit)
    image = Image.new( mode: "RGB",  size: (width, height))

    # Generate pixels (alternating red and blue)
    pixels = image.load()
    for y in range(height):
        for x in range(width):
            if (x + y) % 2 == 0:
                pixels[x, y] = (255, 0, 0)  # Red
            else:
                pixels[x, y] = (0, 0, 255)  # Blue

    # Save the image as a BMP file
    image.save( fp: "alternating_red_blue.bmp",  format: "BMP")

    print("BMP file created successfully: alternating_red_blue.bmp")

# Call the function
create_bmp()
```

README.md bitmap.py alternating_red_blue.bmp

1:1 10x10 BMP (24-bit color) 374 B