# INSTITUTO POLITÉCNICO NACIONAL

## Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas

# Multimedia

# PRACTICA 1:VOLCAN CON 16 COLORES

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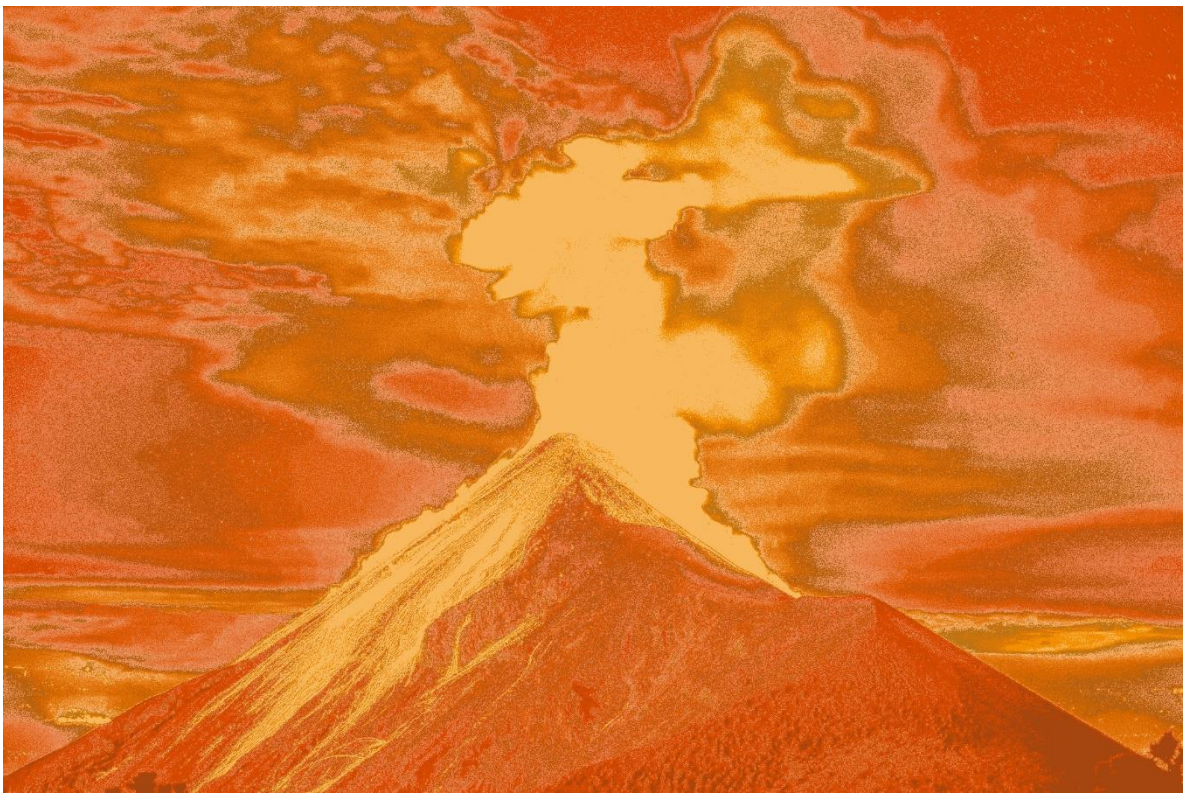
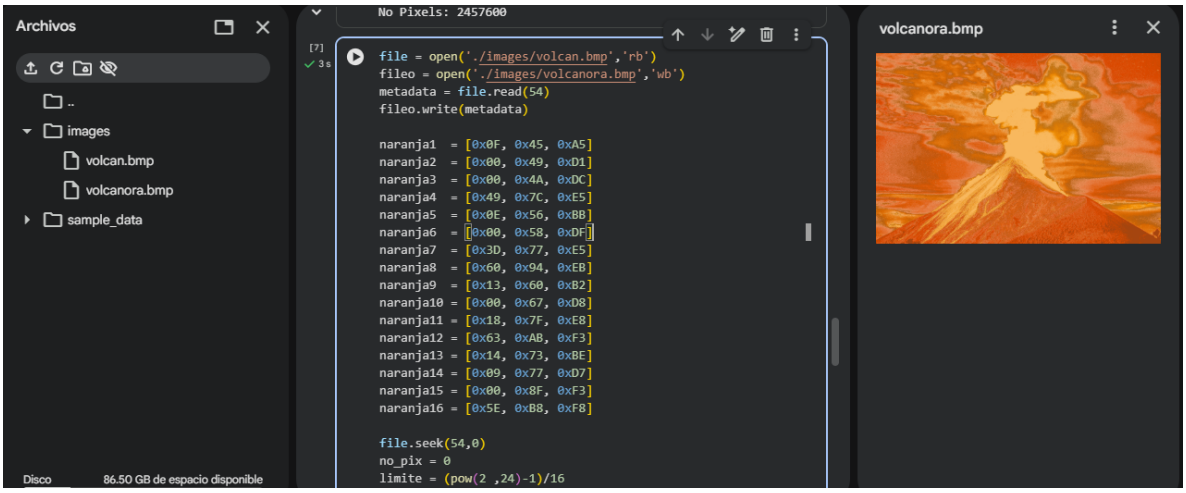
**CODIGO GENERADO:**

```
file = open('./images/volcan.bmp','rb')
fileo = open('./images/volcanora.bmp','wb')
metadata = file.read(54)
fileo.write(metadata)

naranja1  = [0x0F, 0x45, 0xA5]
naranja2  = [0x00, 0x49, 0xD1]
naranja3  = [0x00, 0x4A, 0xDC]
naranja4  = [0x49, 0x7C, 0xE5]
naranja5  = [0x0E, 0x56, 0xBB]
naranja6  = [0x00, 0x58, 0xDF]
naranja7  = [0x3D, 0x77, 0xE5]
naranja8  = [0x60, 0x94, 0xEB]
naranja9  = [0x13, 0x60, 0xB2]
naranja10 = [0x00, 0x67, 0xD8]
naranja11 = [0x18, 0x7F, 0xE8]
naranja12 = [0x63, 0xAB, 0xF3]
naranja13 = [0x14, 0x73, 0xBE]
naranja14 = [0x09, 0x77, 0xD7]
naranja15 = [0x00, 0x8F, 0xF3]
naranja16 = [0x5E, 0xB8, 0xF8]

file.seek(54,0)
no_pix = 0
limite = (pow(2 ,24)-1)/16
while(True):
    pixel_data = file.read(3)
    if(len(pixel_data) > 0):
        valor_int = int.from_bytes(pixel_data, byteorder='little')

        if valor_int < limite:
            color_elegido = naranja1
        elif valor_int <limite* 2:
            color_elegido = naranja2
        elif valor_int <limite* 3:
            color_elegido = naranja3
        elif valor_int < limite* 4:
            color_elegido = naranja4
        elif valor_int < limite* 5:
            color_elegido = naranja5
        elif valor_int < limite * 6:
            color_elegido = naranja6
        elif valor_int < limite * 7:
```

```
            color_elegido = naranja7
        elif valor_int < limite * 8:
            color_elegido = naranja8
        elif valor_int < limite * 9:
            color_elegido = naranja9
        elif valor_int < limite* 10:
            color_elegido = naranja10
        elif valor_int < limite* 11:
            color_elegido = naranja11
        elif valor_int < limite * 12:
            color_elegido = naranja12
        elif valor_int < limite * 13:
            color_elegido = naranja13
        elif valor_int < limite* 14:
            color_elegido = naranja14
        elif valor_int < limite* 15:
            color_elegido = naranja15
        else:
            color_elegido = naranja16
        fileo.write(bytes(color_elegido))
        no_pix += 1
    else:
        break

print('No Pixels: '+str(no_pix))
file.close()
fileo.close()
```

**EVIDENCIA:**




Archivos
..
images
volcan.bmp
volcanora.bmp
sample_data
Disco
86.50 GB de espacio disponible
No Pixels: 2457600
[7]
3s
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volcanora.bmp