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1: #include <SFML/System.hpp>
2: #include <SFML/Window.hpp>
3: #include <SFML/Graphics.hpp>
4: #include <iostream>
5: #include <string>
6: #include <algorithm>
7: #include "LFSR.hpp"
8:
9: sf::Image transform(sf::Image picture, LFSR lfsr)
10: {
11:     sf::Vector2u size = picture.getSize();
12:     sf::Color p2;
13:     for (size_t x = 0; x < size.x; x++) {
14:         for (size_t y = 0; y < size.y; y++) {
15:             p2 = picture.getPixel(x, y);
16:             p2.r = p2.r ^ lfsr.generate(8);
17:             p2.g = p2.g ^ lfsr.generate(8);
18:             p2.b = p2.b ^ lfsr.generate(8);
19:             picture.setPixel(x, y, p2);
20:         }
21:     }
22:     return picture;
23: }
24:
25: int main(int argc, char *argv[])
26: {
27:     std::string fi, out;
28:     if (argc < 3) {
29:         std::cout << "Usage: " << argv[0] << " inputfile LFSR bit" << std::endl;
30:         exit(0);
31:     } else {
32:         fi = argv[1];
33:         out = argv[2];
34:     }
35:     sf::Image image;
36:     if (!image.loadFromFile(fi))
37:         return -1;
38:     sf::Image imageOut;
39:     if (!imageOut.loadFromFile(fi))
40:         return -1;
41:     LFSR lfsr(argv[3], atoi(argv[4]));
42:     imageOut = transform(image, lfsr);
43:     sf::Vector2u size = image.getSize();
44:     sf::RenderWindow window(sf::VideoMode(size.x * 2, size.y), "Meow");
45:     if (!imageOut.saveToFile(fi))
46:         return -1;
47:     sf::Texture texture;
48:     texture.loadFromImage(image);
49:     sf::Sprite sprite;
50:     sprite.setTexture(texture);
51:     sf::Texture textureOut;
52:     textureOut.loadFromImage(imageOut);
53:     sf::Sprite spriteOut;
54:     spriteOut.setTexture(textureOut);
55:     spriteOut.setPosition(size.x, 0);
56:     while (window.isOpen()) {
57:         sf::Event event;
58:         while (window.pollEvent(event)) {
59:             if (event.type == sf::Event::Closed)
60:                 window.close();
61:         }
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62:     window.clear(sf::Color::White);
63:     window.draw(sprite);
64:     window.draw(spriteOut);
65:     window.display();
66: }
67:
68:
69:
70:     if (!imageOut.saveToFile(out))
71:         return -1;
72:     return 0;
73: }
```