**Traffic lights Project**

**Code:**

#include <SFML/Graphics.hpp>

#include <iostream>

using namespace sf;

const int RED = 0;

const int YELLOW = 1;

const int GREEN = 2;

int main()

{

RenderWindow window(VideoMode(300, 600), "Traffic Signal");

CircleShape redLight(50.f);

redLight.setFillColor(Color::Red);

redLight.setPosition(100.f, 50.f);

CircleShape yellowLight(50.f);

yellowLight.setFillColor(Color(128, 128, 0)); // Dark yellow color

yellowLight.setPosition(100.f, 250.f);

CircleShape greenLight(50.f);

greenLight.setFillColor(Color::Green);

greenLight.setPosition(100.f, 450.f);

int currentState = RED;

Clock clock;

Time elapsed;

while (window.isOpen())

{

Event event;

while (window.pollEvent(event))

{

if (event.type == Event::Closed)

window.close();

}

elapsed = clock.getElapsedTime();

if (elapsed.asSeconds() > 5)

{

clock.restart();

if (currentState == RED)

currentState = YELLOW;

else if (currentState == YELLOW)

currentState = GREEN;

else if (currentState == GREEN)

currentState = RED;

}

// Set lights based on current state

if (currentState == RED)

{

redLight.setFillColor(Color::Red);

yellowLight.setFillColor(Color(128, 128, 0));

greenLight.setFillColor(Color(0, 128, 0));

}

else if (currentState == YELLOW)

{

redLight.setFillColor(Color(128, 0, 0));

yellowLight.setFillColor(Color::Yellow);

greenLight.setFillColor(Color(0, 128, 0));

}

else if (currentState == GREEN)

{

redLight.setFillColor(Color(128, 0, 0));

yellowLight.setFillColor(Color(128, 128, 0));

greenLight.setFillColor(Color::Green);

}

window.clear(Color::Black);

window.draw(redLight);

window.draw(yellowLight);

window.draw(greenLight);

window.display();

}

return 0;

}