CPIT 210 Project

Done by:

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Introduction

For the CPIT-210 project we must create a logic gate sequential circuit. We will create a traffic light system using logic gates and D flipflop.

Objectives

We want to create a fully functioning traffic light system using gates and flip flops only, the traffic light has to work based on a clock and switch between “Red” for stop, “Yellow” for prepare for red light, and “Green” for allowed to go.

Components used:

Clock

D Flipflops

And Gate

LED lights

How these components work

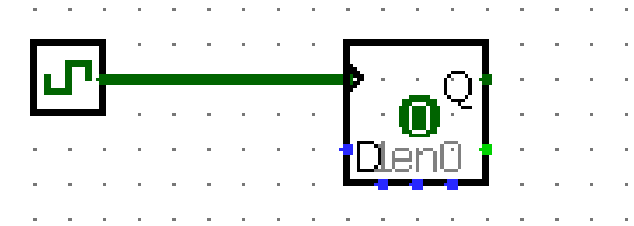
In a traffic light control system, a D flip-flop is often used as part of the logic to control the state transitions of the traffic light. D flip-flops are digital devices that store a single bit of data. They are commonly used in sequential logic circuits for their ability to store and transfer binary information.

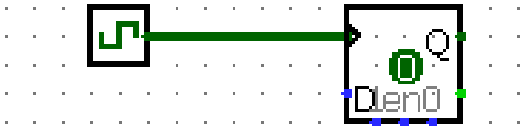
Clocks are used to time the traffic light and automatically change it, its usually used for systems such as alarms and timed activities.

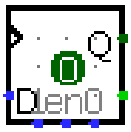
And gate is a simple gate that gives you an electric charge when both inputs are true/charged.

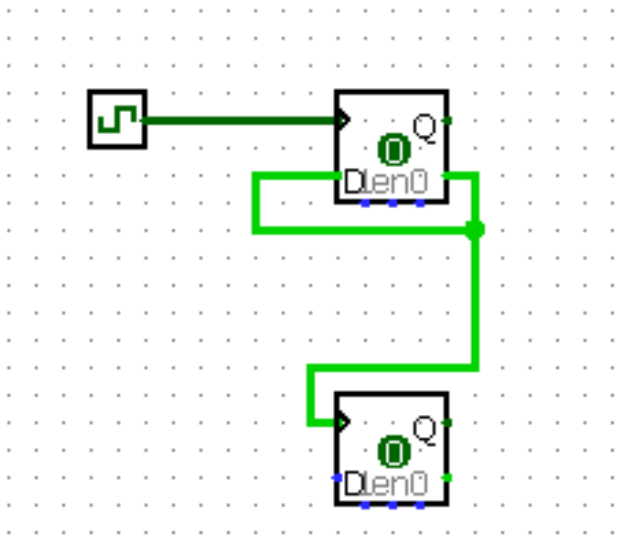
LED lights are used to represent the traffic lights and which light is on.

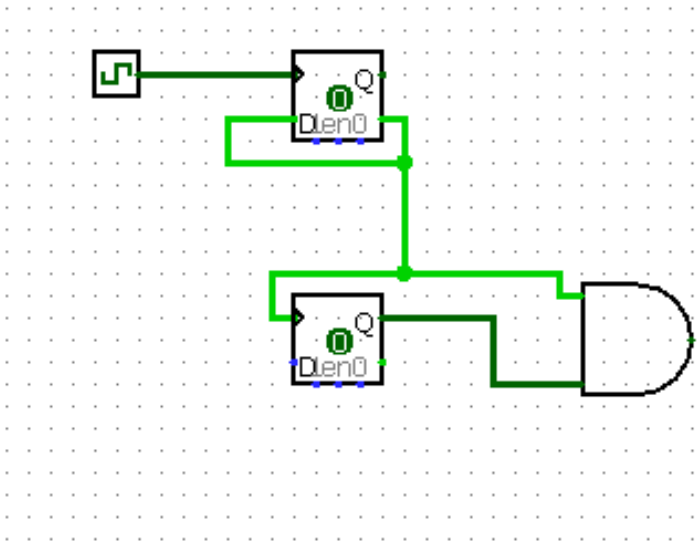
Step by step build of circuit







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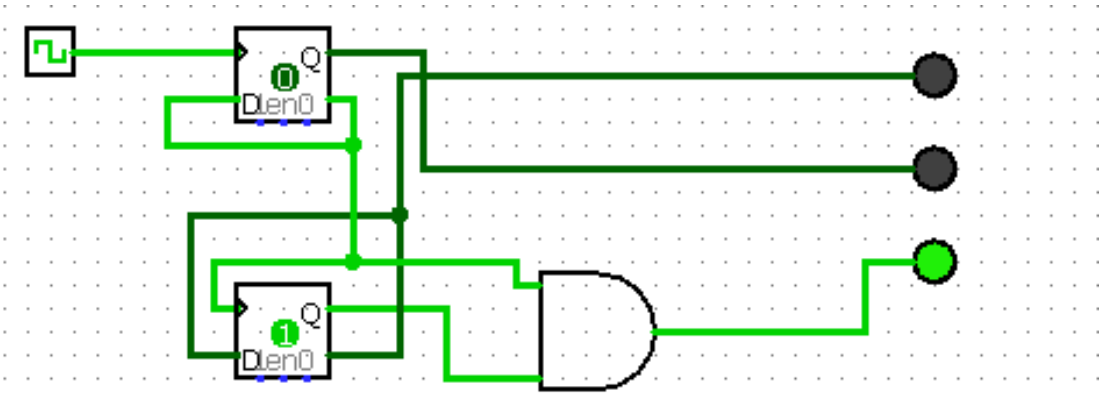
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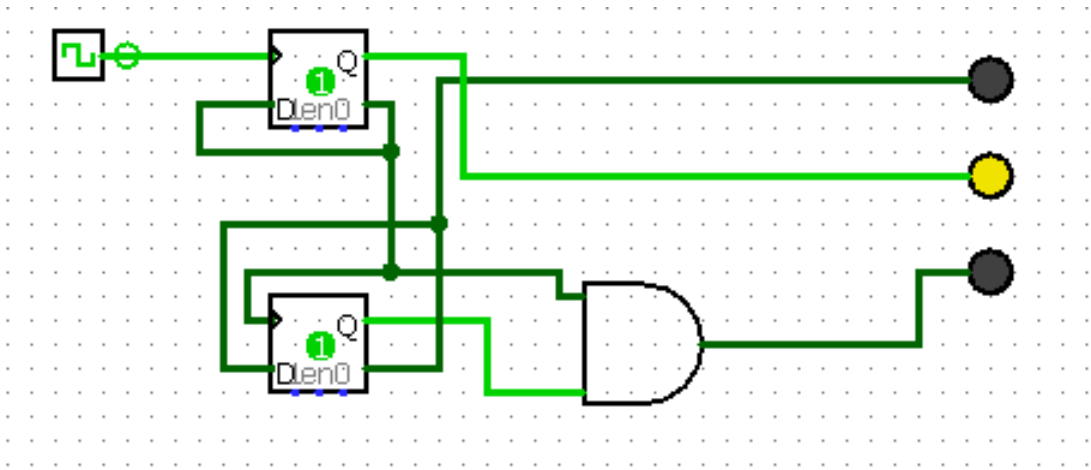
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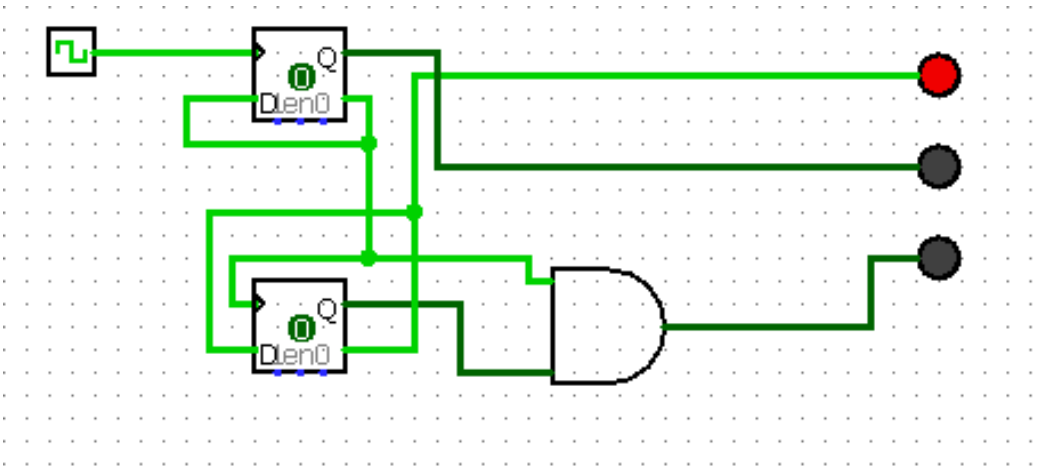

Work done by

Ahmad 33% (Report and helped with gates)

Sultan 33% (Gates and helped with reports)

Meshal 34% (Idea and leader, helped with report and gates)