

PREMIER UNIVERSITY CHITTAGONG



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Course Code : **EEE 314**
Course Title : **Control System Laboratory**
Report No : **02**
Name of the Report : **To Observe AND , OR , Not gate
logic operation using PLC**
Date of Performance : **21/10/2019**
Date of Submission : **05/10/2019**

REMARKS

SUBMITTED BY
Student ID : 1402710200851
Department : CSE
Year : 2019
Semester : 7th
Group : C7A1

Ojective : To Observe AND , OR , Not gate logic operation using PLC

Instrument : PLC Software .

CPU 1212C DC/DC/DC .

Siemens S7-1200 PLC CPU .

Circuit Board .

Ladder Diagram :

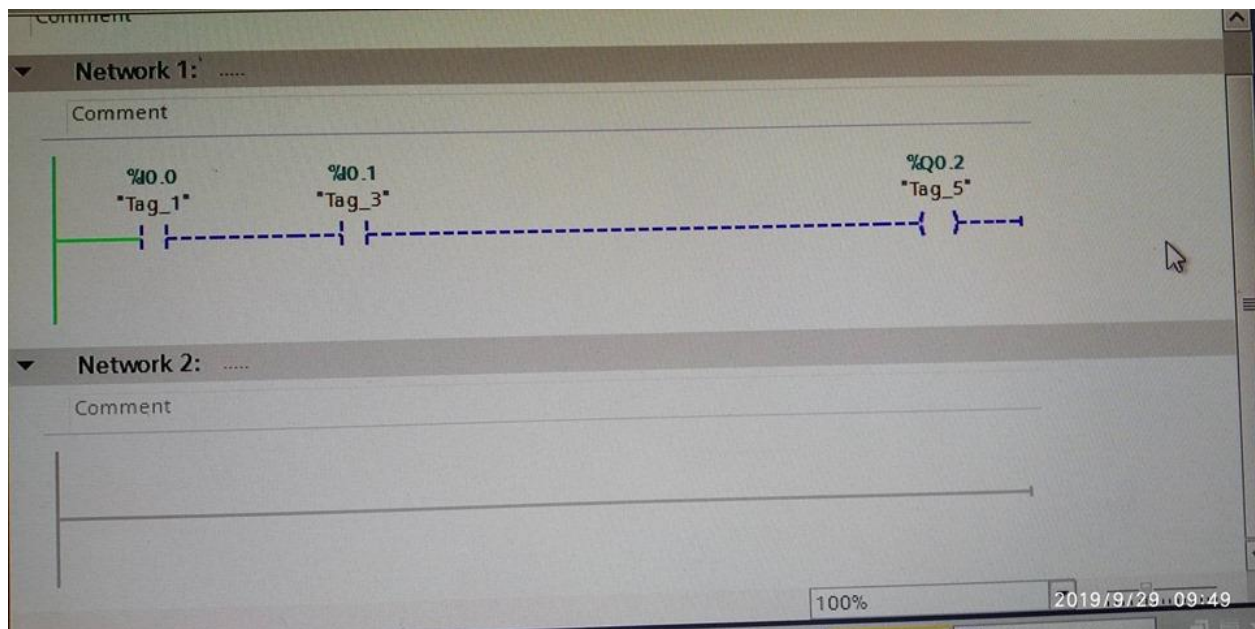


Fig 1 : Ladder Diagram(AND gate) .



Fig 1.1 : AND gate

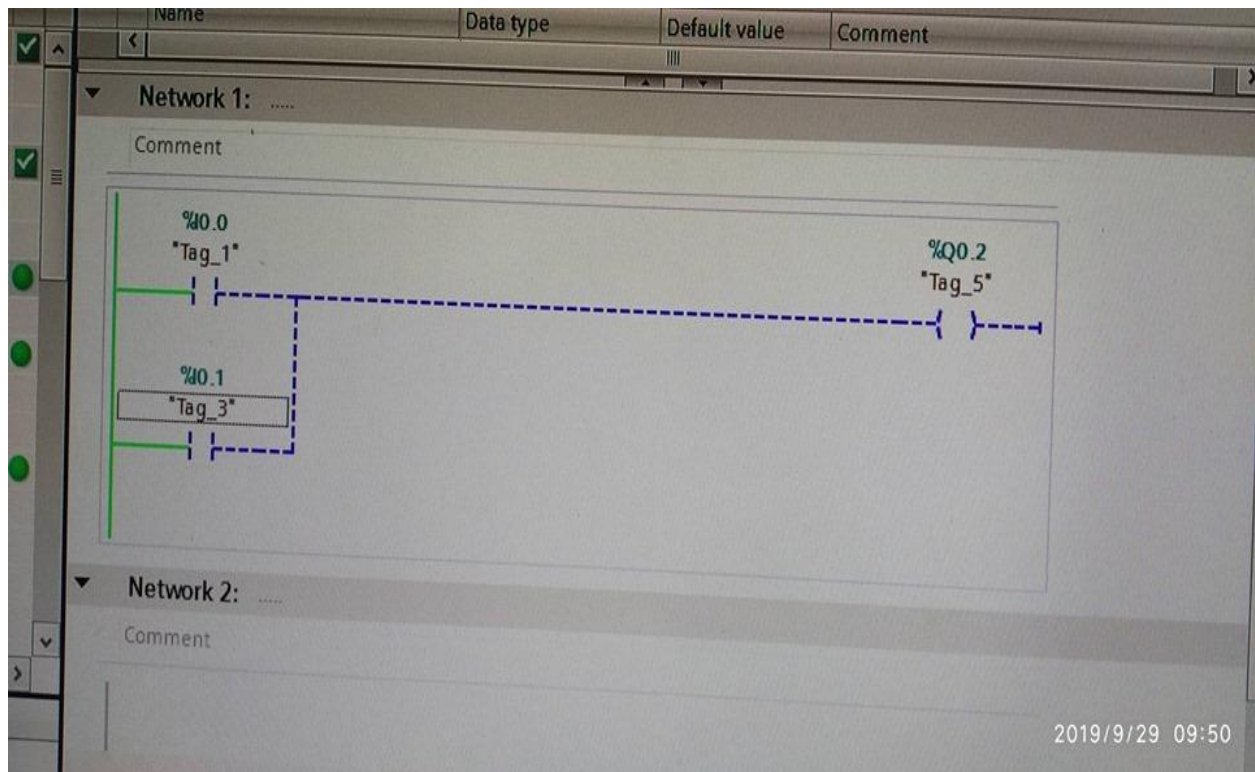


Fig 2 : Ladder Diagram(XOR gate) .

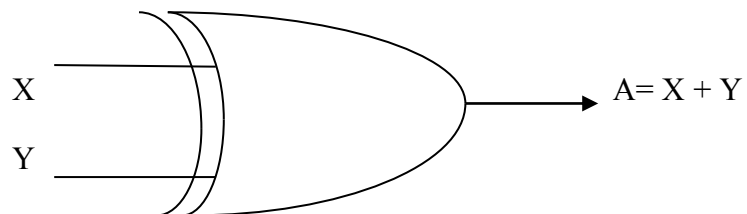


Fig 2.1 : XOR gate

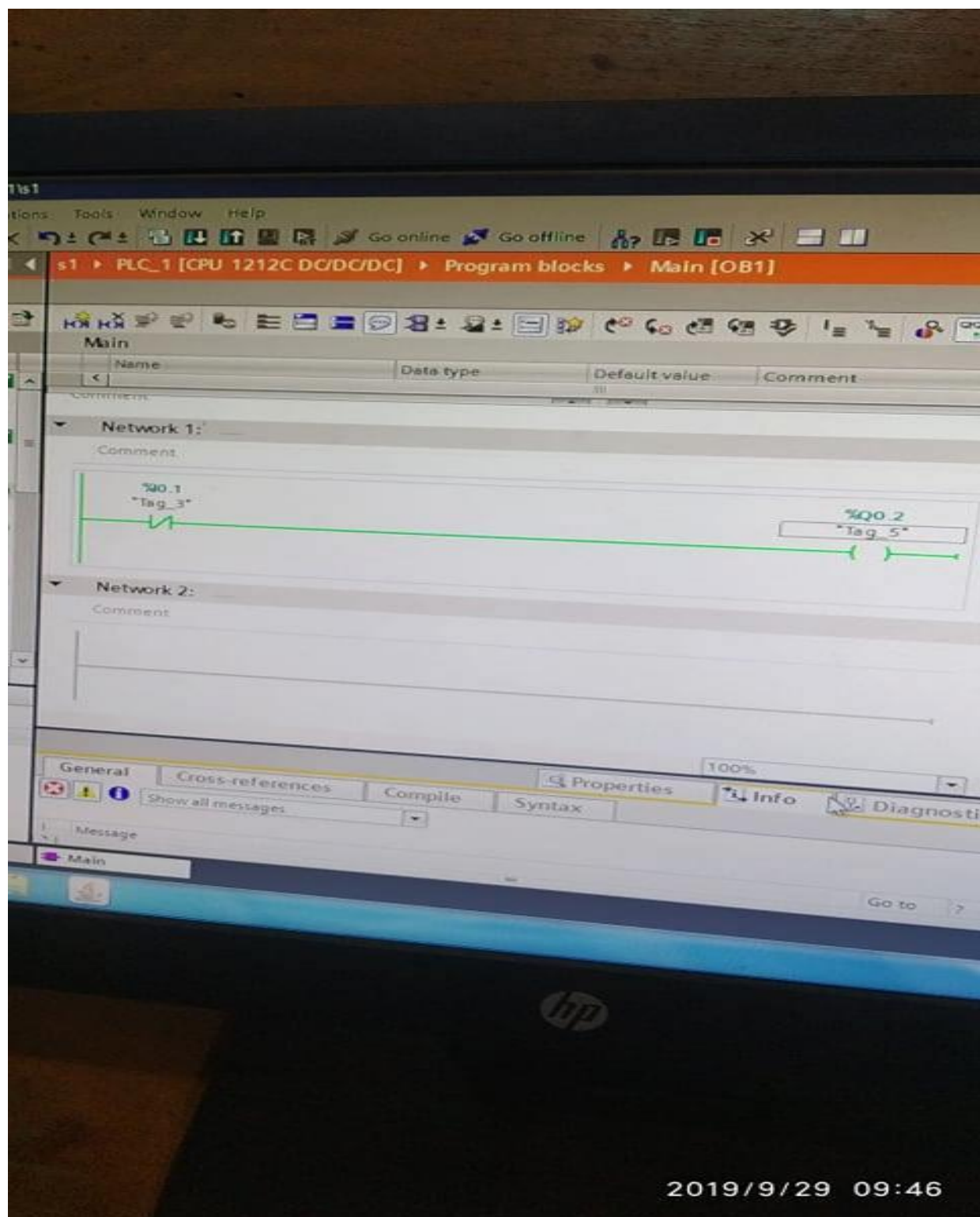


Fig 3 : Ladder Diagram(NOT gate) .

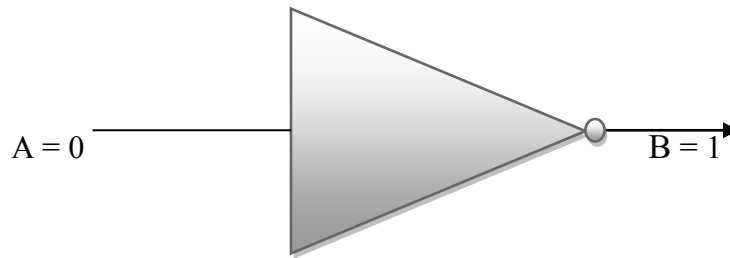


Fig 3.1 : NOT gate.

Discussion : Before the advent of solid-state logic circuits, logical control systems were designed and exclusively around electromechanical relays. Relays are far from obsolete in modern design, but have been replaced in many of their former roles as logic-level control devices, relegated most often to those applications demanding high current and or high voltage switching.

Systems and processes requiring on or off control abound in modern commerce and industry, but such control systems are rarely built from either electromechanical relays or discrete logic gates. Instead, digital computers fill the need, which may be programmed to do a variety of logical functions.