

Experiment No.7

Date:09/09/2021

Name: O G RAGAVI

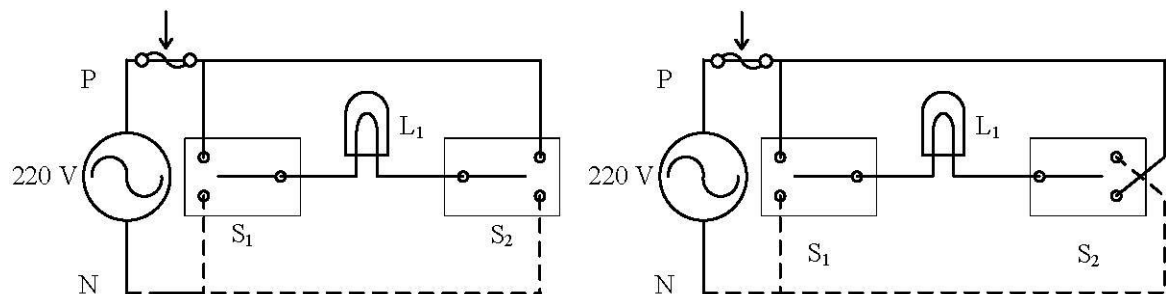
Reg No: 20BCE1988

Staircase Wiring Circuits

Objectives:

To make a staircase wiring in Simulation and verify by doing experiment.

Circuit



Stair Case Wiring Circuit

Theory of operation:

Staircase wiring or multiway switching or two-way light switch wiring is a commonly used connection to control a load from two different positions. That is from above or below the staircase, from by the side of the bed or door, indoor or outdoor. Staircase wiring helps to operate a lamp from two frequently using position. And also, to, off the load after use if the load is a lamp or something that is used for only passage from one position to another.

Staircase Wiring Observation:

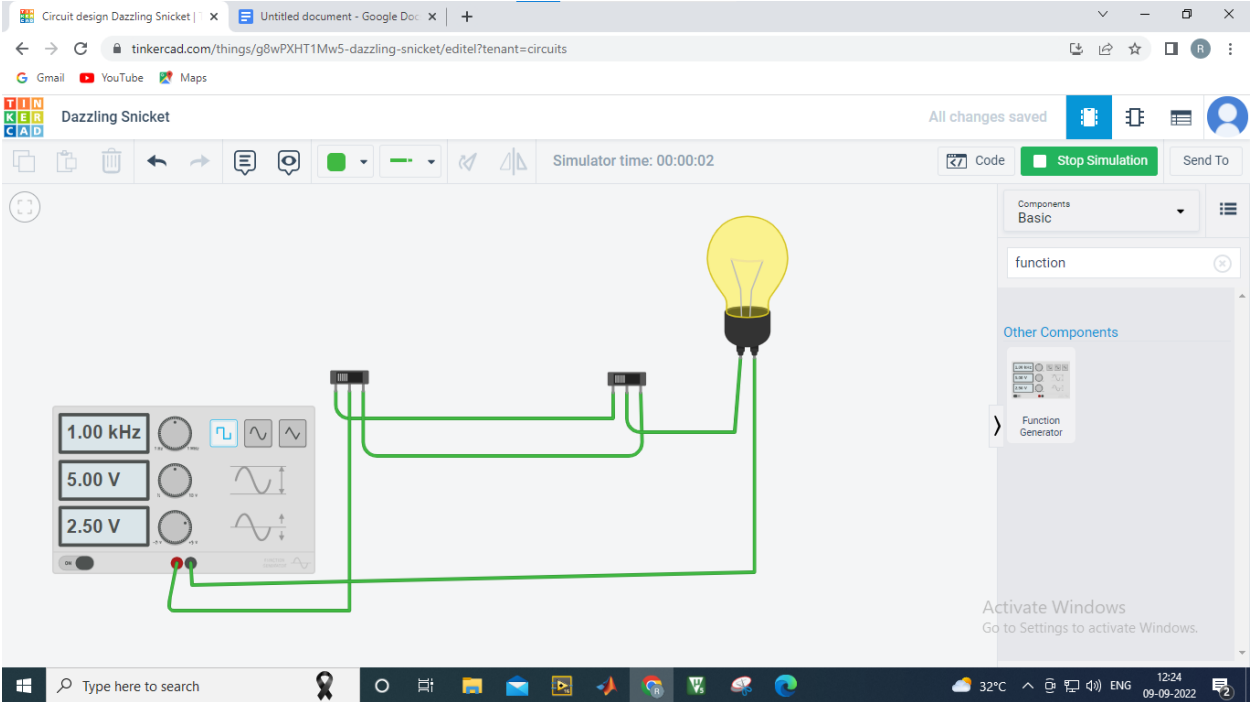
Switch 1	Switch 2	Lamp1 (XOR LOGIC)
OFF	OFF	OFF
ON	OFF	ON
OFF	ON	ON

ON	ON	OFF
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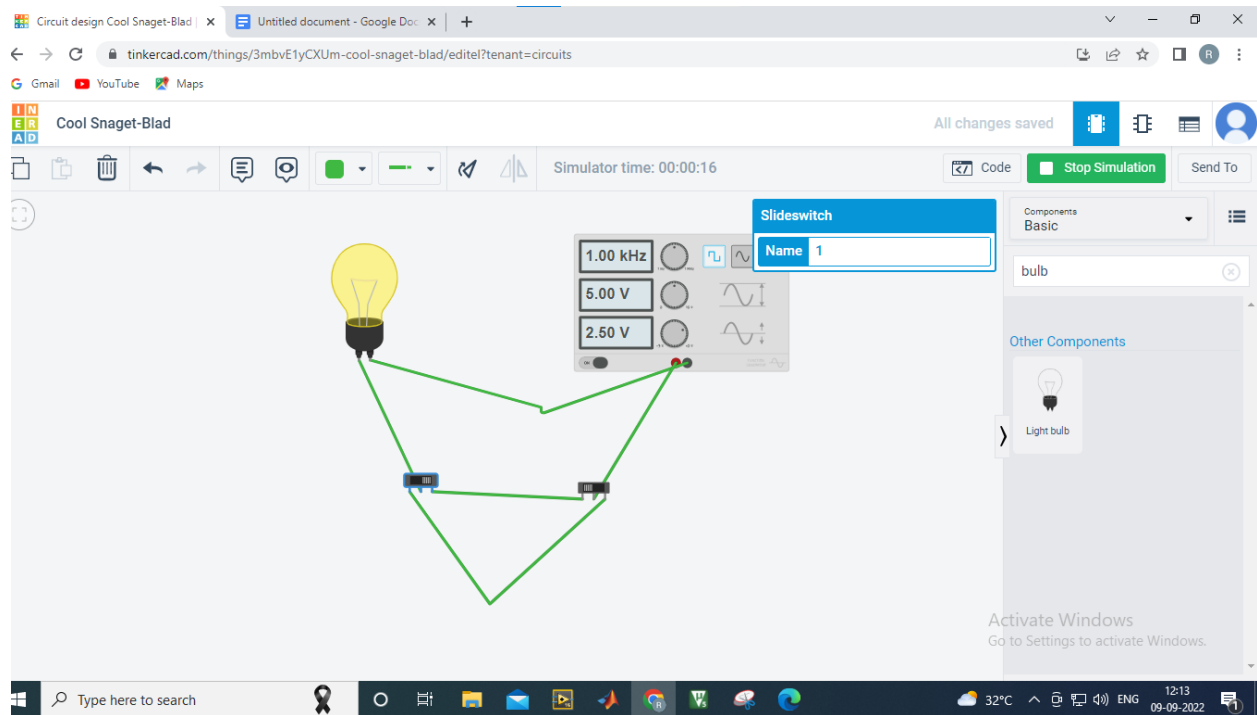
Switch 1	Switch 2	Lamp1 (XNOR LOGIC)
OFF	OFF	ON
ON	OFF	OFF
OFF	ON	OFF
ON	ON	ON

Simulation results:

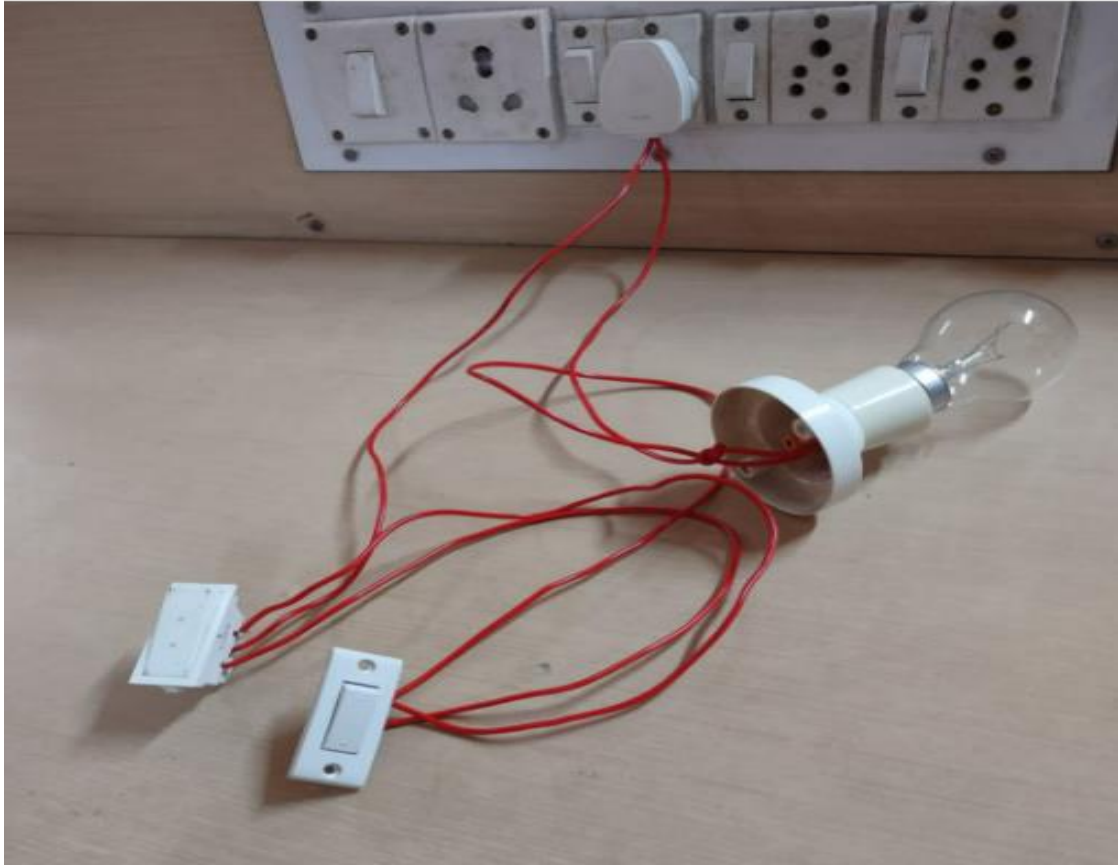
XOR :



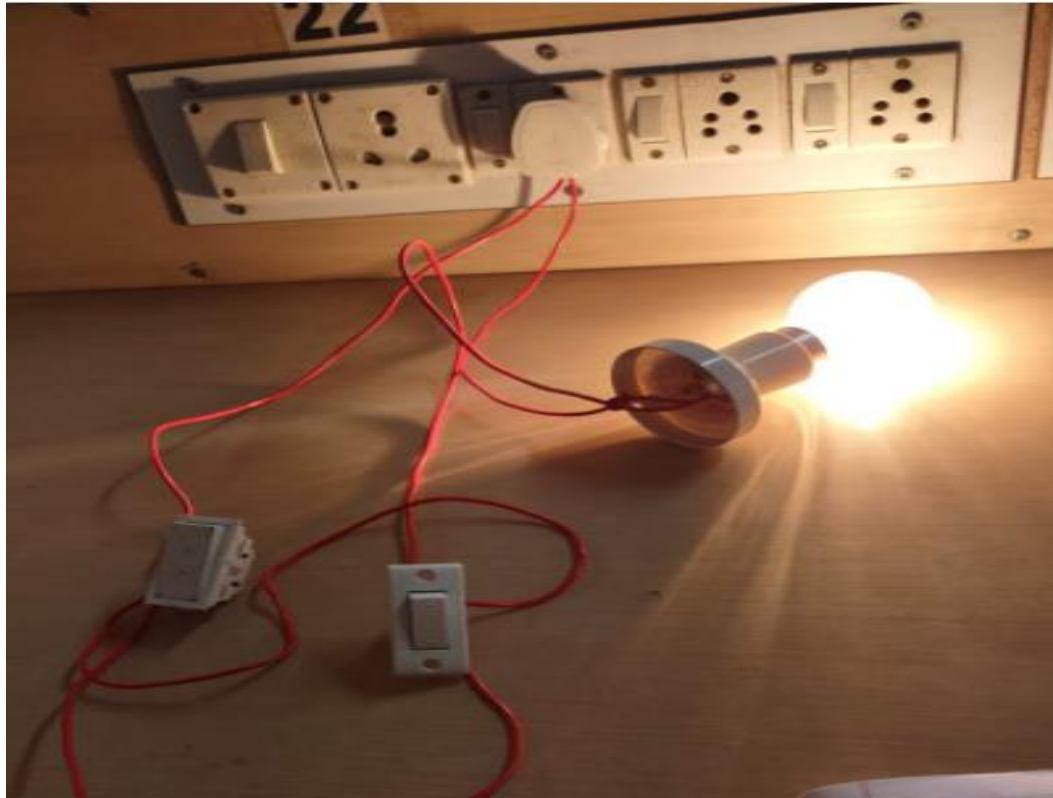
XNOR:



Experimental results:
XOR:



XNOR:



Result:

The staircase wiring is made to work in simulation and verified the working by conducting experiment.