

In [4]: *#Name: Mohith Dande*

Solution:

1. Turn Switch A ON and leave it on for about 1-2 minutes.
2. After that time, turn Switch A OFF and immediately turn Switch B ON.
3. Leave Switch C OFF the whole time.
4. Now go into the other room (only once) and observe the bulb:
If the bulb is on, it's controlled by Switch B (you left B on).
If the bulb is off but warm/hot, it's controlled by Switch A,
(it was on long enough to heat the bulb, then you turned it off).
If the bulb is off and cold, it's controlled by Switch C (never turned on).

That single visit gives you the identity of each switch.

In [1]: