
Stairwell

X89209_en

An open stairwell has four floors and one switch per floor to control the light. If all switches are off, the light is off; any single change in the position of any switch changes the state of the light. Design a circuit that controls the light based on the position of the four switches.

Specification

```
module stairwell(switches, light);
  input [3:0] switches;
  output light;
```

Input

- *switches* represents the state of the four switches (1 when "on" and 0 when "off").

Output

- *light* controls the state of the light (1 when "on" and 0 when "off").

Problem information

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