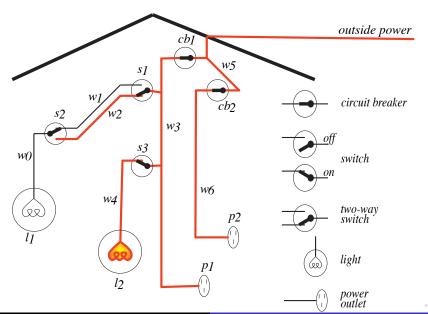
Electrical Domain



Users

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- What should an occupant know?



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- What should an occupant know?
- Users can't be expected to volunteer knowledge:
 - They don't know what information is needed.
 - ► They don't know what vocabulary to use.



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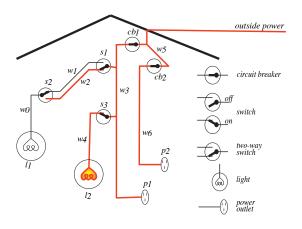
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 - how for which the user isn't expected to know the answer
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- There are 3 sorts of atoms to be proved in the top-down proof procedure:
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 - askable atoms that the user has already provided information about.
- The top-down proof procedure can be modified to ask users about askable atoms they have not already provided answers for.

3/9

Electrical Environment (aipython.org interaction)



python -i logicExplain.py
interact(elect)
ask lit_11



Knowledge-Level Explanation

HOW questions can be used to ask how an atom was proved.
 It gives the rule used to prove the atom.

A user can ask HOW an element of the body of that rules was proved.

This lets the user explore a proof.

Knowledge-Level Explanation

how 1

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 It gives the rule used to prove the atom.

A user can ask HOW an element of the body of that rules was proved.

```
This lets the user explore a proof. (Continuing the aipython session): ask lit_11 how
```

WHY questions can be used to ask why a question was asked.
 It provides the rule with the asked atom in the body.
 You can ask WHY the rule in the head was asked.

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- The system asks irrelevant questions.

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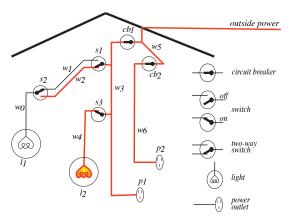
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- Incorrect answers can be debugged by only answering yes/no questions.

Electrical Environment (aipython.org interaction)



```
python -i logicExplain.py
interact(elect_bug)
ask lit_l1
how
how 1
```

Missing Answers (false negatives)

If atom g is true in the intended interpretation, but could not be proved, either:

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 - One of the a_i is true in the interpretation and could not be proved.