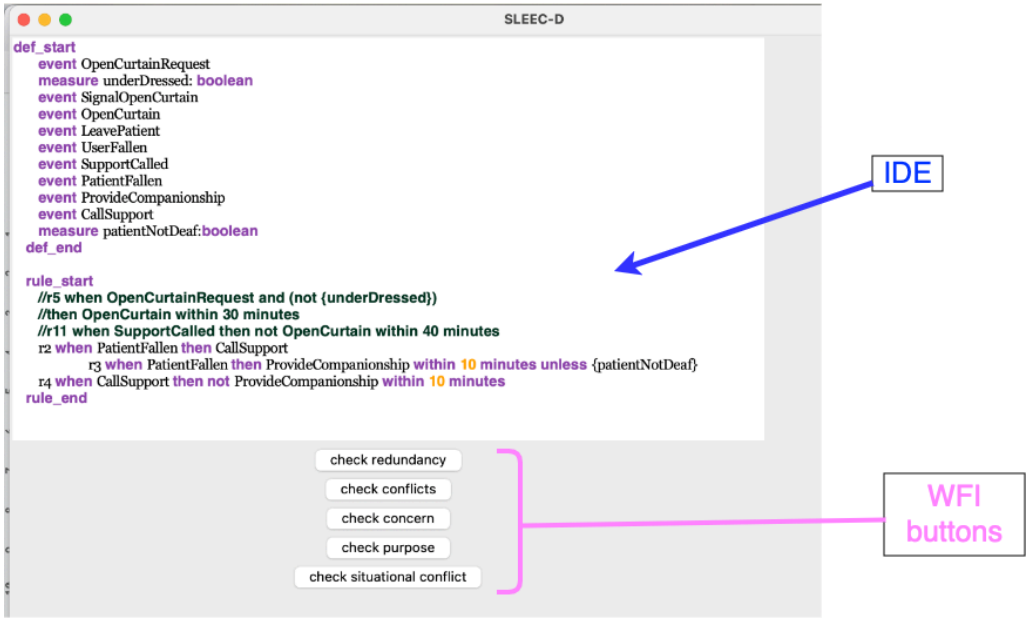
Demo 1:

1. **Launch the tool:** `python3 sleecFrontEnd.py`

2. **LEGOS-SLEEC overview:**
   You will see LEGOS-SLEEC, which consists of two parts: the IDE and the buttons to check well-formedness issues.



3. **Using SLEEC rules:**
   Let's use the SLEEC rules examples we discussed in our classes. Copy and paste the content of `demo1.sleec` into the IDE.

4. **Maintaining your own copy:**
   It is always better to keep an updated copy of your modifications to `demo1.sleec` in your IDE of choice (e.g., Emacs, Geany, or Vim). Note that LEGOS-SLEEC does not allow saving modifications.

5. **SLEEC definitions and rules:**
   You will see definitions, rules, concerns, and purposes in the IDE. Measures used in the rules are always enclosed in curly brackets `{}`. This helps LEGOS-SLEEC differentiate them from events.

6. **Syntax errors:**

   - Please keep a terminal window open. Syntax errors are shown there rather than in the IDE.

   - Let's misspell an event and run the tool again. Observe that the error is detected and message displayed in the terminal. Let's fix the error.

7. **Checking for redundant rules:**
   - Let's check if there is any redundancy. Here it is, as seen this morning.
   - We can resolve redundancy by simply commenting out rule 5.

8. **Checking for vacuous conflicting rules:**
   - Now, let us check if there are any vacuous conflicting rules.
   - We can resolve these conflicts similarly.

9. **Checking whether the rules are insufficient (button `check concern`):**
   Next, let us check if there are any concerns that could arise while respecting our rules. Here it is, as seen this morning.

10. **Resolution of the insufficiency detected:**
    To resolve this, we can add the following new rule to ensure the system calls emergency services as soon as possible (e.g., within 20 seconds):

```
Rfixc1: when SmokeDetectorAlarm and (not {userDisablesAlarm})
then CallEmergencyServices within 20 seconds
```