

Name: Check Drug Interaction

Description: The software allows the user to enter two drug names and reports whether there is a known interaction, or issues a low-confidence warning.

Actor: End User

Entry condition: The user has launched the Drug Interaction Checker program.

Basic path:

1. The system displays the prompt “Enter the first drug:” [PR001]
2. The user enters the first drug name [A01]
3. The system displays the prompt “Enter the second drug:” [PR002]
4. The user enters the second drug name [A02]
5. The system asks “Are these inputs correct? (yes/no):” [PR003]
 - If the user enters “No” [A04], go back to step 1.
6. The user enters “Yes” [A03]
7. The system preprocesses the inputs (lowercases and concatenates)
8. The system invokes the AI model to predict interaction and probability
9. The system evaluates confidence:
 - If confidence $\geq 0.6 \rightarrow$ display either “Potential interaction detected!” or “No known interaction detected.” [PR004]
 - If confidence $< 0.6 \rightarrow$ display “This combination is unfamiliar. Please verify with a professional.” [BR001]
10. The program terminates.

Business rules:

- BR001: If model confidence < 0.6 , always show the “unfamiliar” warning rather than a definitive result.
- BR002: Drug names must be non-empty; an empty input should re-prompt the user.