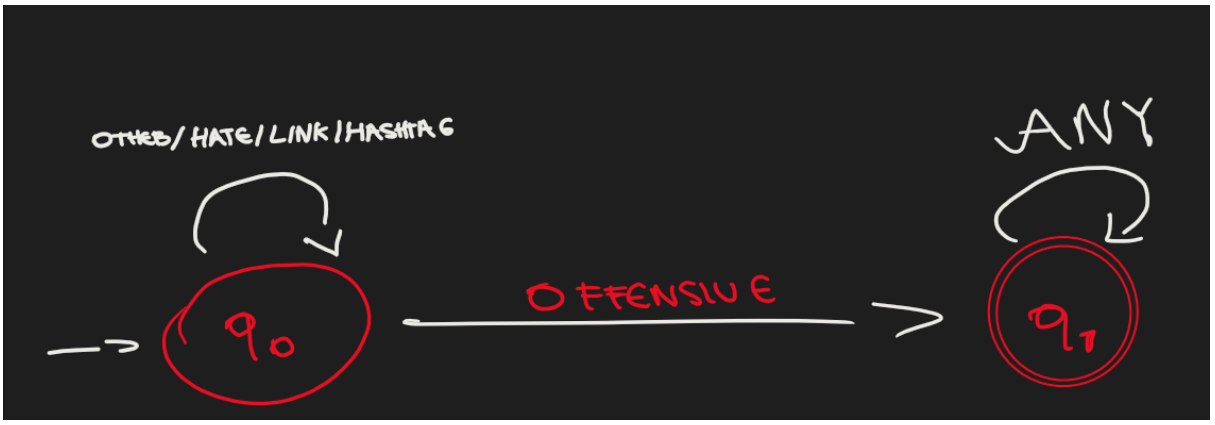
DFA diagram - Content Classification

Materia	Discretas 3
Estado	Lista

DFA — Offensive Language



- Start: `q0`
- Accepting: `q1`
- Transitions:
  - `q0 --OFFENSIVE--> q1`
  - `q0 --(OTHER|HATE|LINK|HASHTAG)--> q0`
  - `q1 --(ANY)--> q1` (once seen, always accepting)

DFA — Hate Speech

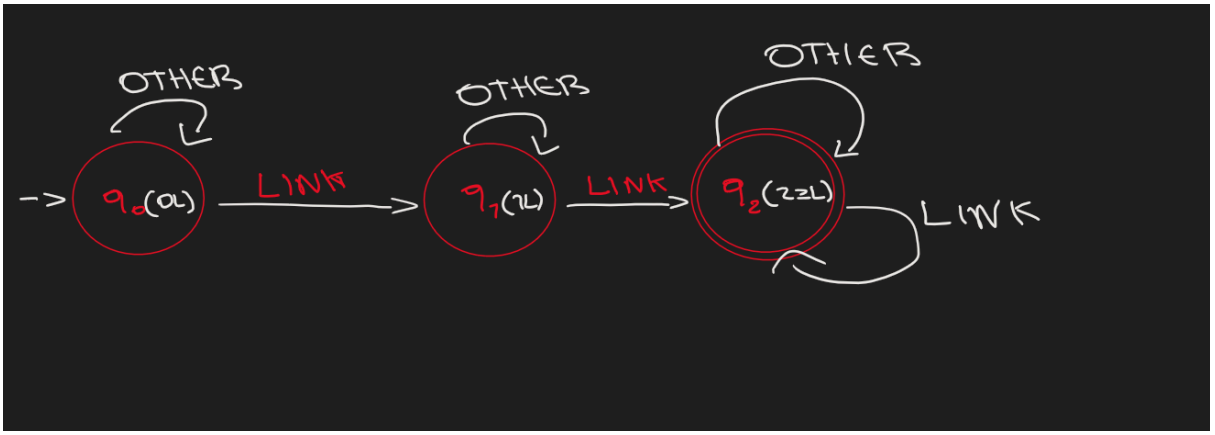
DFA — Spam

We model **two counters** with finite states and OR the results:

- **Links DFA**: accept if `≥ 2 LINKS`
- **Hashtags DFA**: accept if `≥ 3 HASHTAGS`
- **Spam = LinksDFA ∪ HashtagsDFA** (accept if either accepts)

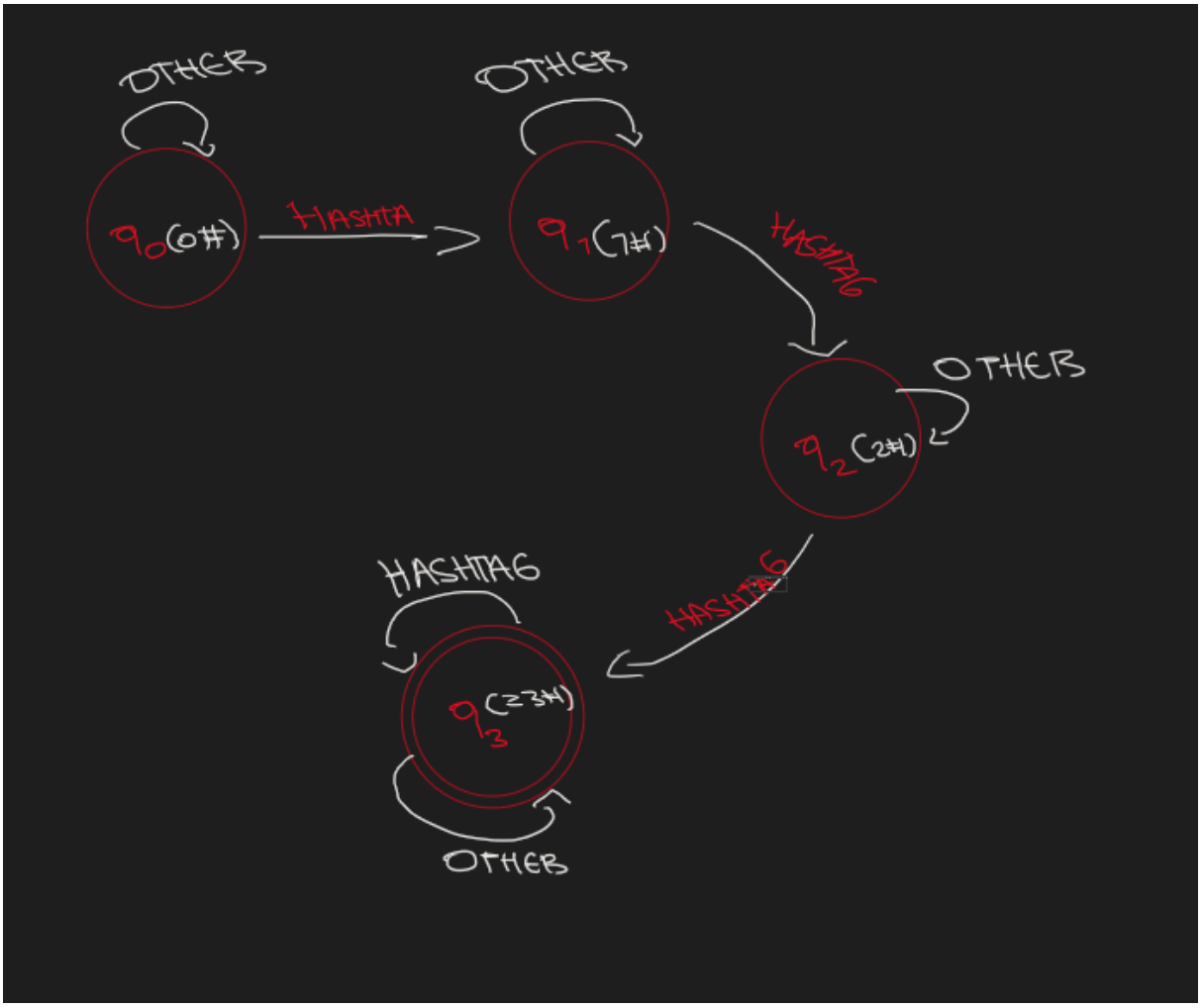
You can show them separately (clearer in class), or compose them (product automaton). Below are the **separate** DFAs; in your code, we effectively used the **product** internally.

Links DFA (≥ 2 links)



- Start: `q0` (0 links)
- `q1`: 1 link
- `q2`: **accepting** (2+ links)
- Any non-LINK: self-loop on the current stat

Hashtags DFA (≥ 3 hashtags)



- Start: `q0` (0 #)
- `q1`: 1 hashtag
- `q2`: 2 hashtags
- `q3`: **accepting** (3+ hashtags)
- Any non-HASHTAG: self-loop on the current state.