

Exercise 2.30

Consider a top-level call $\text{edges}(q_0 \leadsto q_*) \llbracket C \rrbracket (q_b, q_c)$:
what should q_b and q_c be?

There are at least three cases to consider:

1) $q_b = q_0$ and $q_c = q_*$

thinking of C as $\text{do } C \text{ od}$

2) $q_b = q_{\text{error}}$ and $q_c = q_{\text{error}}$

where q_{error} is fresh

3) refusing to perform $\text{edges}(q_0 \leadsto q_*) \llbracket C \rrbracket (q_b, q_c)$
if q_b or q_c is needed
i.e. if C has `break` or `continue` outside `do...od`

Solution 3) is often taken in programming languages
where the static semantics (or well-formedness
conditions) dictate demands on programs to be considered.

In IFM we have downplayed static semantics and
instead create the errors in the (dynamic) semantics.
So solution 2) is what we should choose.