```
ifthenelse_wf  THM

⊢  ∀b:𝔹, A:Type, p,q:A. if b→ p else q fi ∈ A  by UnivCD
|
1. b : 𝔹
2. A : Type
3. p : A
4. q : A
⊢  if b→ p else q fi ∈ A
| by Unfold ‘ifthenelse‘ 0 THEN Unfold ‘bool‘ 1
|
1. b : Unit+Unit
2. A : Type
3. p : A
4. q : A
⊢  InjCase(b ; p; q) ∈ A  by Analyze 1 THEN Reduce 0
END
```