```
int_seg_ind  THM

⊢  ∀i:ℤ, j:{i+1...}, E:({i..j⁻}→Prop).
|  E(i) ⇒ (∀k:{(i+1)..j⁻}. E(k-1) ⇒ E(k)) ⇒ (∀k:{i..j⁻}. E(k))
| by UnivCD
|
1. i : ℤ
2. j : {i+1...}
3. E : {i..j⁻}→Prop
4. E(i)
5. ∀k:{(i+1)..j⁻}. E(k-1) ⇒ E(k)
⊢  ∀k:{i..j⁻}. E(k)
| by BackThruLemmaWithUnfolds
|    Thm* ∀i:ℤ, j:{i...}. WellFnd{u}({i..j⁻};x,y.x<y)
|    {int_seg_well_founded_up}
|    [`wellfounded`]
|
⊢  ∀j@0:{i..j⁻}. (∀k:{i..j⁻}. k<j@0 ⇒ E(k)) ⇒ E(j@0)  by UnivCD
|
6. j@0 : {i..j⁻}
7. ∀k:{i..j⁻}. k<j@0 ⇒ E(k)
⊢  E(j@0)  by RenameVar `n` 6
|
6. n : {i..j⁻}
7. ∀k:{i..j⁻}. k<n ⇒ E(k)
⊢  E(n)  by Decide (n = i)
|
|\
| 8. n = i
| ⊢  E(n)  by Assert (n = i)
| |
| 9. n = i
| ⊢  E(n)  by HypSubst 9 0
|
.\
. 8. ¬n = i
. ⊢  E(n)  by (BackThru 5) THEN (BackThru 7)
END
```