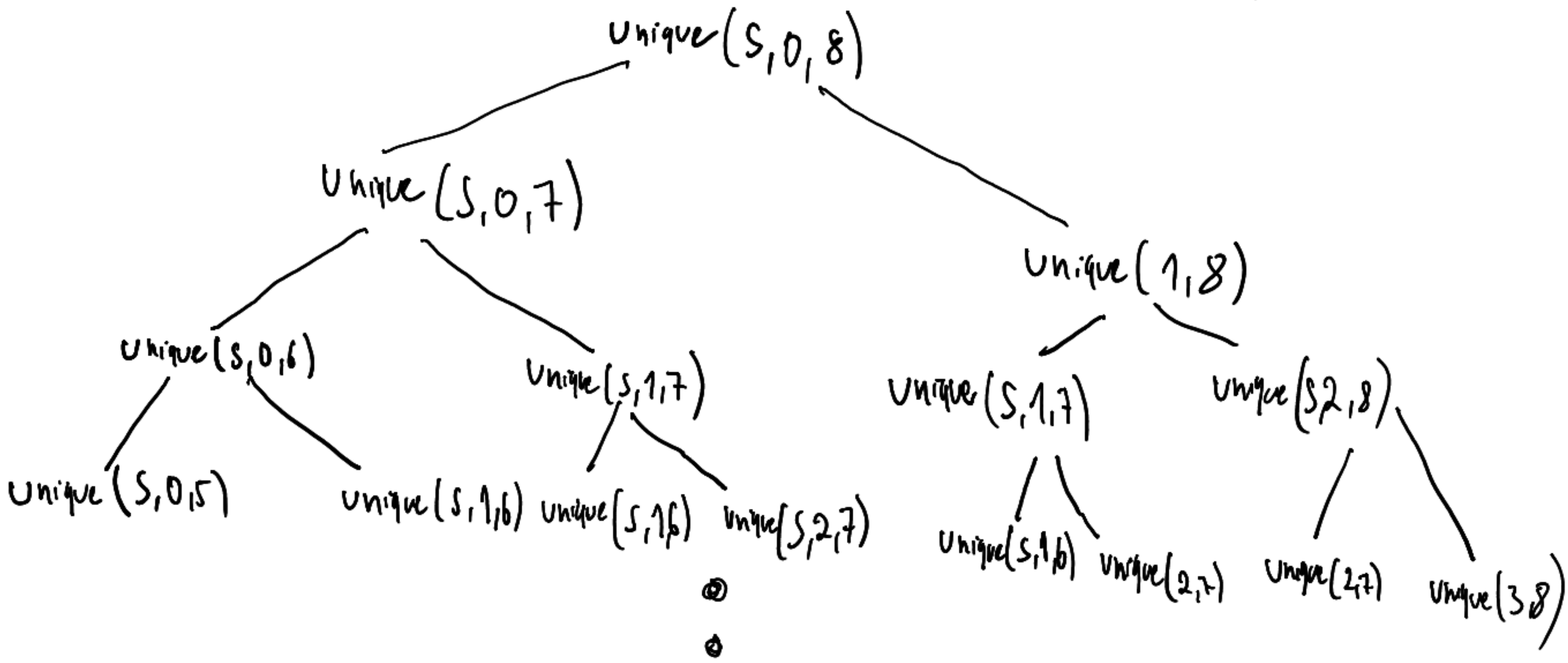
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|

idea for checking uniqueness:

- check that first n-1 elements are unique, ie elements 0 through 6 are all unique
- check that last n-1 elements are unique, ie elements 1 through 7
- check that first and last element don't equal




runs from difference between start & stop being n, until it's 1, so n times.

$$2^0 + 2^1 + 2^2 + \dots 2^{n-1}$$
$$= 2^n - 1$$