recursion.md 1/9/2020

## **Recursive Models**

Faketastic allows you to write recursive models. There is a itself builder function that declares a property as recursive. Let's use an example for better understanding; consider the following \$Directory model:

```
import { model, itself, RecursionDepth, oneOf, quantity, randomInt } from
'faketastic';
export const $File = model({
 /* ... */
});
export const $Directory = model({
  name: oneOf(['Documents', 'Pictures', 'User', 'Public']),
  files: use(
    $File,
    quantity(() => randomInt(0, 2)),
  ),
  directories: itself(
    RecursionDepth([], 1, 2),
    quantity(() => randomInt(0, 4)),
  ),
});
```

Let's go throught it: The **\$Directory** model says:

- A directory has a name, which is either "Documents", "Pictures", "User" or "Public".
- A directory has files, for which we want to use the \$File model. A directory has at least 0 and at most 2 files (implicit: since the given quantity parameter is not constant 1, the output will always be within an array, no matter what quantity-amount gets chosen).
- A directory has subdirectories (itself). The recursion min-depth is 1 and the max-depth is 2. When ending the recursion, set the value [] (empty array) instead of another recursion. Based on that, the model will have at least one recursion level.

```
import { build } from 'faketastic';
import { $Directory } from './models';

const directory = build($Directory);

/*

Outputs something like:
  File instances are left out (...) for simplicity.

{
    name: "Public",
    files: [],
    directories: [
```

recursion.md 1/9/2020

```
name: 'Documents',
          files: [ ... ],
          directories: [
            name: 'Public',
            files: [],
            // recursion ended at this level, so value [] was set:
            directories: [],
        },
        {
          name: 'Private',
          files: [ ... ],
          directories: [
            name: 'Users',
            files: [ ... ],
            // recursion ended at this level, so value [] was set:
           directories: [],
         ]
        },
   }
*/
```

## **Topics**

- Overview
- Getting Started
- BuilderFns
- AttachedFns
- ModelFns