Interactive - 33 - types of indexes (hash, gin)

The default type of index in most SQL databases is a B-Tree. This is a wide tree that can produce sorted data based on the data type and ordering of that data.

This is not the only kind of index.

In some cases ordering of data is meaningless. For example UUIDs do not have any order. We will still need to have an index to look up a value but sorting on UUID rarely makes any sense. A faster index for data that has no order is a "hash" index.

An example of a hash index is:

```
CREATE INDEX ct_config_row_p2 on ct_config_row USING hash ( value );
```

Hash indexes in PostreSQL do not support unique index constraints. In versions before 13 of PosgreSQL there are other limitations on how indexes are replicated and restored from a backup.

Another type of index is a Generalized Inverse Index or GIN index. This is often used in conjunction with JSONb data types.

In interactive homework 26 part 5 we created a column lesson_body with a data type of JSONb. We can create a GIN index on this that will allow for fast searches of the JSON data.

```
CREATE INDEX ct_homework_p2 on ct_homework USING gin ( lesson_body );
```