2 dimensions

XLS
CSV
...

multi dimensional

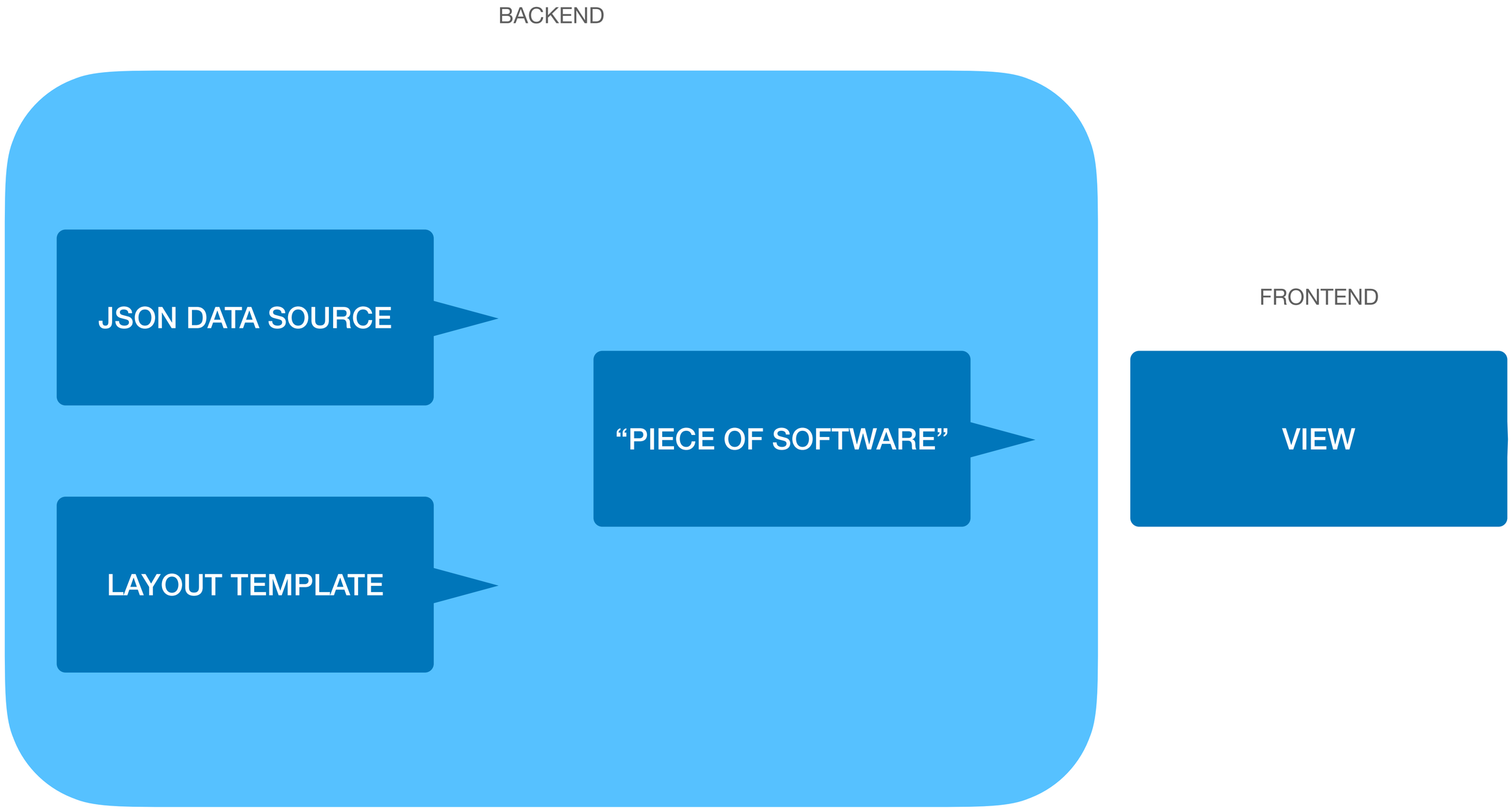
XML
JSON
…



DATABASES

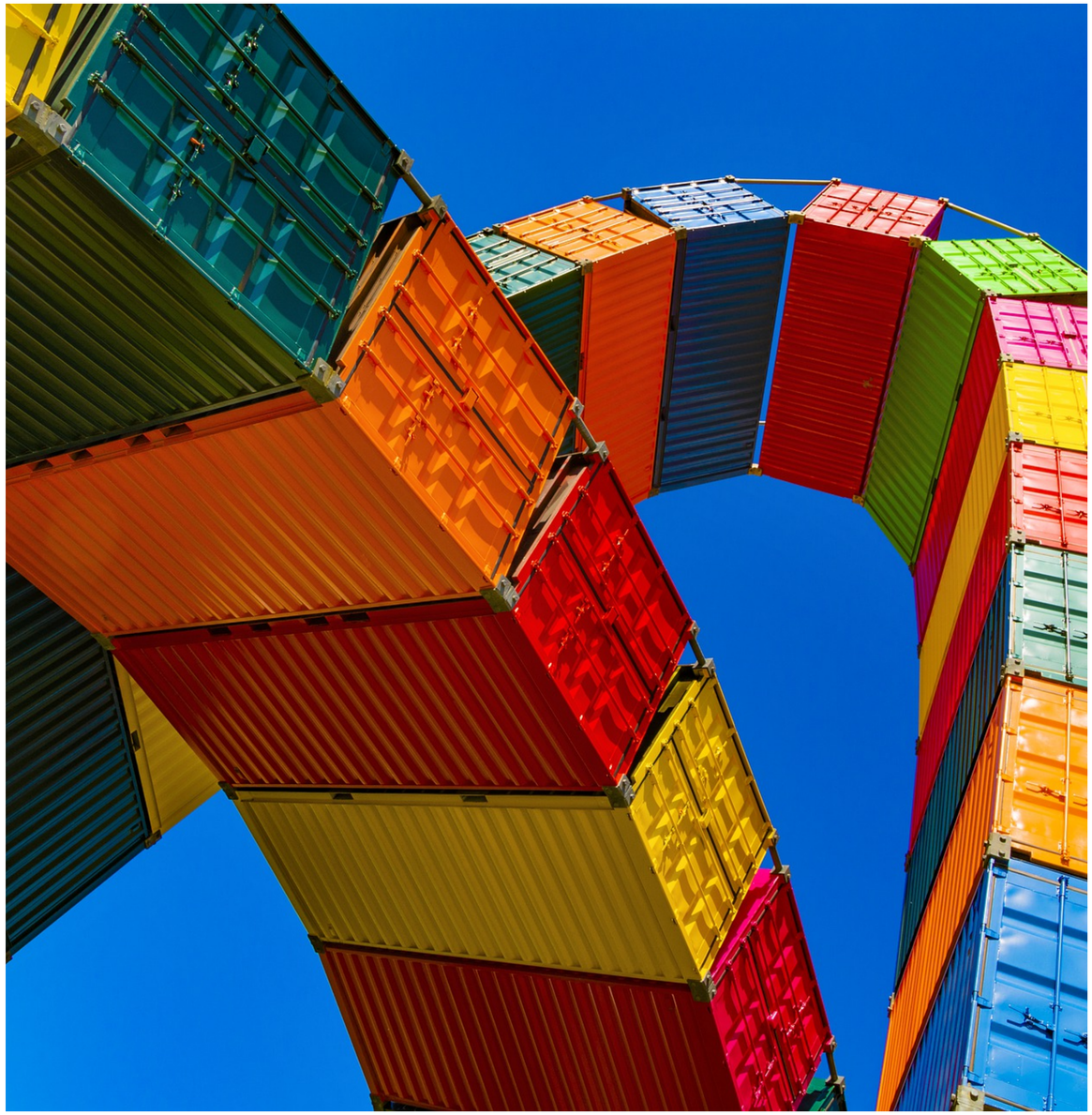
Relational data structures


JSON DATA SOURCE
LAYOUT TEMPLATE
“PIECE OF SOFTWARE”
VIEW


BACKEND
JSON DATA SOURCE
LAYOUT TEMPLATE
“PIECE OF SOFTWARE”
FRONTEND
VIEW

DATA STORAGE

You can store data in many different ways.



DATABASE TYPES





JSON

JSON DATABASES



RDBMS

relational database management system



JSON DATA SOURCE

LAYOUT TEMPLATE

“PIECE OF SOFTWARE”

VIEW



“PIECE OF SOFTWARE”

VIEW

main purposes of a database

keep your data compact and consistent

RDBMS

Stores data in “linked” 2 dimensional tables

How can we store this multidimensional data in two-dimensional tables?

```
<musicshop>
    <artist>
        <name>Bruce Springsteen</name>
        <albums>
            <album>
                <name>Born to run</name>
                <year>1975</year>
                <availability>
                    <vinyl>3</vinyl>
                    <cd>20</cd>
                </availability>
                <songs>
                    <track>
                        <name>Thunder Road</name>
                        <duration>4:49</duration>
                    </track>
                    <track>
```

Assignment

Databases

- You now make an assignment in a small group or bubble (2 to 4 students)
- Create a relational table structure to store data for a recipe list (on location)
- Use Word or Excel to create “different tables”.
- Upload the assignment on Toledo before the next lesson.

