Exercise: Modeling a library

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Q1: Need for a new library system

The library has decided to improve its book management system to accommodate with new mediums

An item is either a book, a journal, or a video game(!) (PSX and Wii)

Each item has a date and a name

Provide an operation of searching for items along their name (exact matching)

Q2 : Item searching

For this second question, we need a very flexible way to search for items

The matching can be realized on name, date. For example:

all items released in 2017

all items whose name begins with "Zeld"

all items named "Zelda" *and* released in 2020

all items named "Zelda" *or* released in 2020

all items named "Zelda" *and* (released in 2019 *or* released in 2020)

As you can see the system should potentially accept an infinite amount of different queries. How would you implement this?

What you should know!

Which design pattern is necessary to implement the searching facility?

What are the modular property of the search?

Can you answer these questions?

How to add a Folder item, in which items may be added into it? What will the impact be on the search operations?

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