

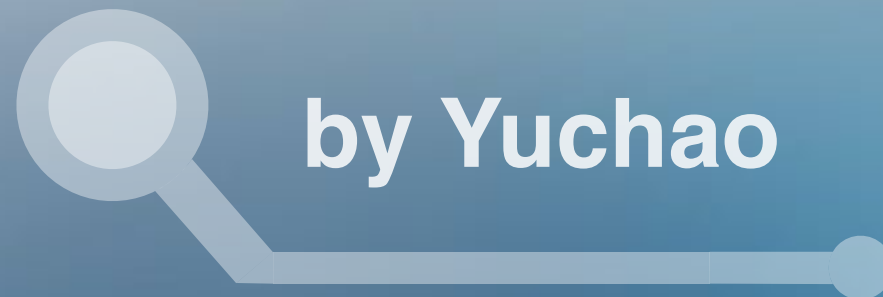


Yuchao Searching

|

Yuchao

Adaptive Search Engine for Digital Media Indexing

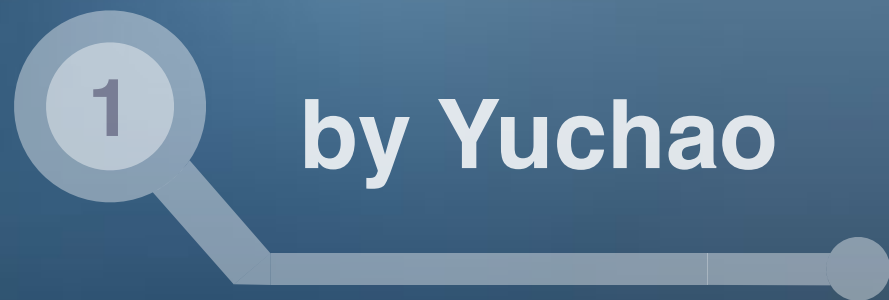


Supervisor: CLEMENT H. C. LEUNG

Observer: SUNNY

Examiner: JEREMY

INTRODUCTION



by Yuchao

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Backgrounds

1. Many people like listening to musics, watching movies;
2. Searching specific media is a popular;
3. Such a good search engine for media indexing is hard to see.



Digital Media

According to Wikipedia, **Digital media** are any **media** that are encoded in a machine-readable format. **Digital media** can be created, viewed, distributed, modified and preserved on **digital** electronics devices.



Indexing?

The machine supports searching of images, videos and audios.

✓ ~~concept-based~~ contents

Through the **daily use** of this machine, we can easily collect the knowledge from users. This is **Feedback**.

Novel indexes would be built gradually.

Developing Method

IDE: Eclipse Mars(for backend)



Editor: Sublime Text 2(for frontend)

Language: Java, JSP, CSS, JS, HTML

Developer: Yuchao



Related Frameworks



Lucene is a powerful search framework for full-context indexing, with this tool we can implement local searching functions by inputting a valid* keyword.

*what “valid” means here: e.g. There is a sentence, “this is a sentence.”, if the input is “ten” it’s not valid, only you input “sentence” you can get reply.

Related Frameworks

SemanticUI v2.2.4



Semantic is a development framework that helps create beautiful, responsive layouts using human-friendly HTML.

User Interface is the language of the web.

FEATURES

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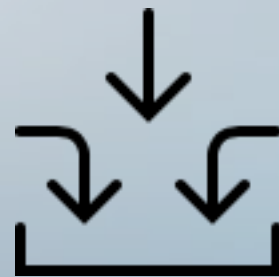
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Digital Media Searching



Search
digital
media



Input
keywords



Show
results

Adaptive Engine



Search times **+ 1**

Adaptive

Click times **+ 1**



Adaptive Engine

Results could be different through the **iterative use**.



Day 1



Day 30



Day 90

.....

figure. the novel indexes through daily use

Adaptive Engine

The key is **ADAPTIVE**.

Results could be reordered by click times and search times

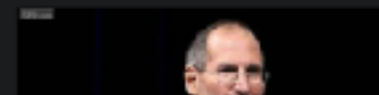
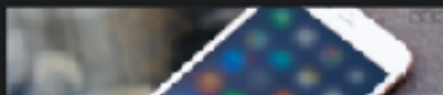
i.e. The media being searched or clicked by the most times will be shown with high priority.



Home

There are 48 results in total.

apple



DESIGN

3

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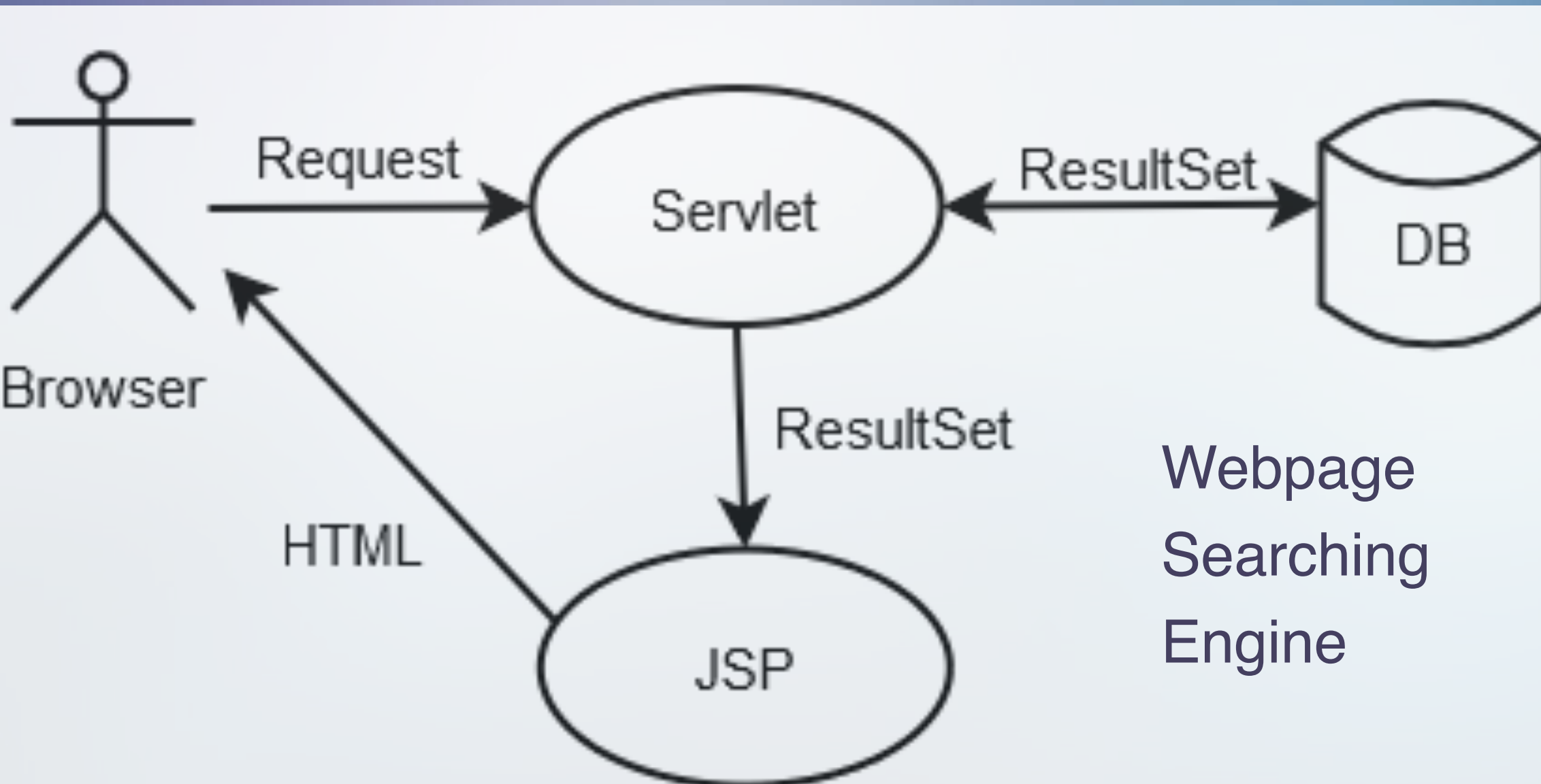
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Architecture

Webpage Searching Engine

Architecture



JSP

Webpage
Searching
Engine

Architecture



Create
Index



Add Key Fields

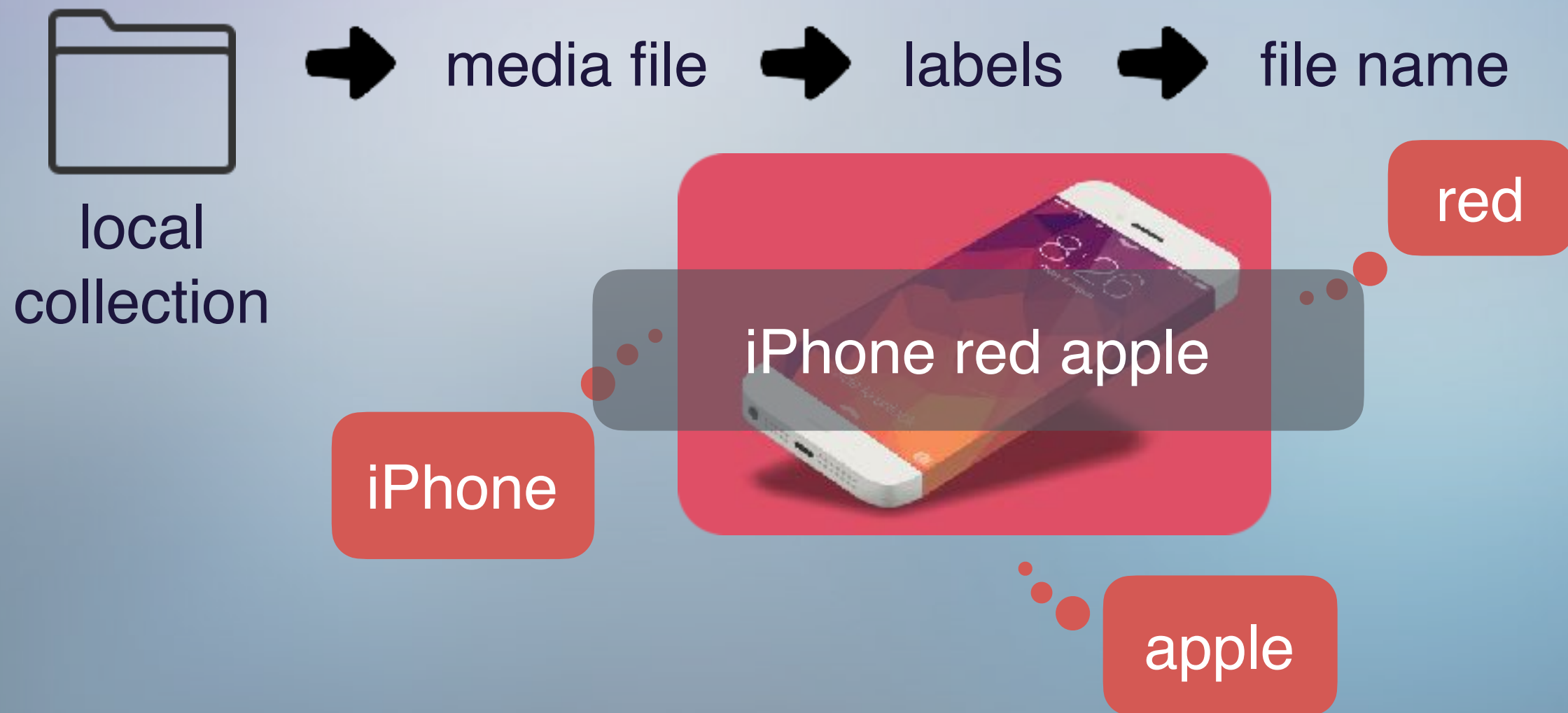


Create Parser
and Searcher



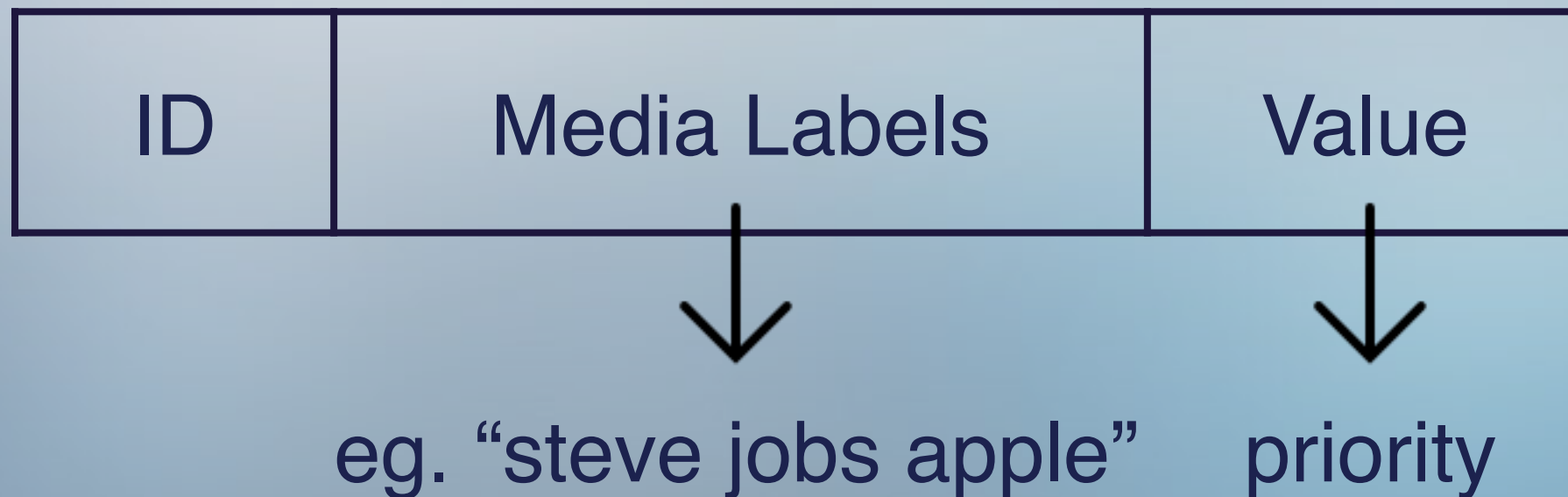
Search

Architecture

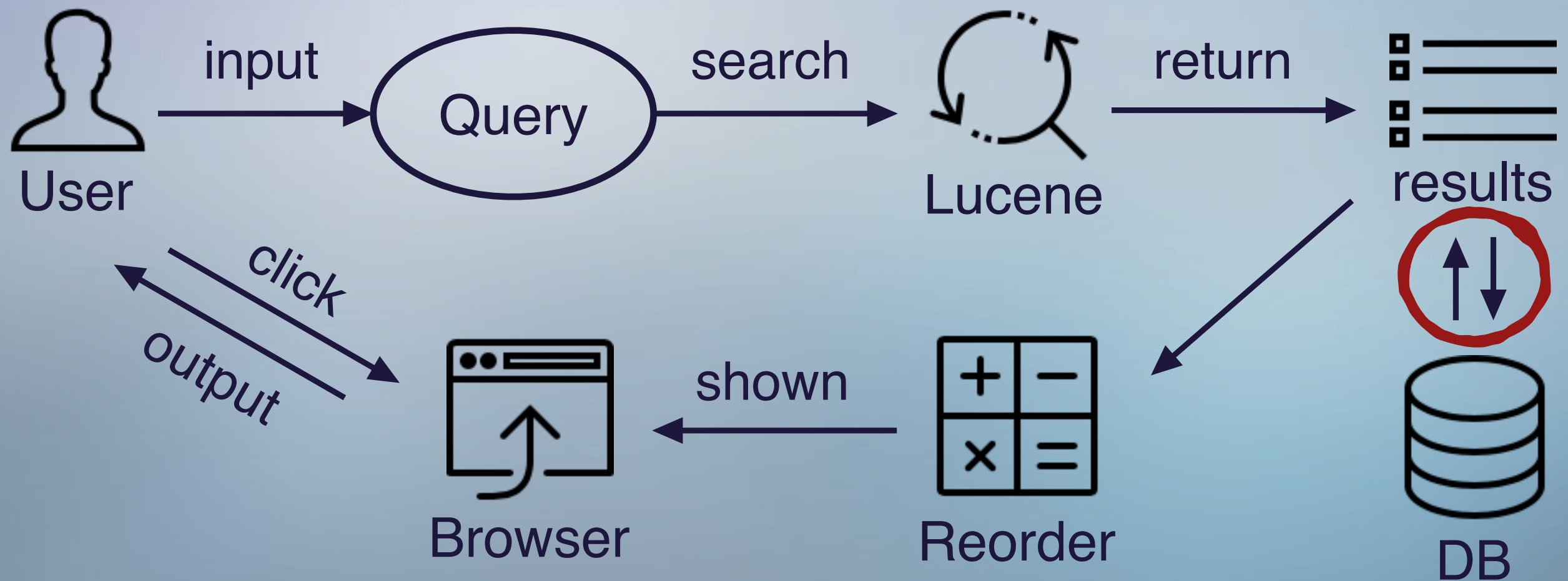


Architecture

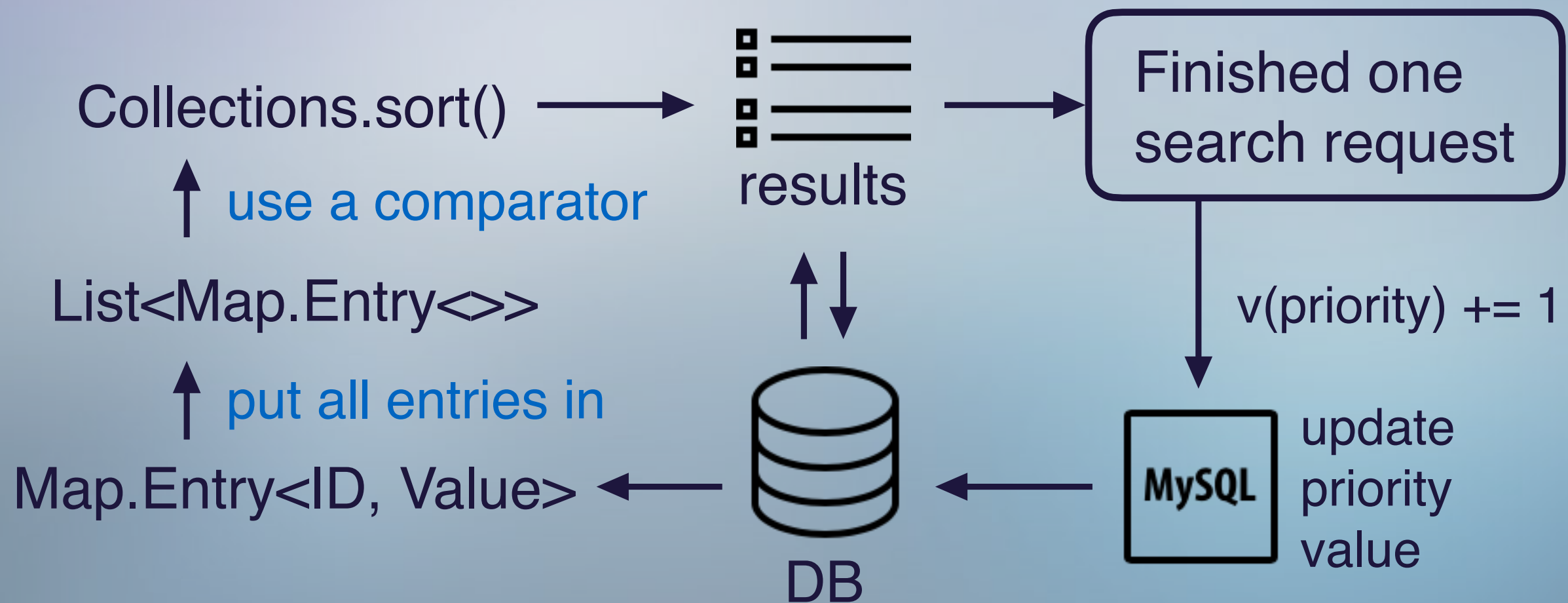
MySQL Database



Architecture



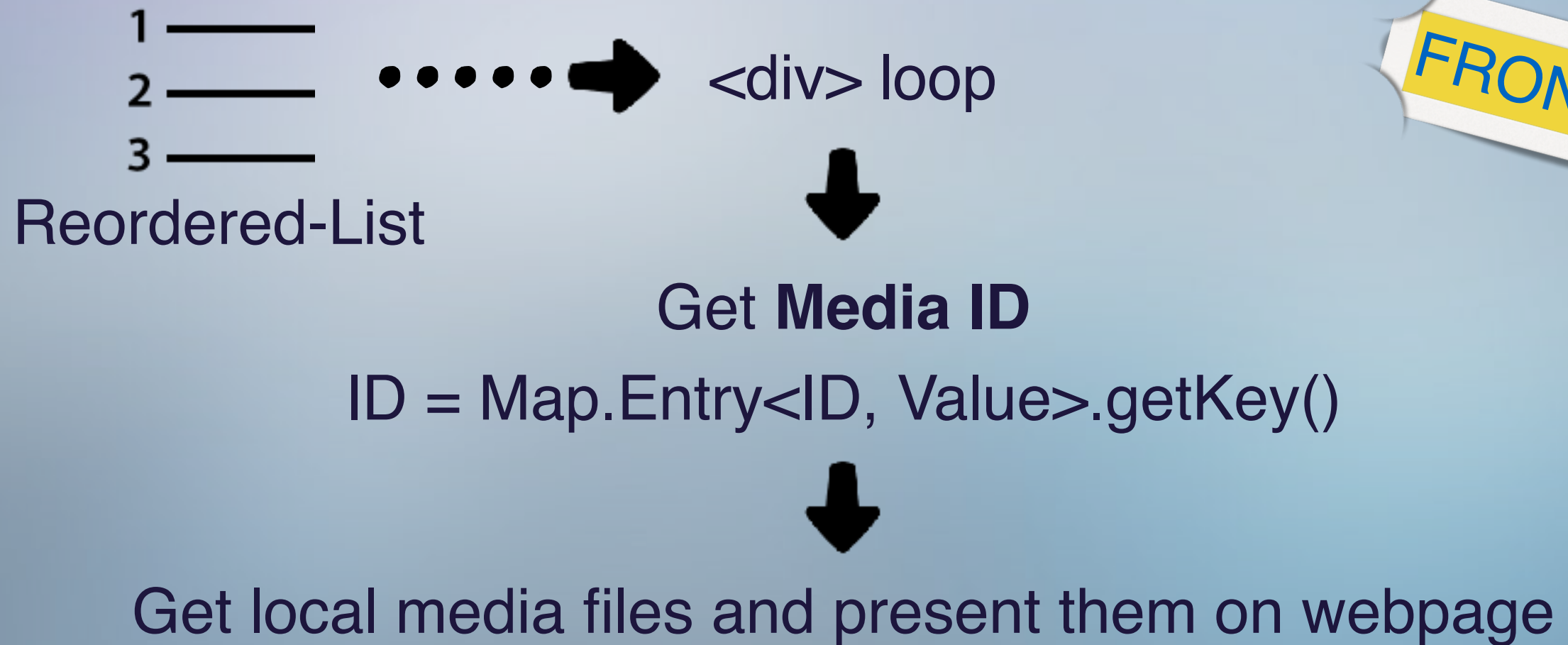
Architecture



Algorithm



Algorithm



CONCLUSION

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Defects

1. Only support English.
2. Cannot do page searching.
3. Searching a particular file folder.
4. A media file should have enough labels or it would not be searched at all with a “right” query.

What I Learnt

1. Adaptive mechanism.
2. Programming skills but not only about Java.
3. Lucene framework.
4. Approach my own software.
5. Design skills.

DEMO

5

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Demo Cases

apple

apple logo

steve

steve cook

steve time

red

red apple

Key Reference

C. H. C. Leung, W.S. Chan, A. Milani, J. Liu and Y.X. Li,
“Intelligent Social Media Indexing and Sharing Using an
Adaptive Indexing Search Engine,” ACM Transactions on
Intelligent Systems and Technology, Vol. 3, No.3, pp.
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THANKS!

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