



**Kampus
Merdeka**
INDONESIA JAYA



Data Requirements

Bachelor of Information Systems

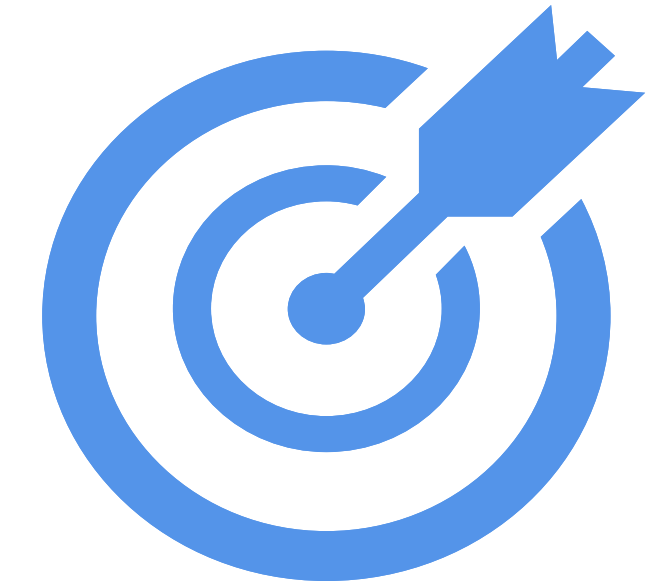


INTRODUCTION TO
DATABASE AND INFORMATION SYSTEM



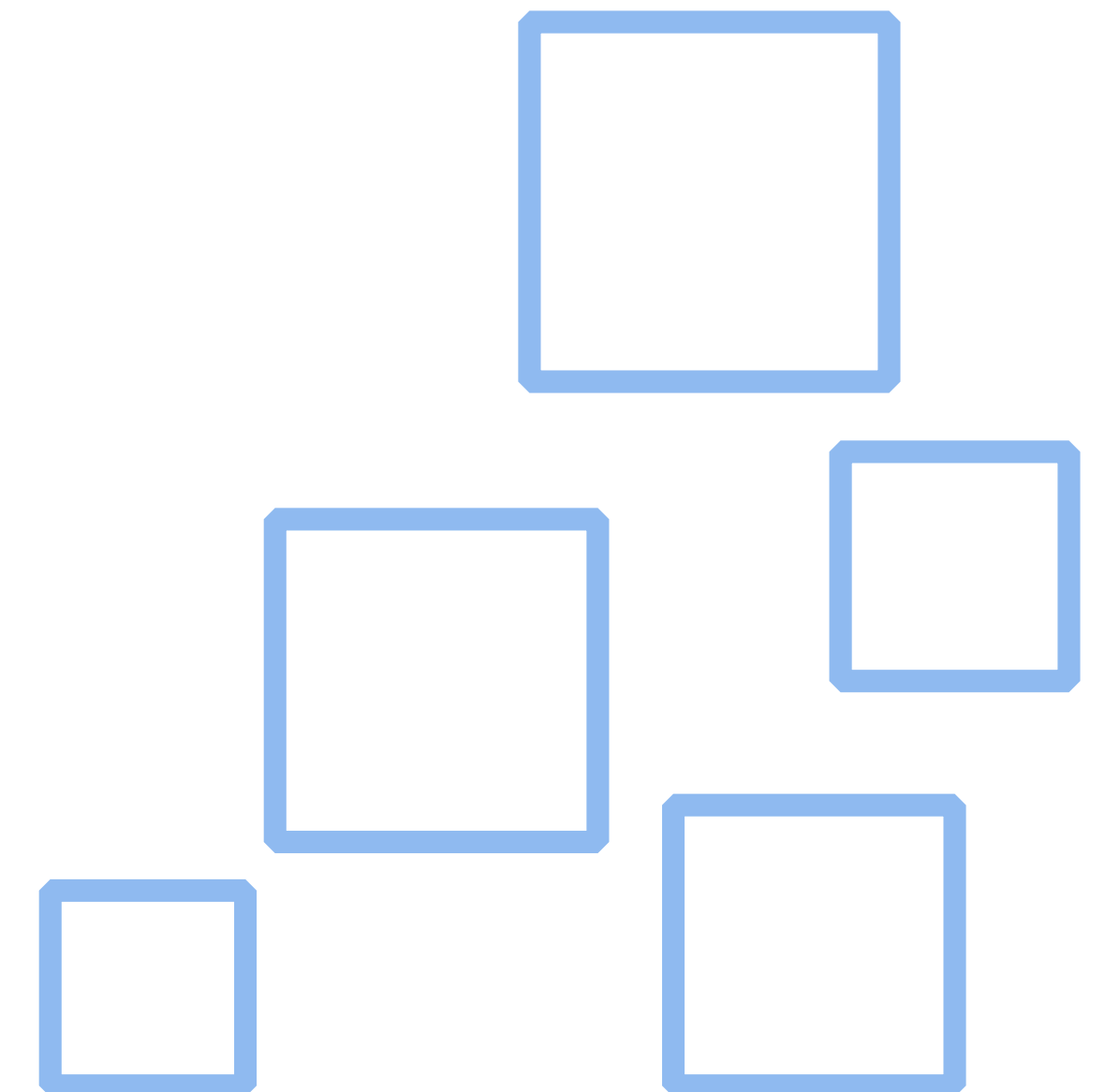
Learning Objective(s)

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This material should address the following question(s).

- ? Why identifying data requirement is important?
- ? How to identify data requirement?



Question



Why identifying
data requirements
is important?

First thing first

"Knowing what we need" is playing a key role to a **successful** database design and to avoid developing the unnecessary.

Question



How to identify
data requirements?

General Steps

Analyze the problem to understand the context. finding similar cases if necessary.

Problem understanding

List the objects (entities)

Find out objects (entities) mentioned in the case. Identify their members. Sometimes, they are not clearly mentioned.

If you think there are things still missing, it is okay to make assumptions. Back your assumptions with references.

Refine the list

Case Study



Inside the campus library.



Case Study

- A library has a multitude copies of books, articles, etc.
 - New collections come periodically.
- Anyone may come and enjoy the collections.
 - Only library members can lend books for period of time.

Inside the campus library.



Case Study

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**Let's make
our analysis**



Case Study

Inside the campus library.

- A library has a multitude copies of books, articles, etc.
 - New collections come periodically.
- Anyone may come and enjoy the collections.
 - Only library members can lend books for period of time.
- There are some objects (**entities**) mentioned:
 - Books, articles, and others.
 - Library visitors and members.
 - Book lending for a limited time.
- However, the details are still **missing**.
 - In this case, we are allowed to make *safe assumptions* to draw a more clear requirements.

Case Study

Inside the campus library.

- A library has a multitude copies of books, articles, etc.
 - New collections come periodically.
- Anyone may come and enjoy the collections.
 - Only library members can lend books for period of time.
- Some *safe assumptions*, e.g.:
 - A book may have multiple copies.
 - A book is identified by its ISBN, title, author(s), publisher, and pub. year.
 - A book copy is identified by its registration number.
 - A member has a name, phone number, email, and a member id.
 - etc.

Case Study

Inside the campus library.

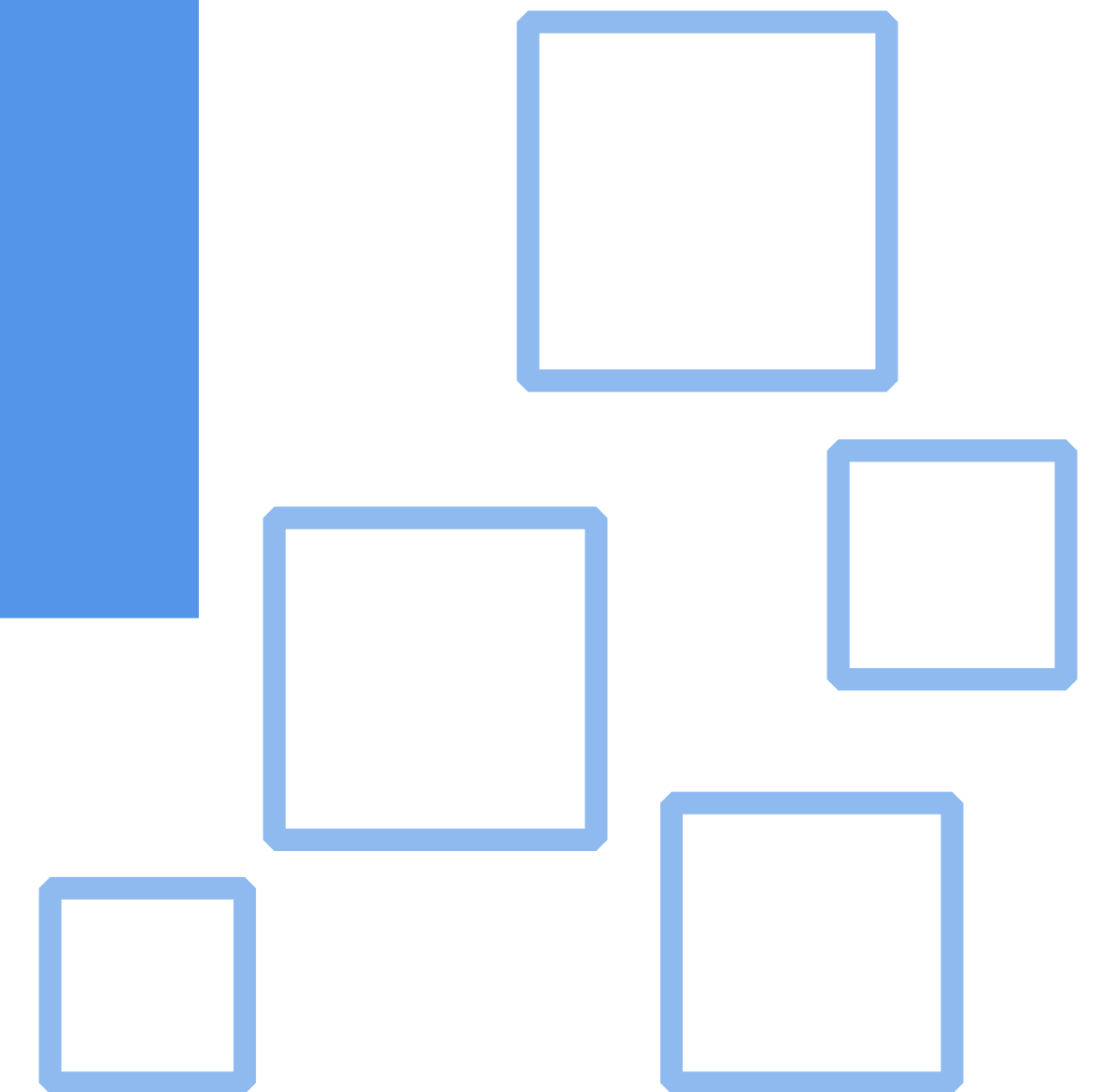
- A library has a multitude copies of books, articles, etc.
 - New collections come periodically.
- Anyone may come and enjoy the collections.
 - Only library members can lend books for period of time.

- Should we care about ...
 - Who (the librarian) handles the lending transaction?
 - Where a book copy is acquired from?
 - The member's bank account?
 - etc.



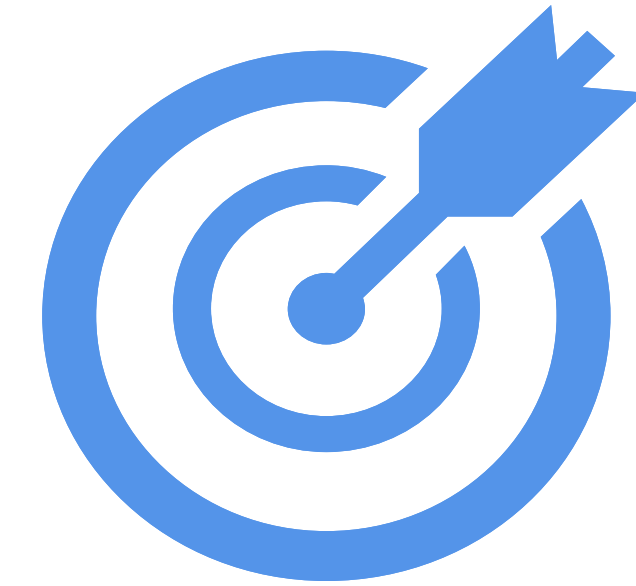
! Where are we now?

By now, you should have the list of **entities** and its members match enough to the requirements.

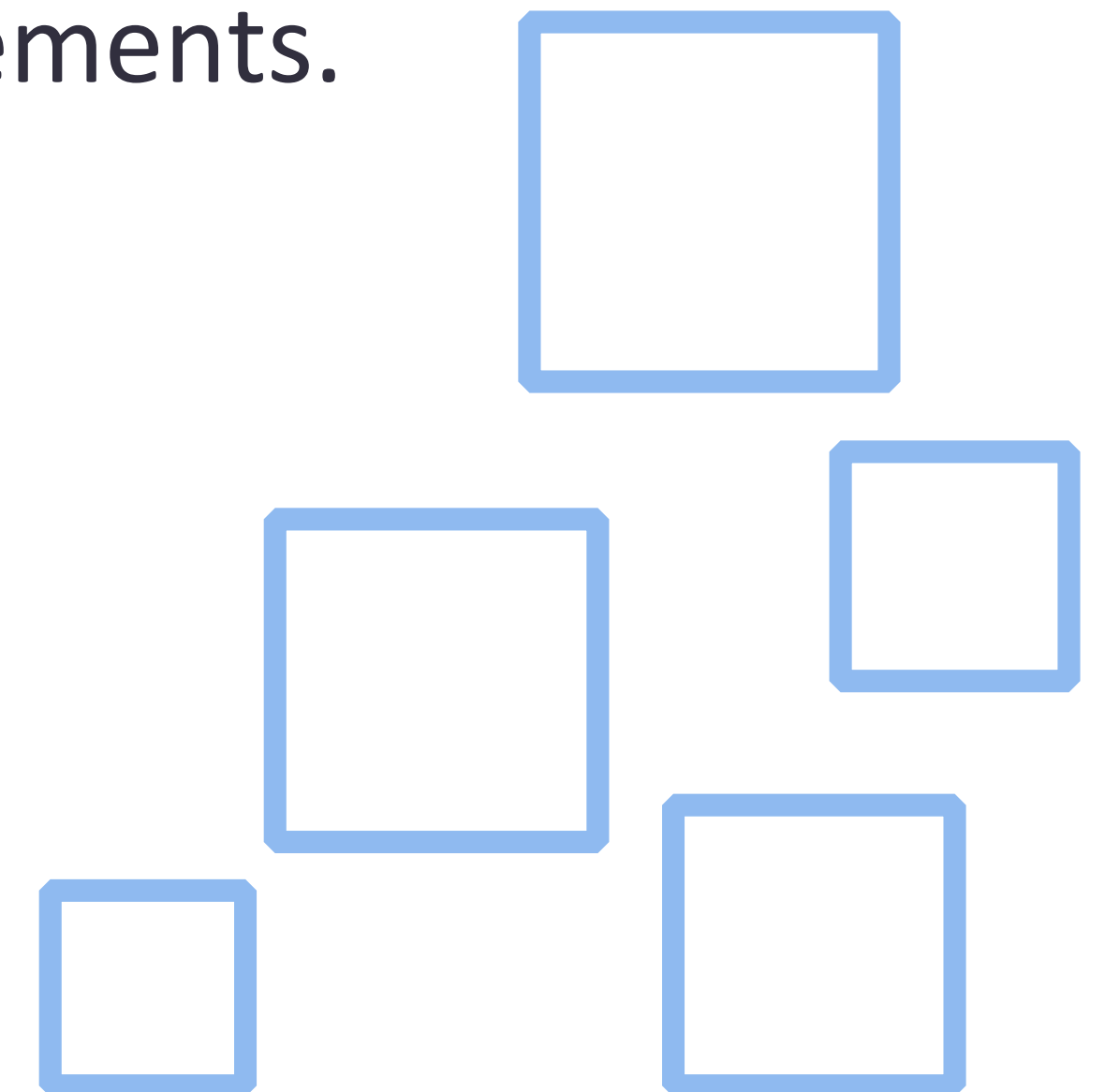


Conclusion

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- ✓ A database should be developed fits to the requirements.
- ✓ A careful analysis is the first step to identify the data requirements.
- ✓ Assumptions are fine!

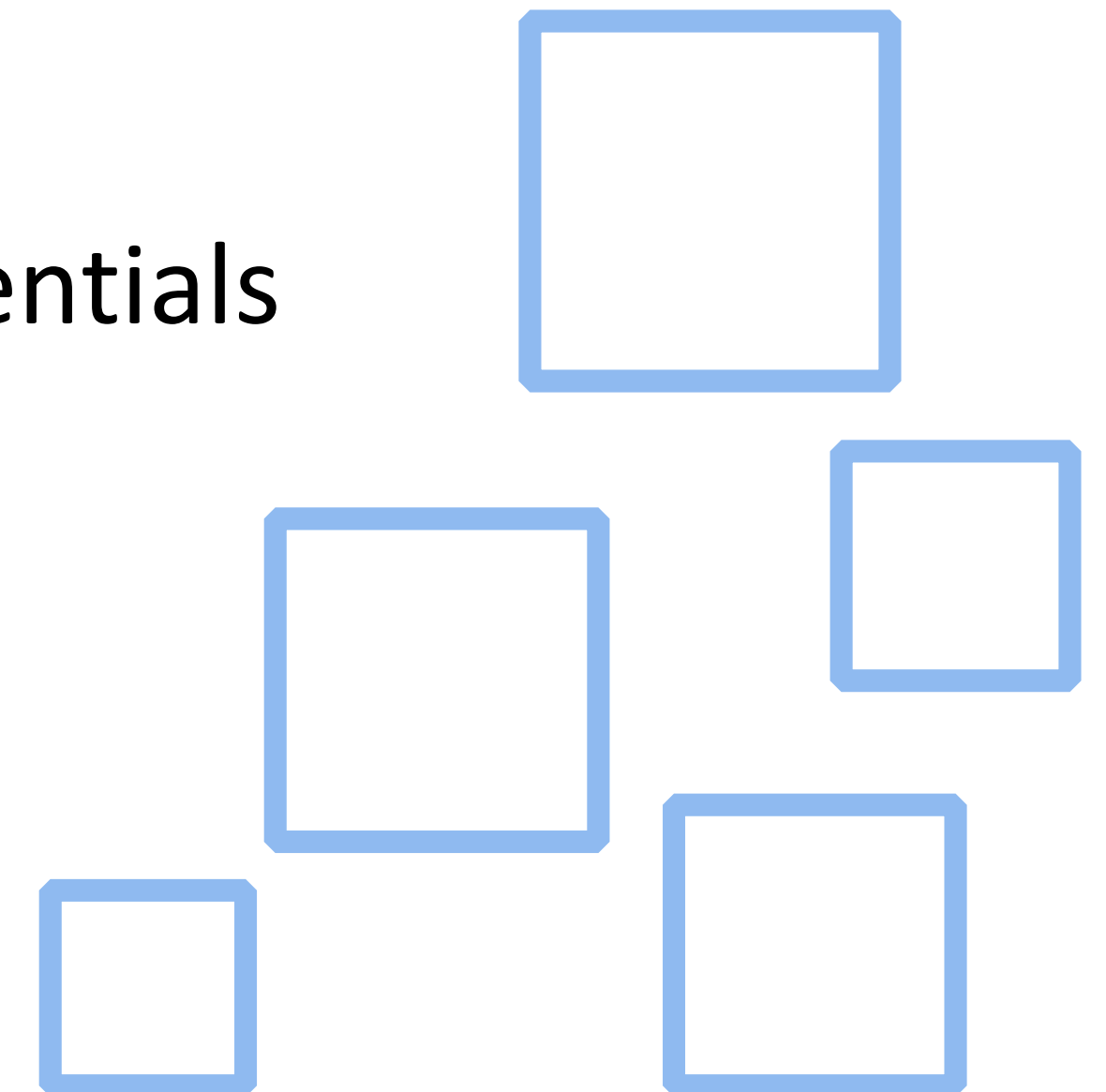


References

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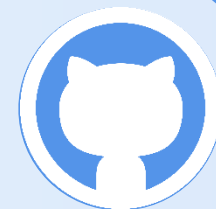


Course



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