

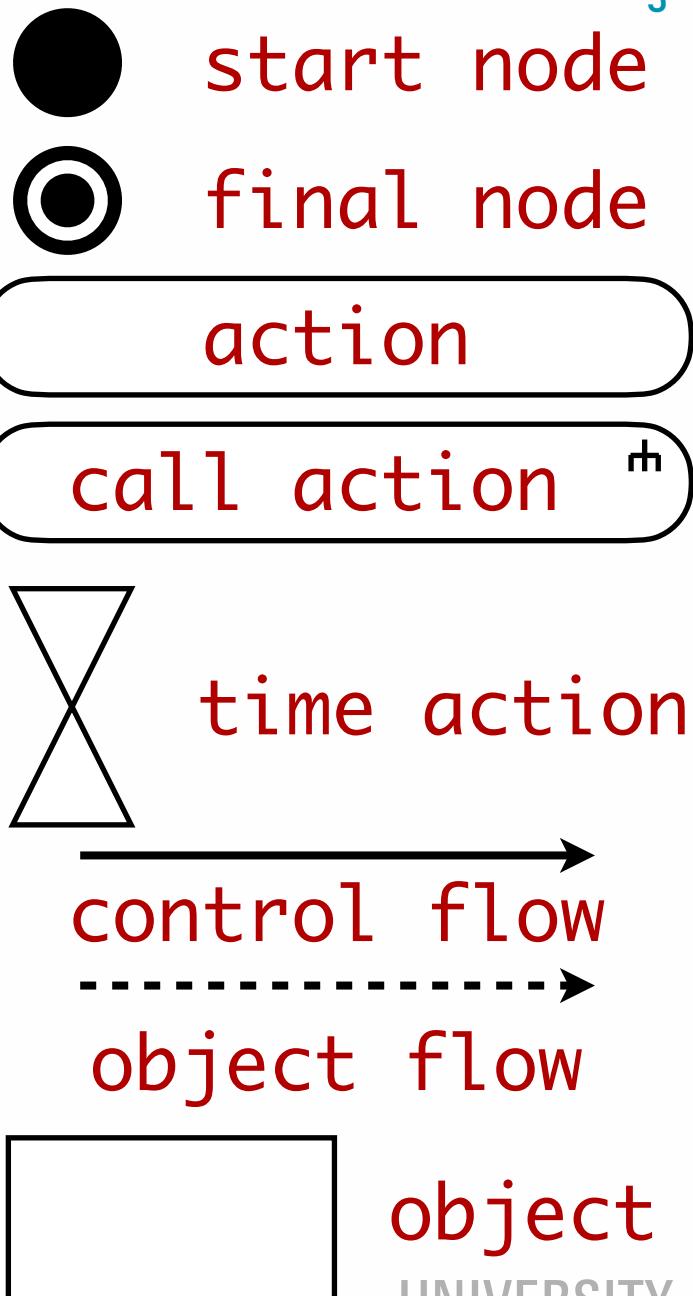
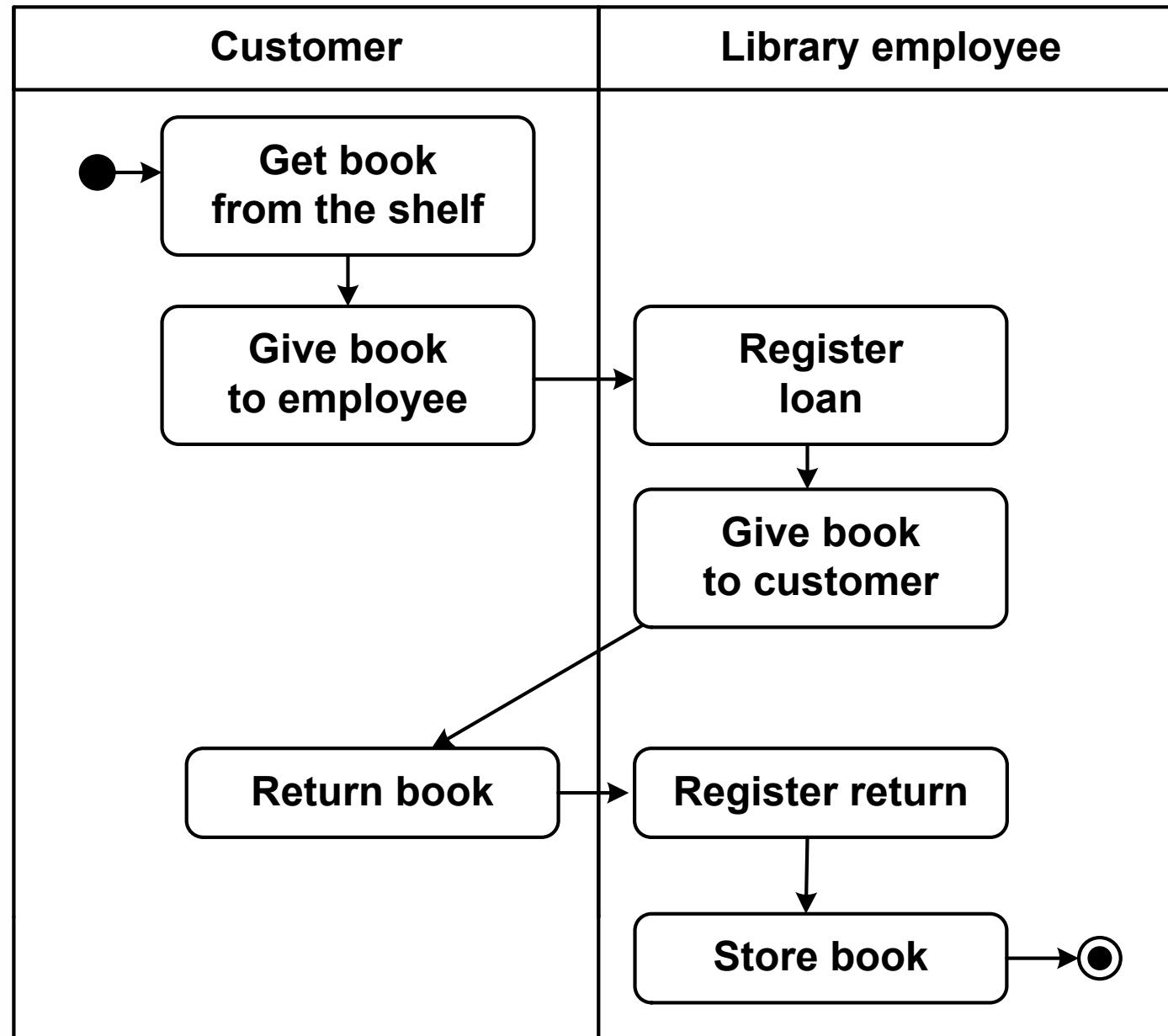
# Behavioural Modelling: Activity Diagrams

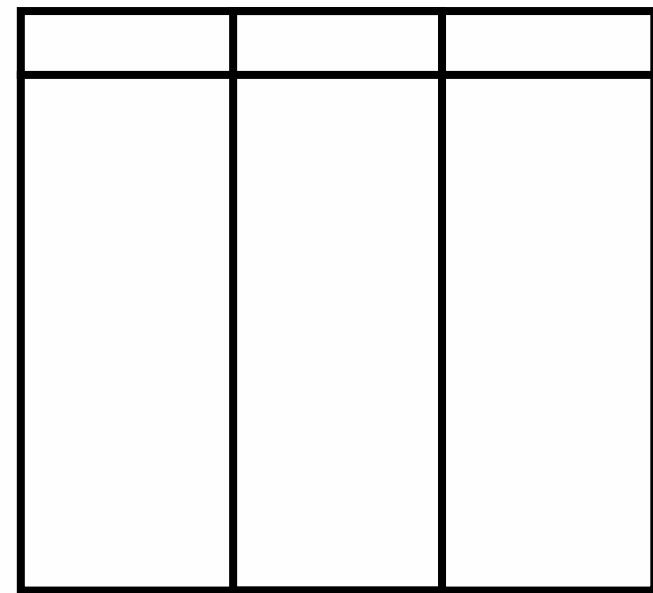
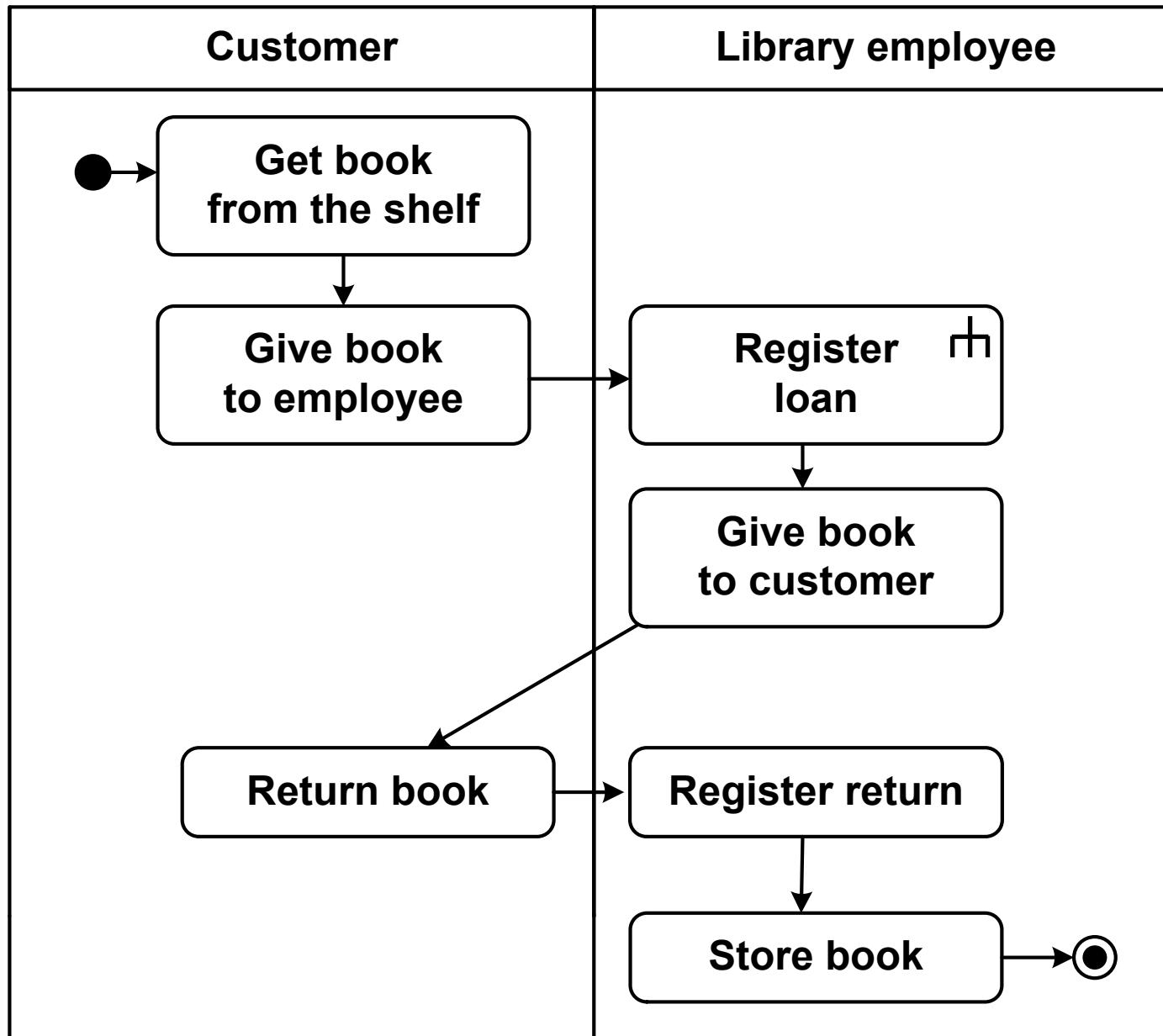
**Software Systems – Design – L4T1**

Dr. Vadim Zaytsev aka @grammarware, November 2020

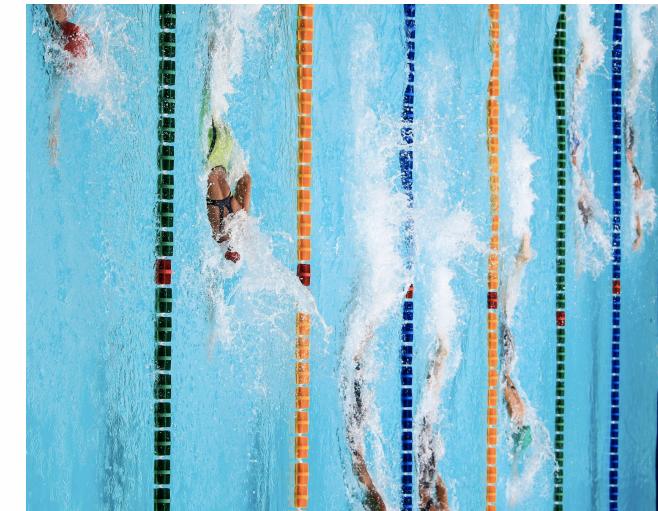
# Behavioural Modelling

- as opposed to **structural** modelling
- cf.: **static** view vs **dynamic** view
- Object Diagrams, Class Diagrams, ...?
  - Component Diagrams, Package Diagrams, ...
- Behavioural:
  - **Activity Diagrams**
  - **Interaction Diagrams**
  - **State Machine Diagrams**





swim lanes



# Notes

precondition:  
book is chosen

postcondition:  
book status changed

register loan

book loaned

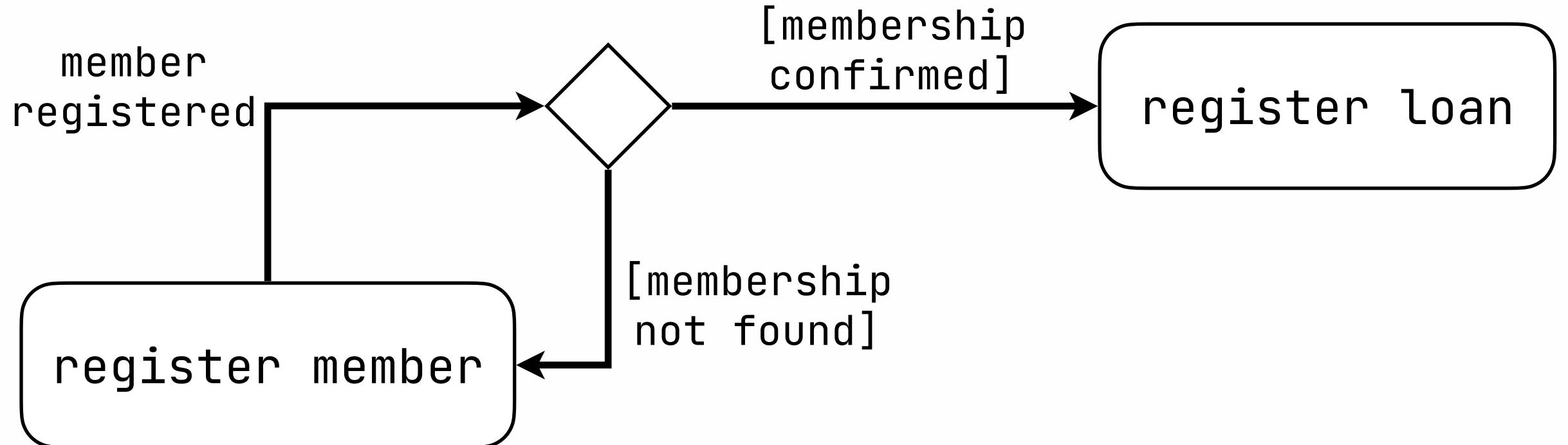
give book back

see the dedicated  
activity diagram

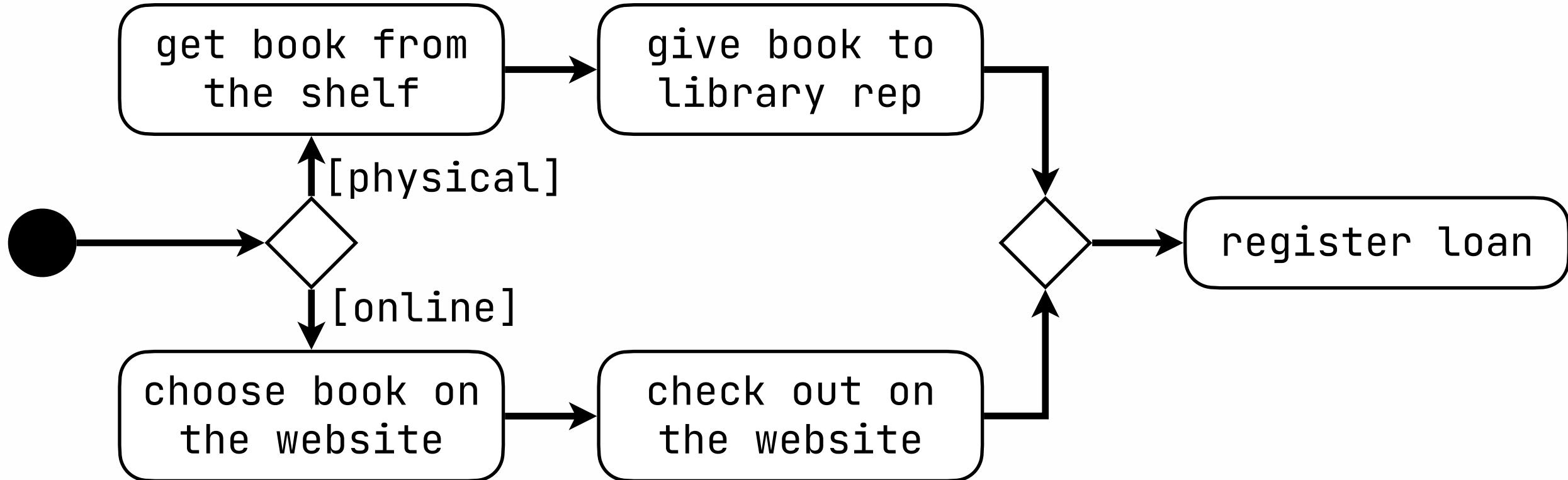
max 5 per person

add a printed  
confirmation of a loan

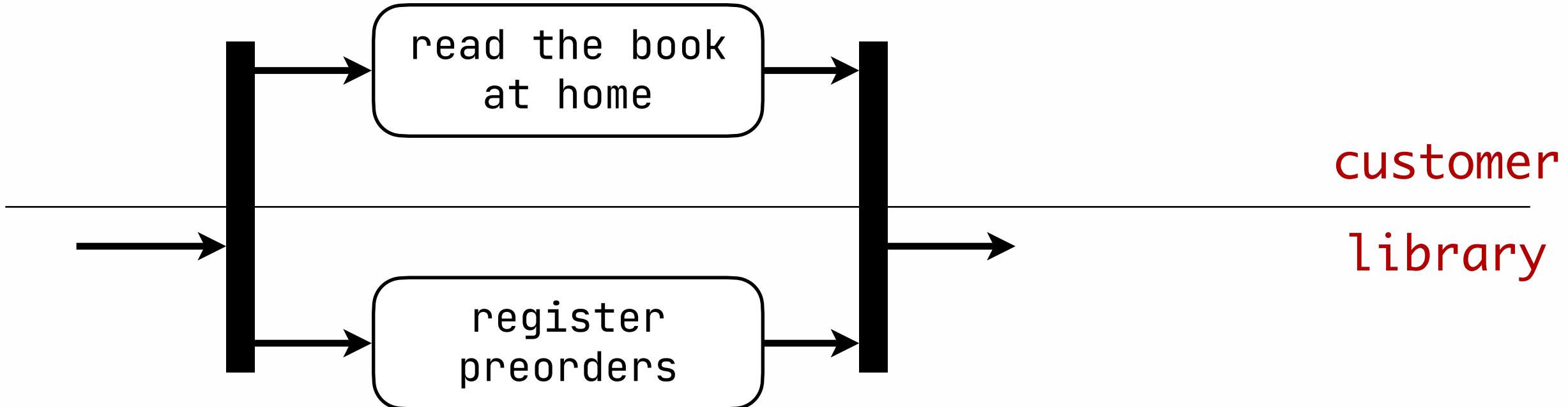
# Decisions and guards



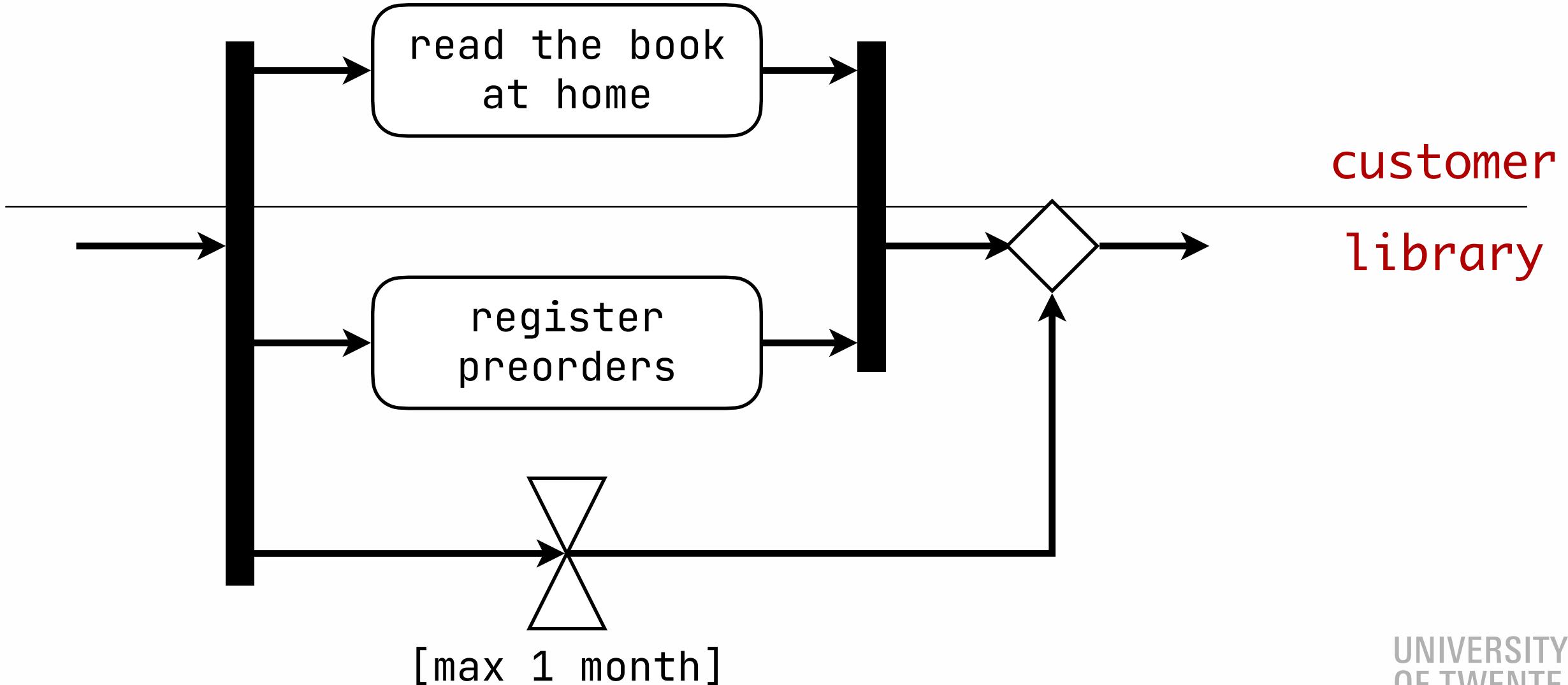
# Merges



# Fork and Rejoin



# Fork and Rejoin

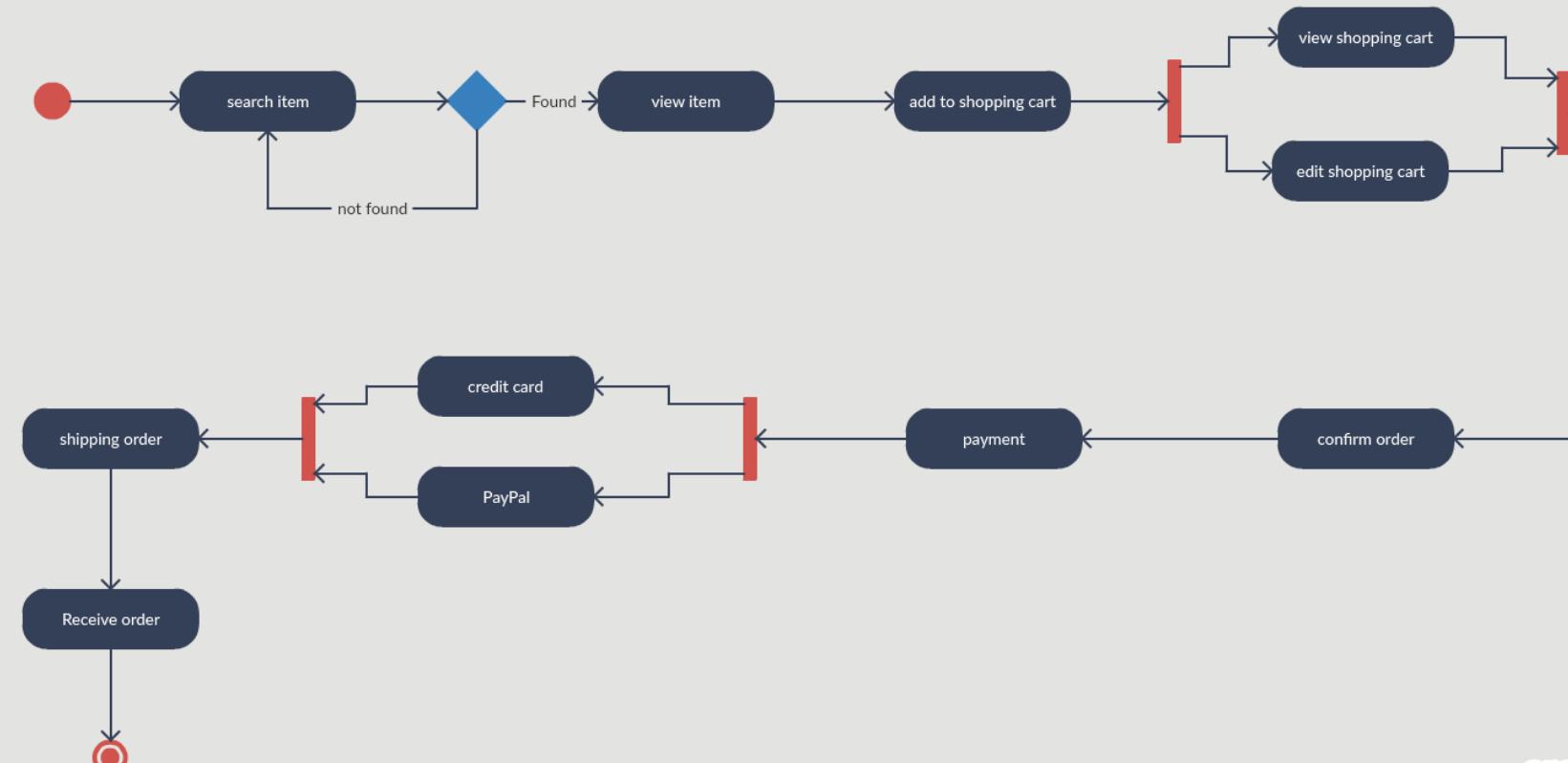


# Guidelines & Advice

- One start
- Actions first
- Identify actors, use swim lanes
- Find the flow
- Avoid loops
- Keep it simple
- Make it beautiful

# Common Mistake: Branch vs Fork

ONLINE SHOPPING SYSTEM for ABC Co.



# Conclusion

- *An activity diagram shows how an activity is broken down to a coherent series of actions*
- Includes only relevant elements
- Activities are carried out by actors
- UML has a notation
  - actors are swim lanes
  - actions are boxes
  - states are dots

# Topics/slides Disclaimer

- Good ✓

- watch before Q&A
- embrace reality
- try out at labs
- ask for feedback
- apply to project
- dig deeper
- recall from slides

- Bad ✗

- slides over videos
- assumptions
- blanks
- timing

