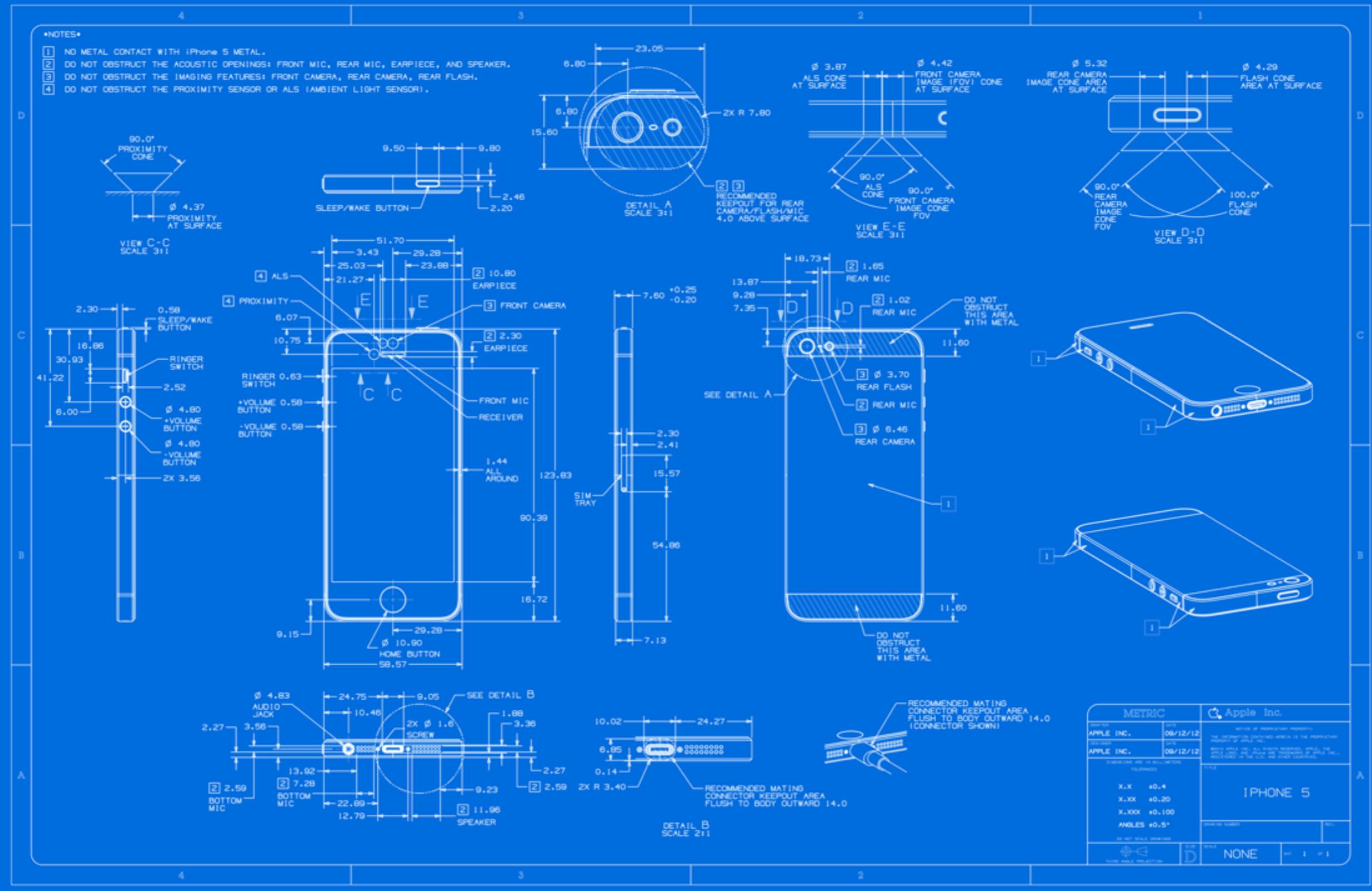


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UML

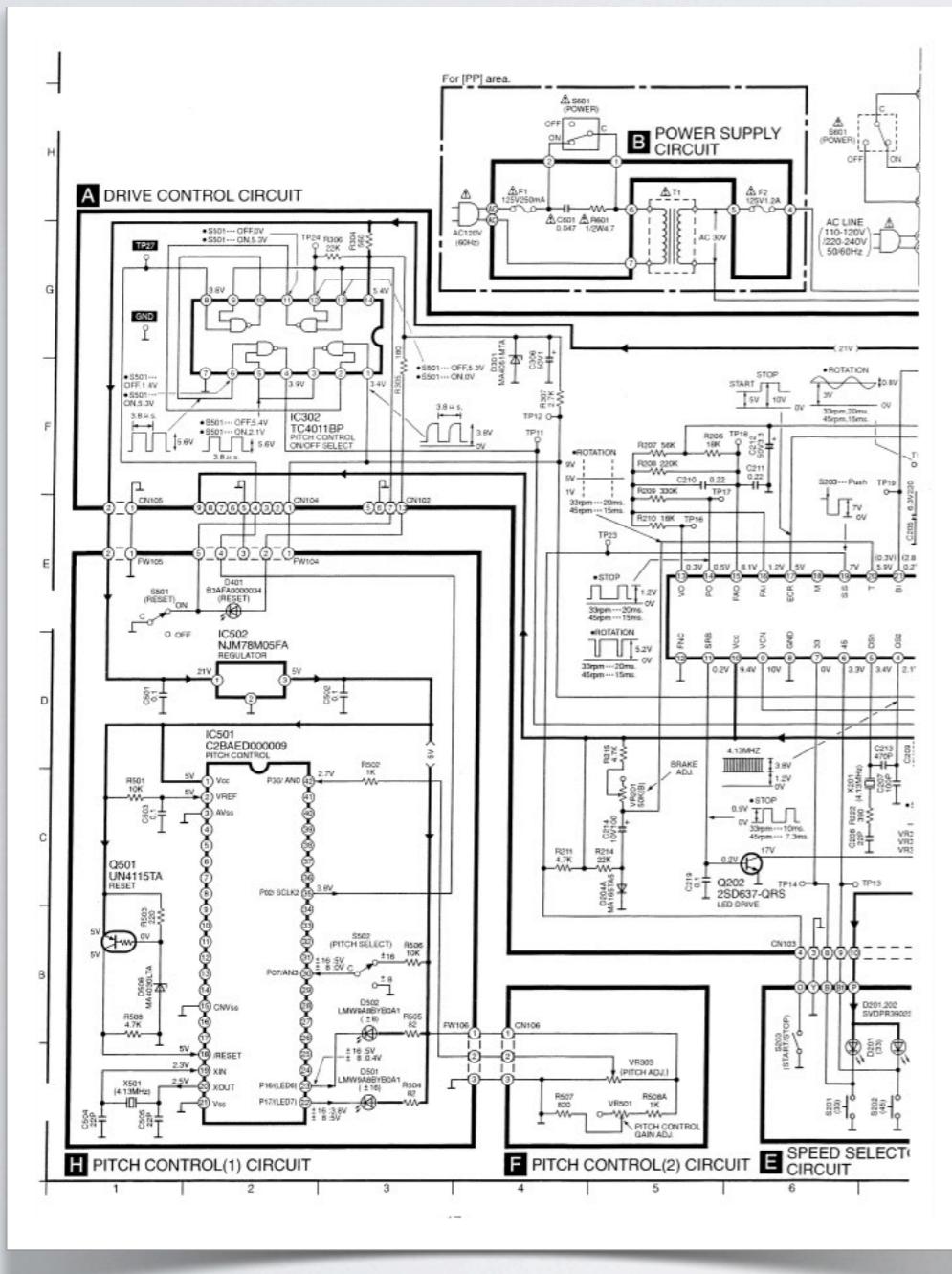
for Business Analysts

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How Do We Communicate Engineering Ideas?

Recognized Standards



- Circuit diagrams
- Building plans
- Machinery blueprints

HOW ABOUT SOFTWARE?

Such tool should be...

- ✓ Unambiguous
- ✓ Descriptive
- ✓ Consistent
- ✓ Applicable to all design aspects

UML Evolution

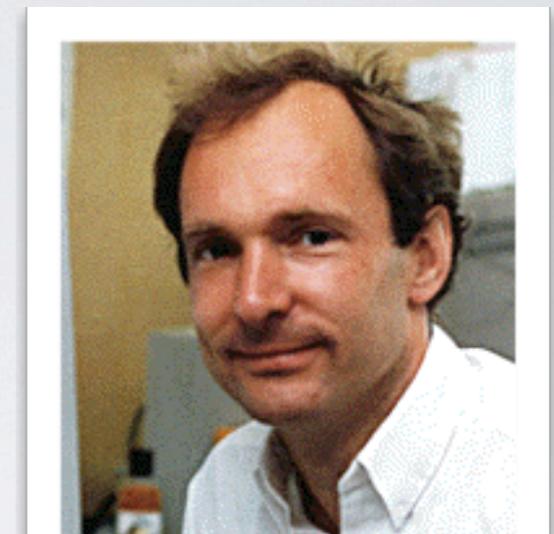
1990s



Grady Booch



Ivar Jacobson



James Rumbaugh

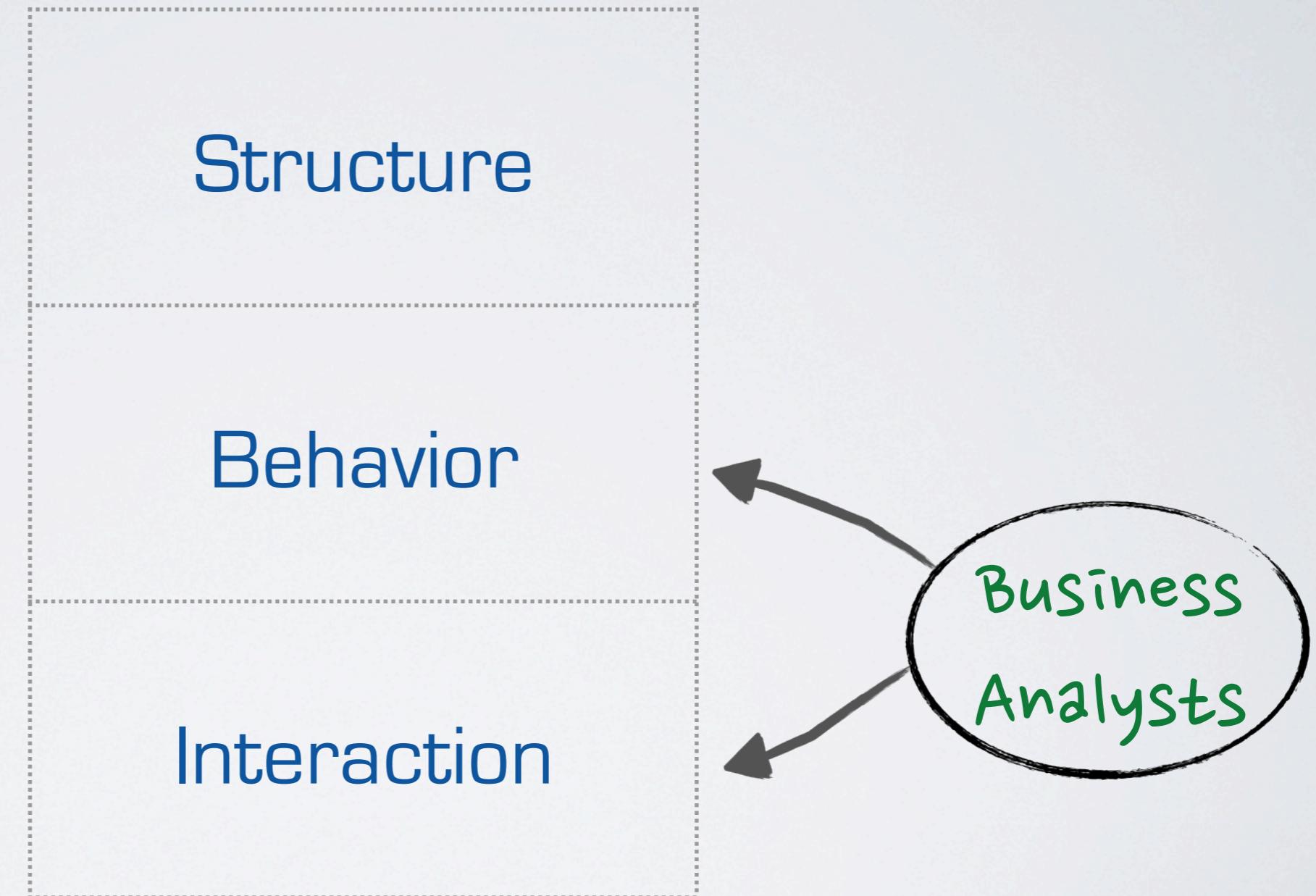
1997



2000

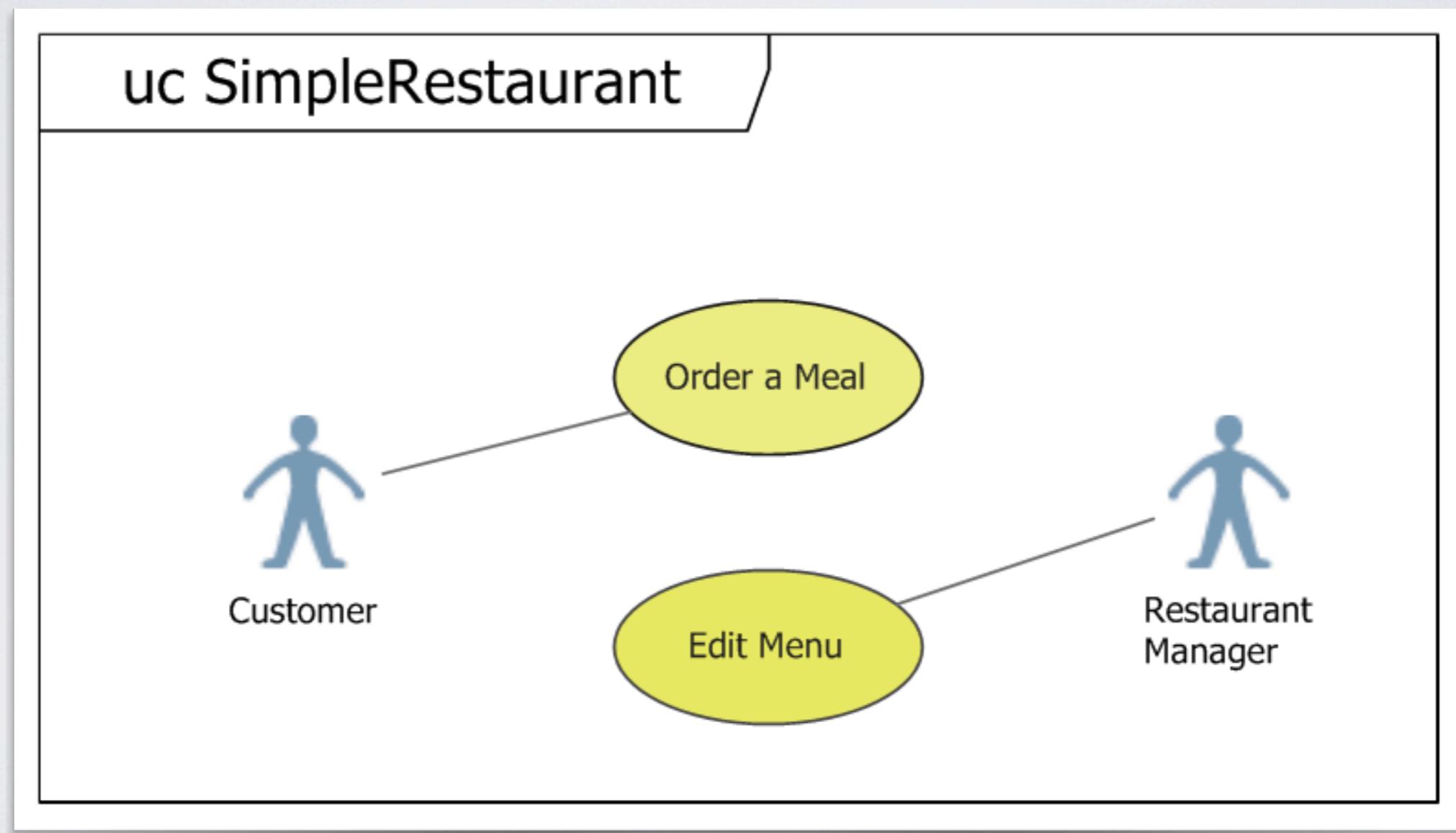


UML Diagram Types

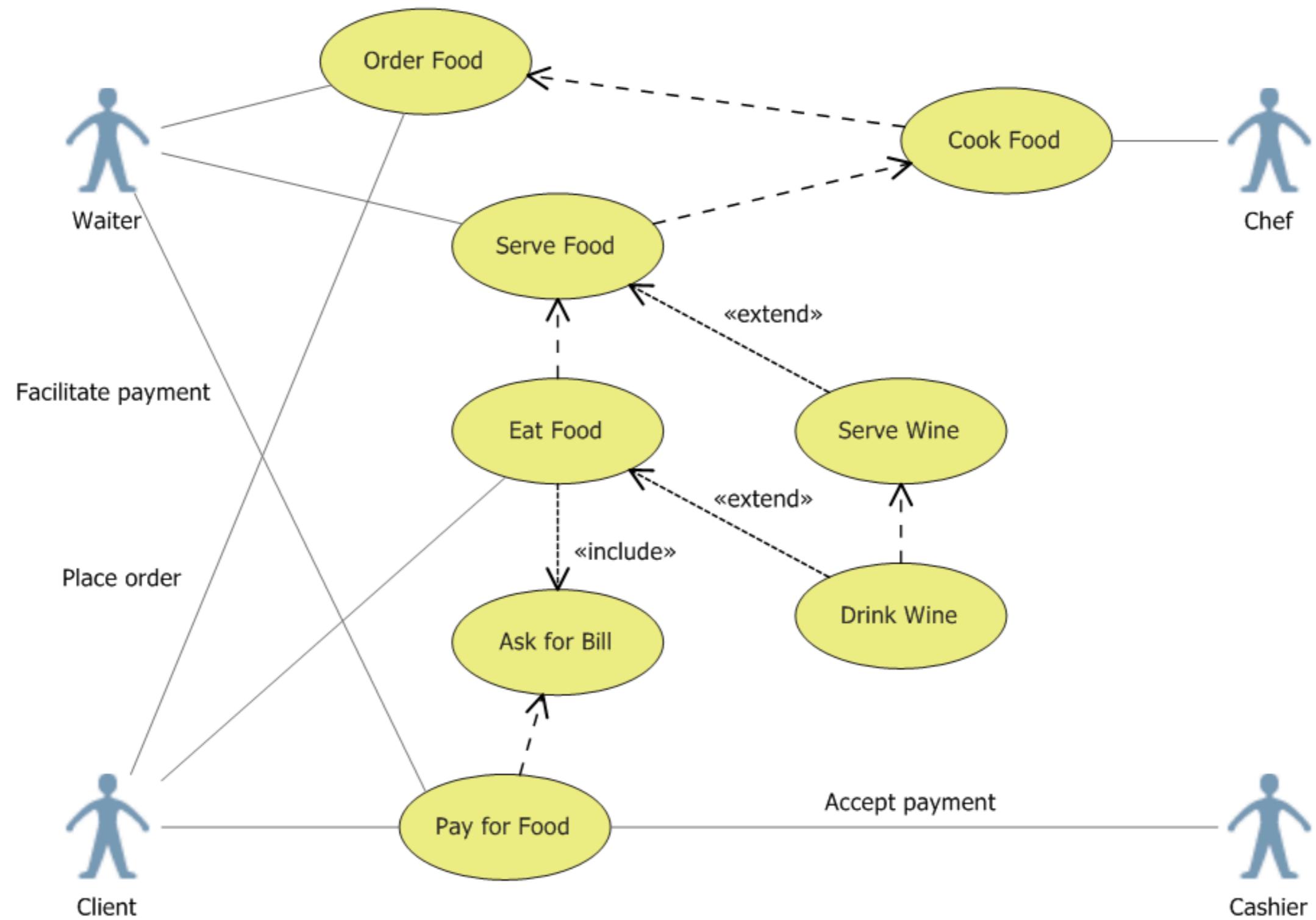


Use Case Diagram

Who uses my system and what they do with it

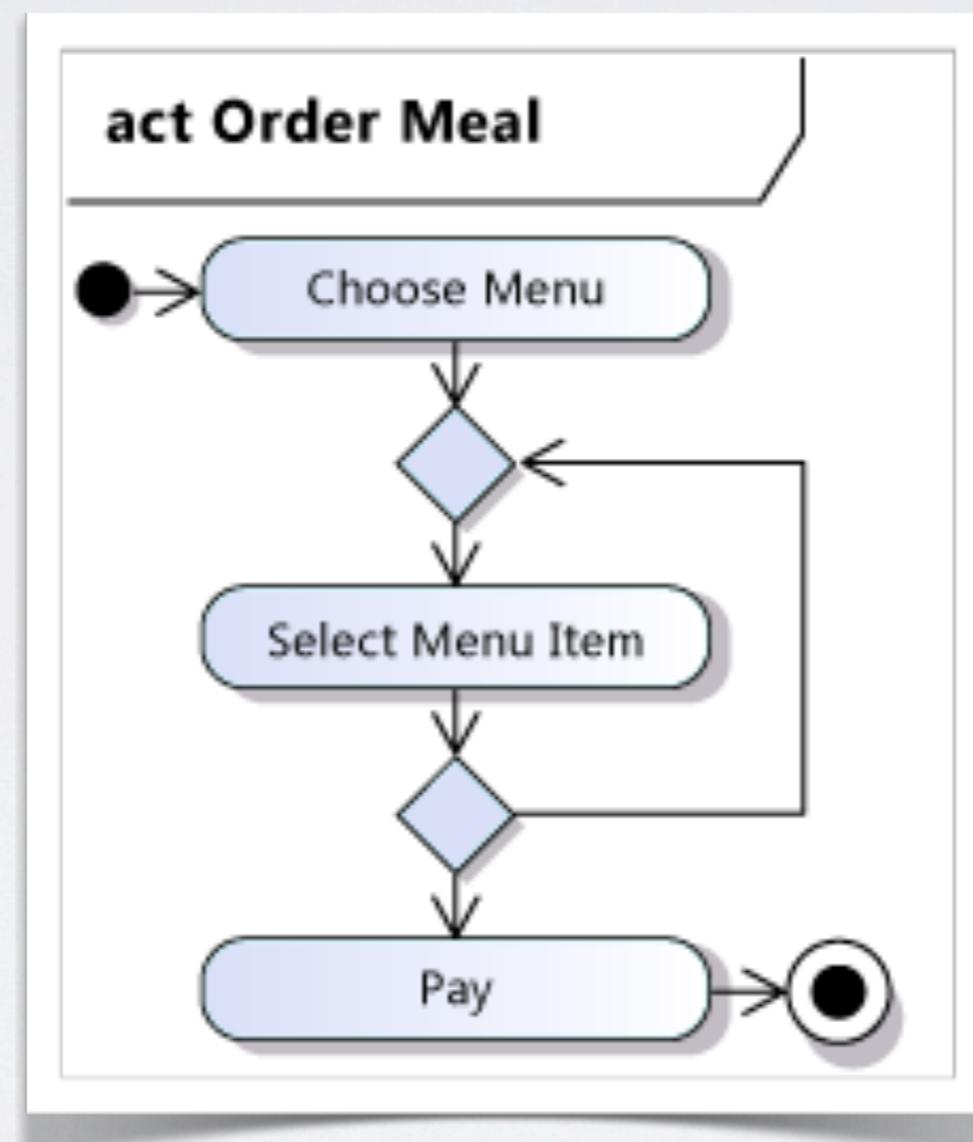


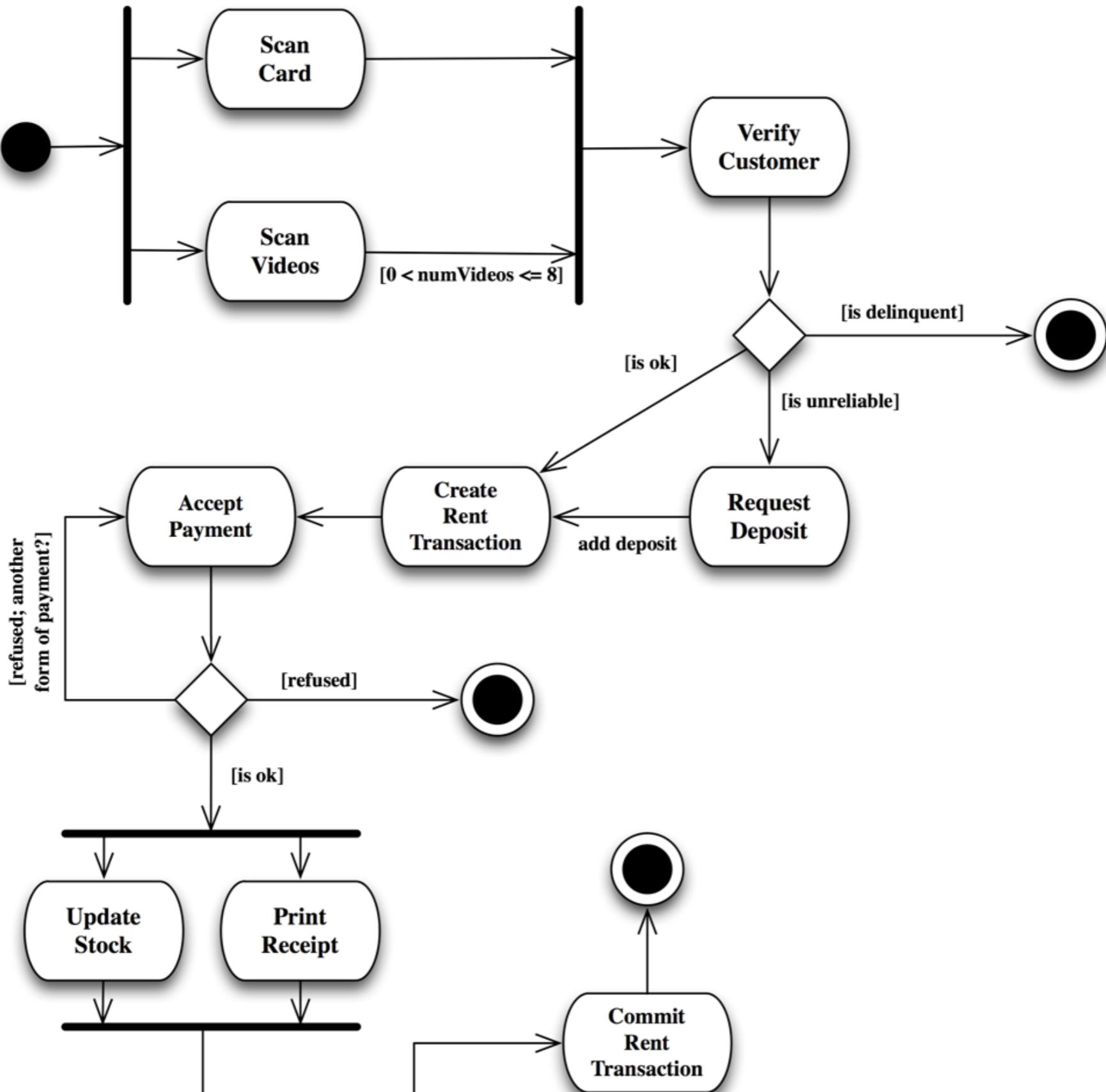
uc AdvancedRestaurant



Activity Diagram

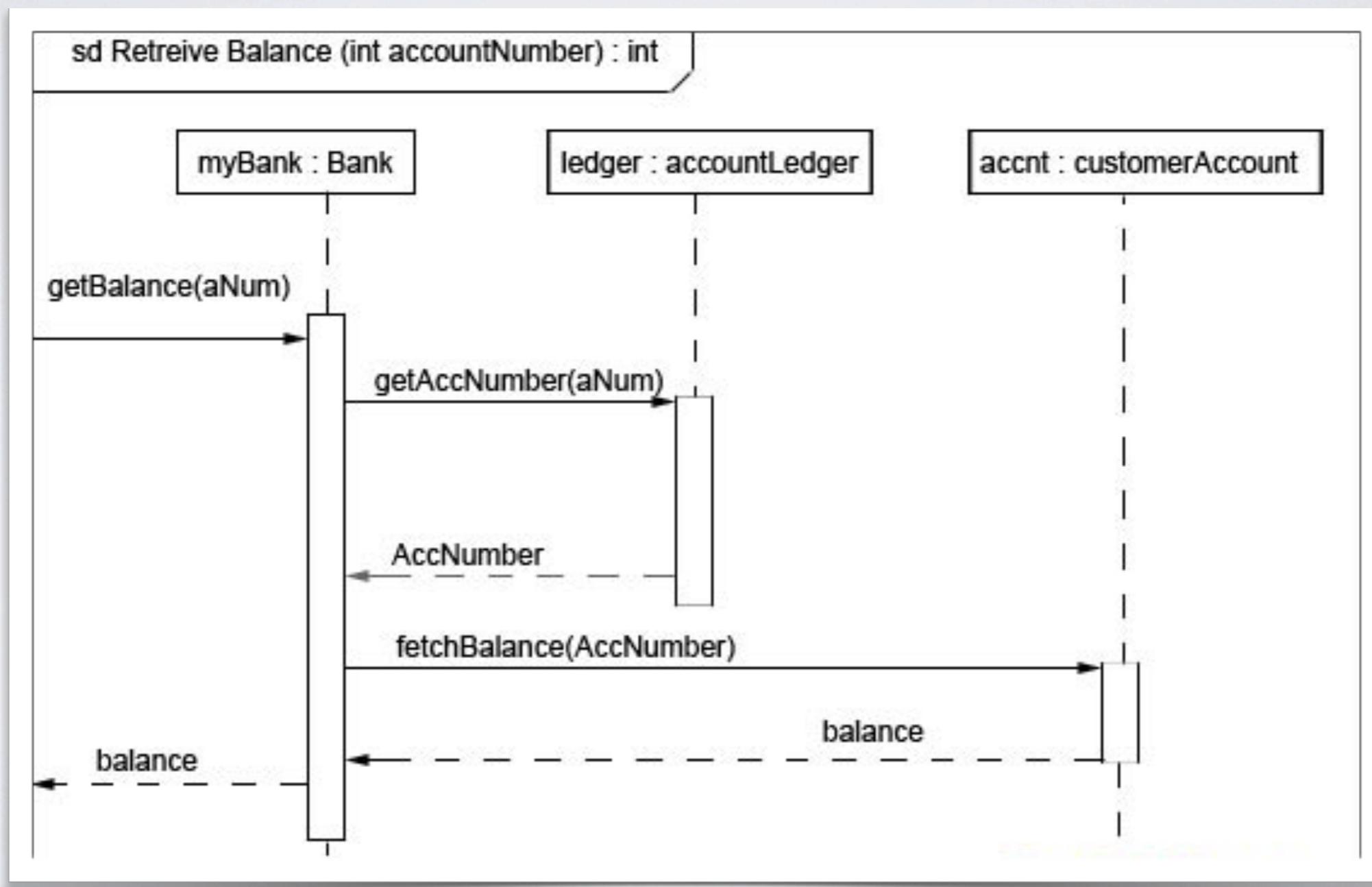
Flow of work and information between the users and the system

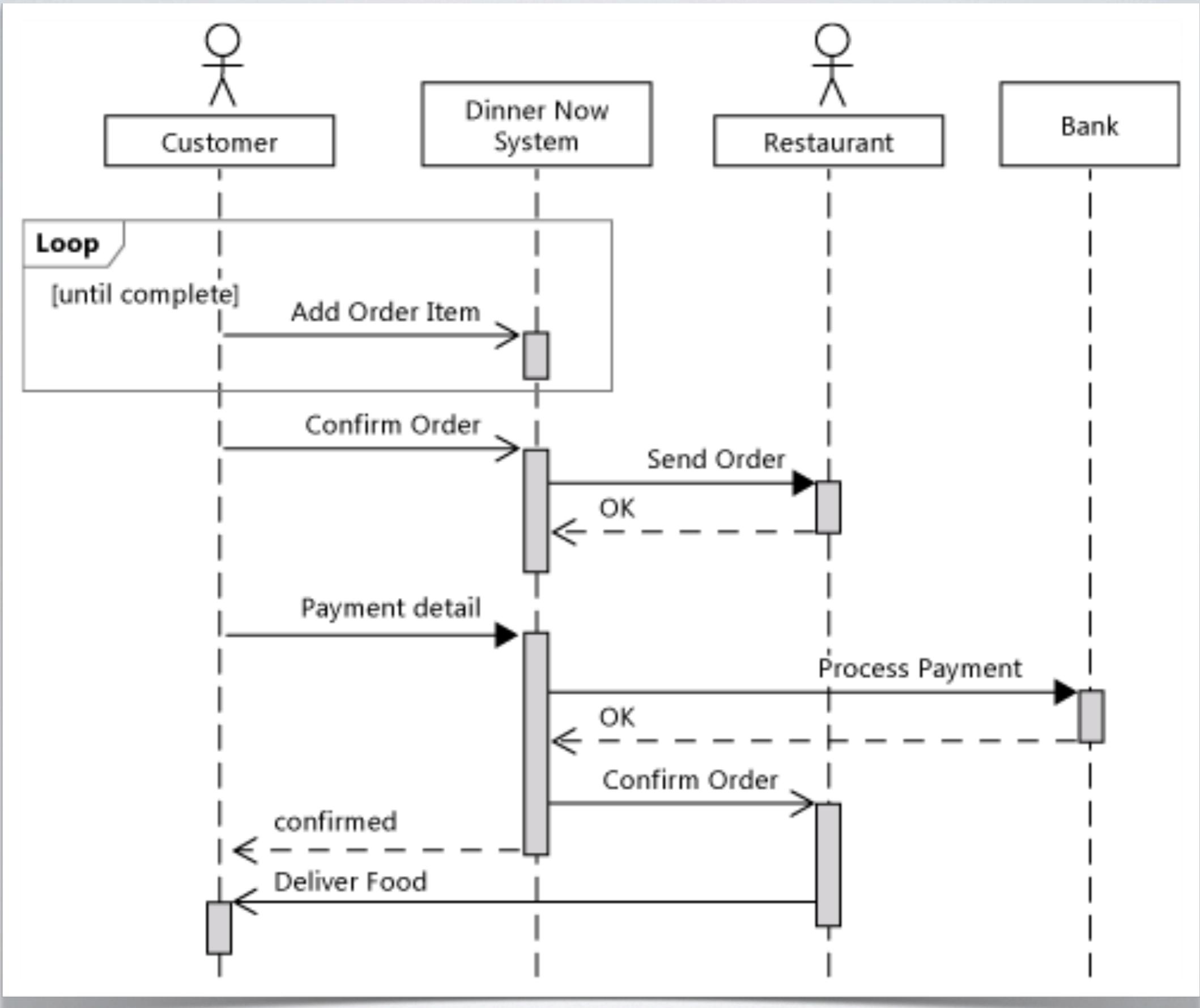




Sequence Diagram

Order of interactions between the users and the system





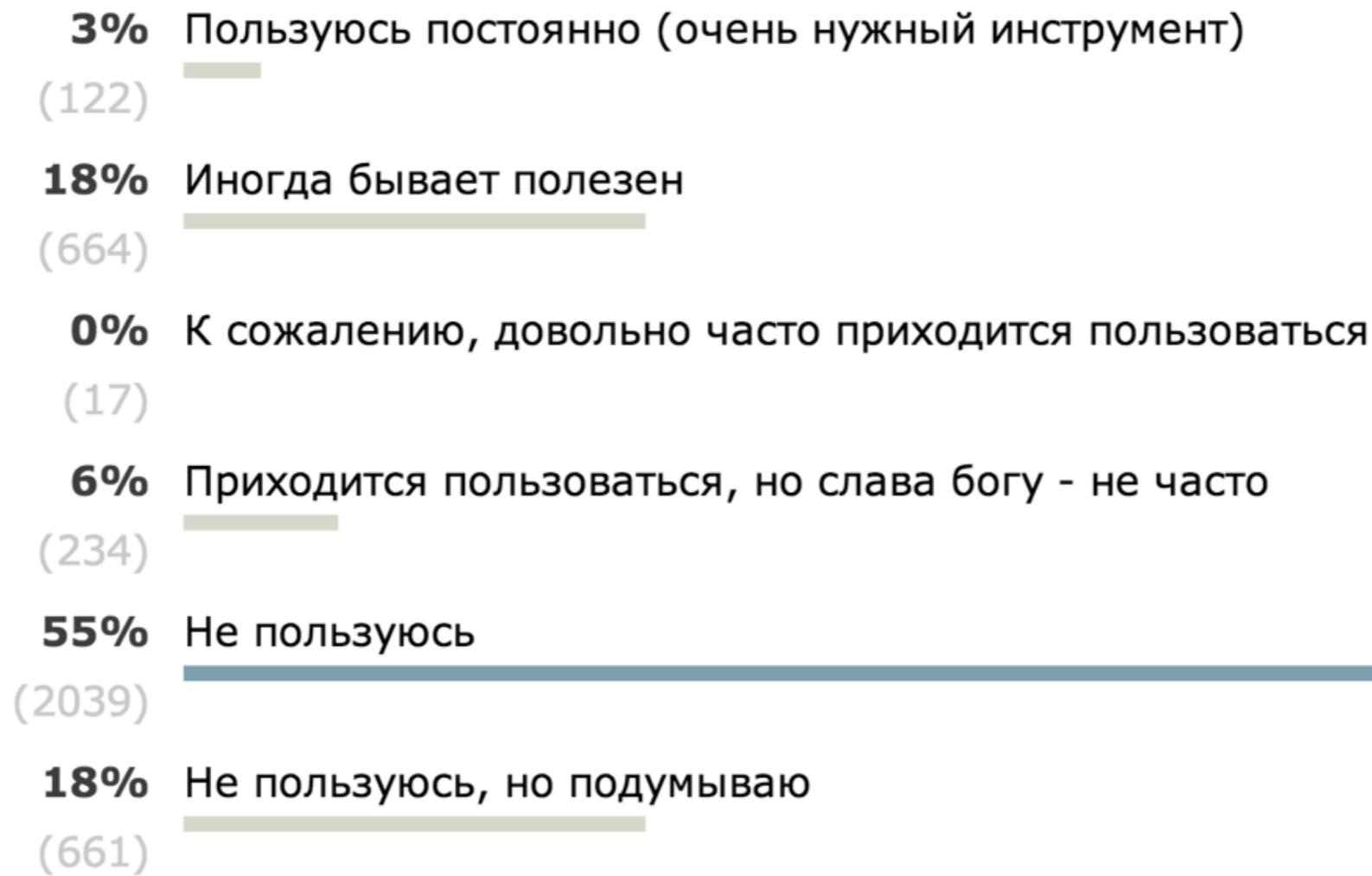
UML Criticism

- Easier to solve a single task once than learn the entire methodology & notation
- Some useful diagrams are not included
- Maintenance becomes a burden; a certain level of redundancy exists

UML Poll on habrahabr.ru

55% don't use, 27% use, 18% consider using

Используете ли вы UML?



Проголосовало 3737 человек. Воздержалось 1046 человек.

UML is a tool, know when to use it

- Code generation, Model-Driven Development
- Communicating knowledge to other teams, esp. remote
- Systems with significant up-front design phase and fairly stable processes (Telecom, Healthcare, Defense, Science, large enterprises)
- When mistakes are costly
- Documenting the system after it is completed

Next Time

- More diagrams
- Tools for creating UML models
- Demo!

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UML

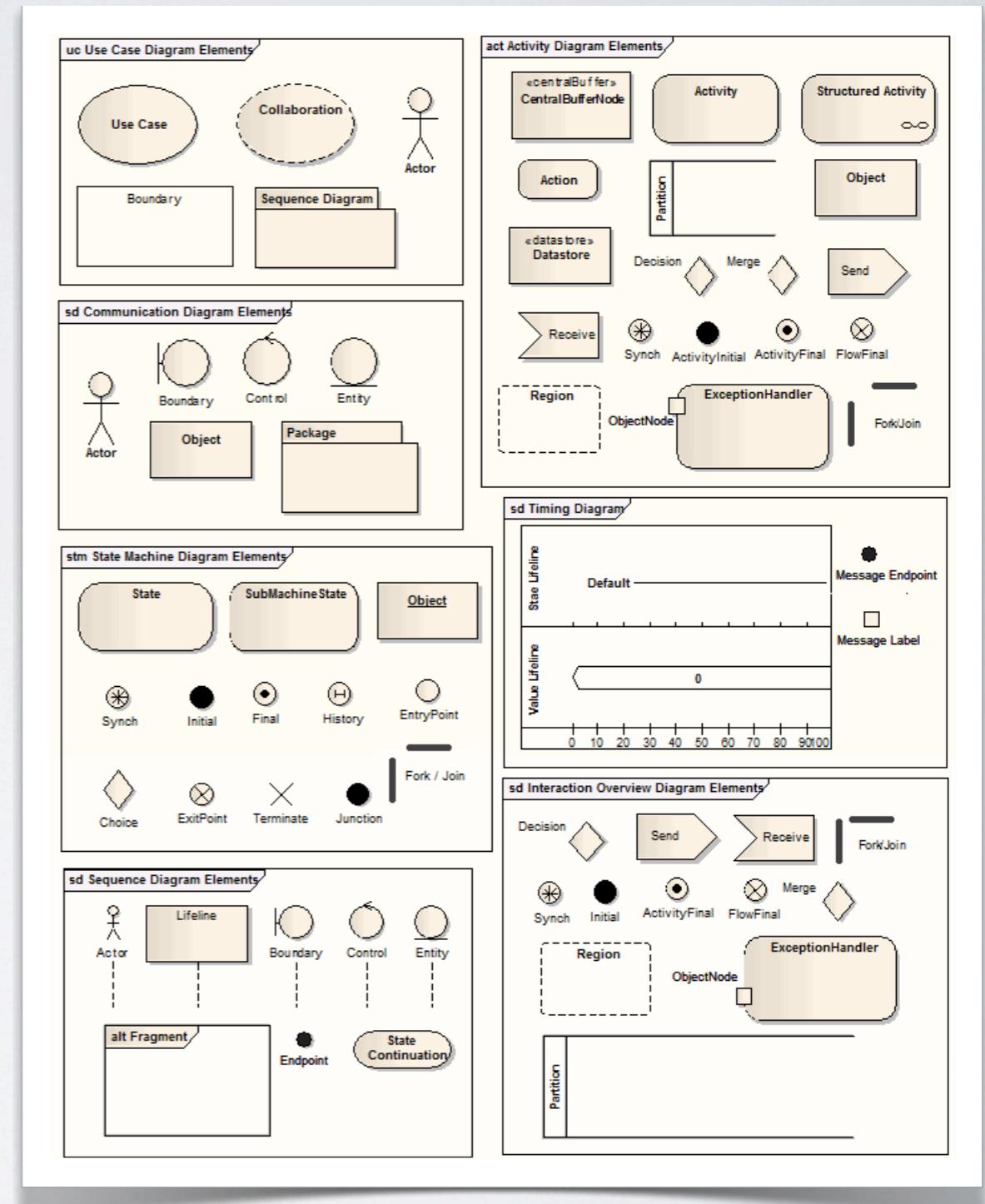
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Part 2

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Part 1: Recap

- Purpose of UML
- UML diagram types
- Behavior diagrams:
 - ✓ Use Case
 - ✓ Activity
 - ✓ Sequence
- Guidelines for using UML

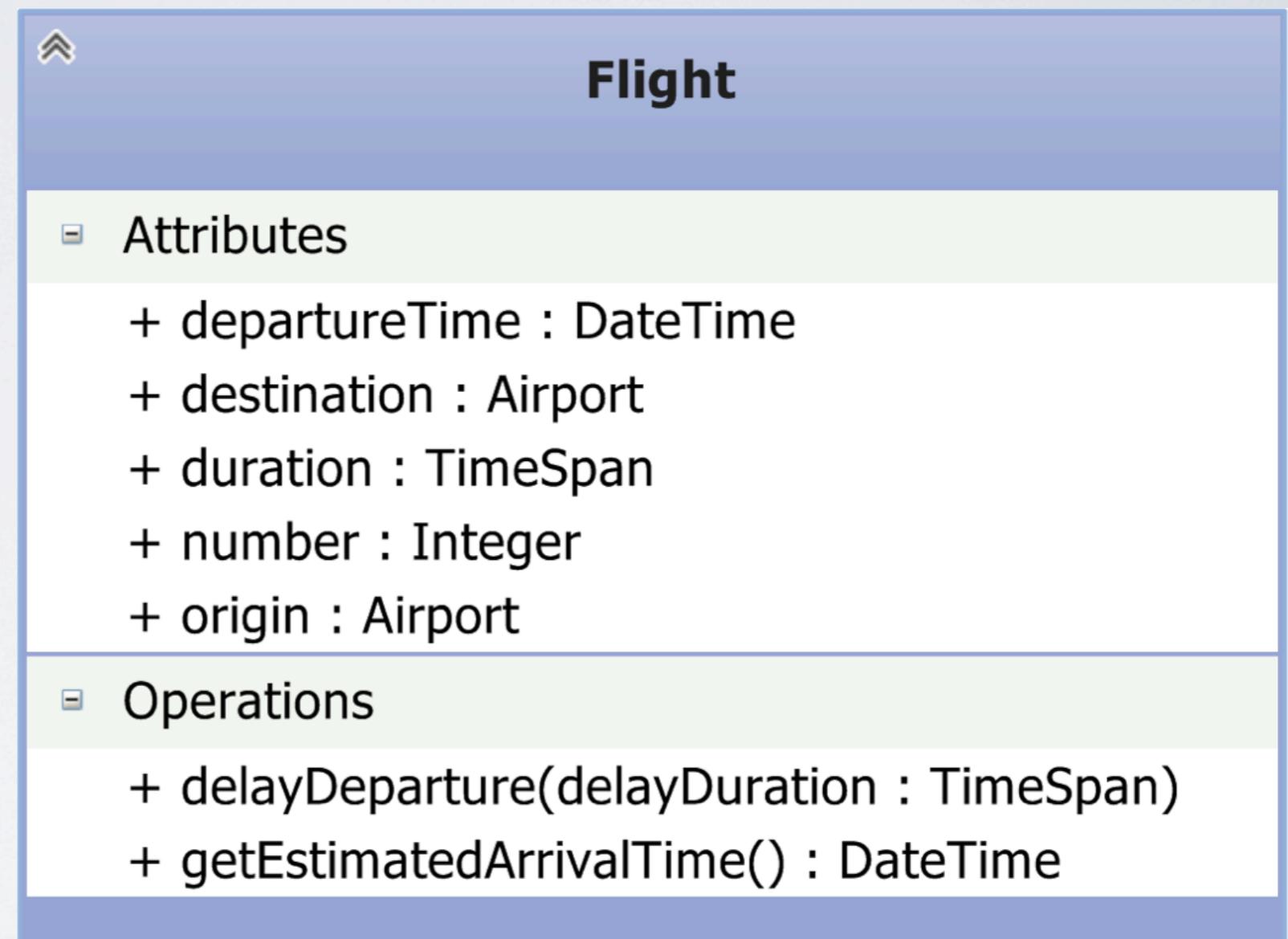


Structure diagrams

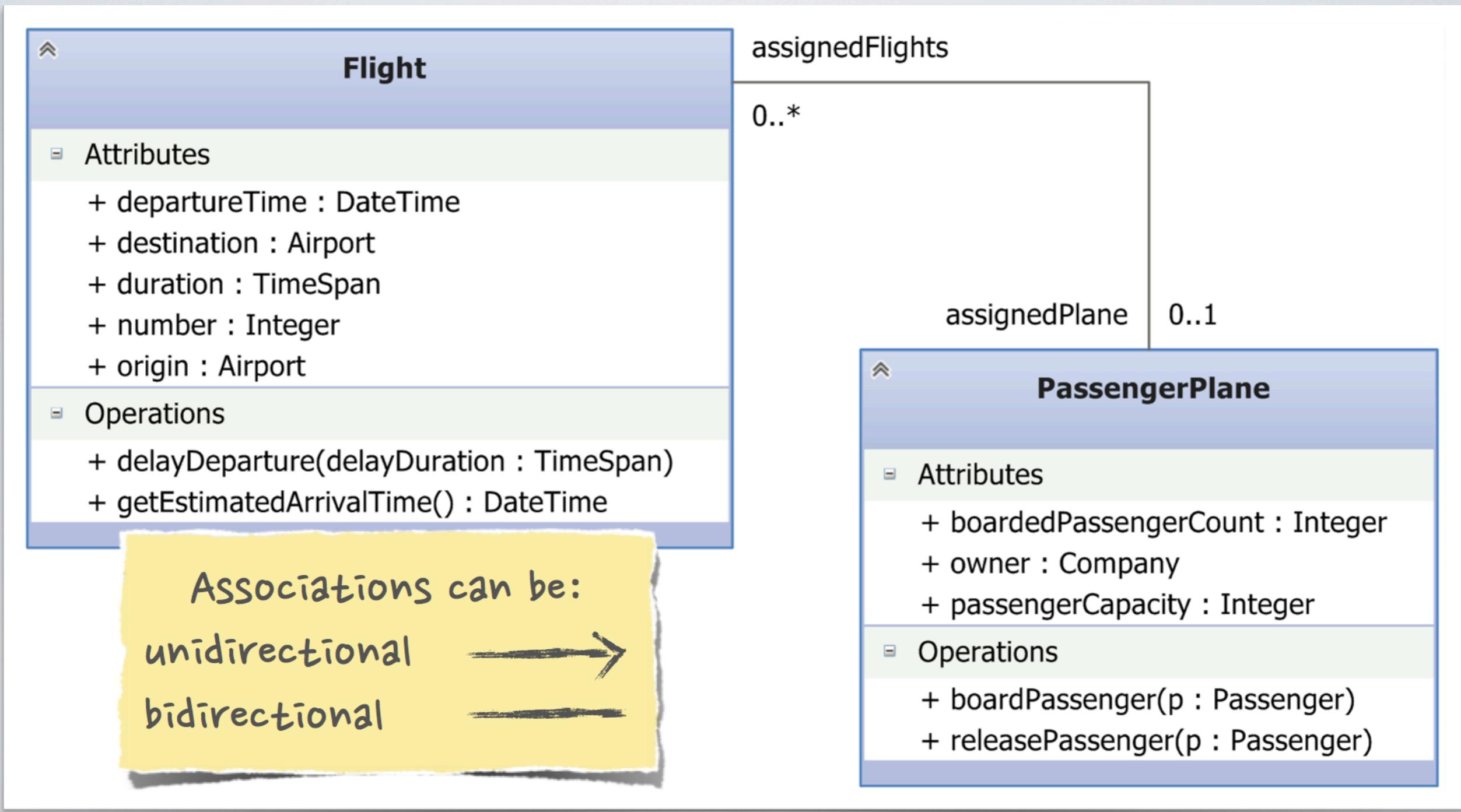
- Static structure of the system
- Focus on elements and relationships
- Irrespective of time

OOP/OOD in 15 minutes

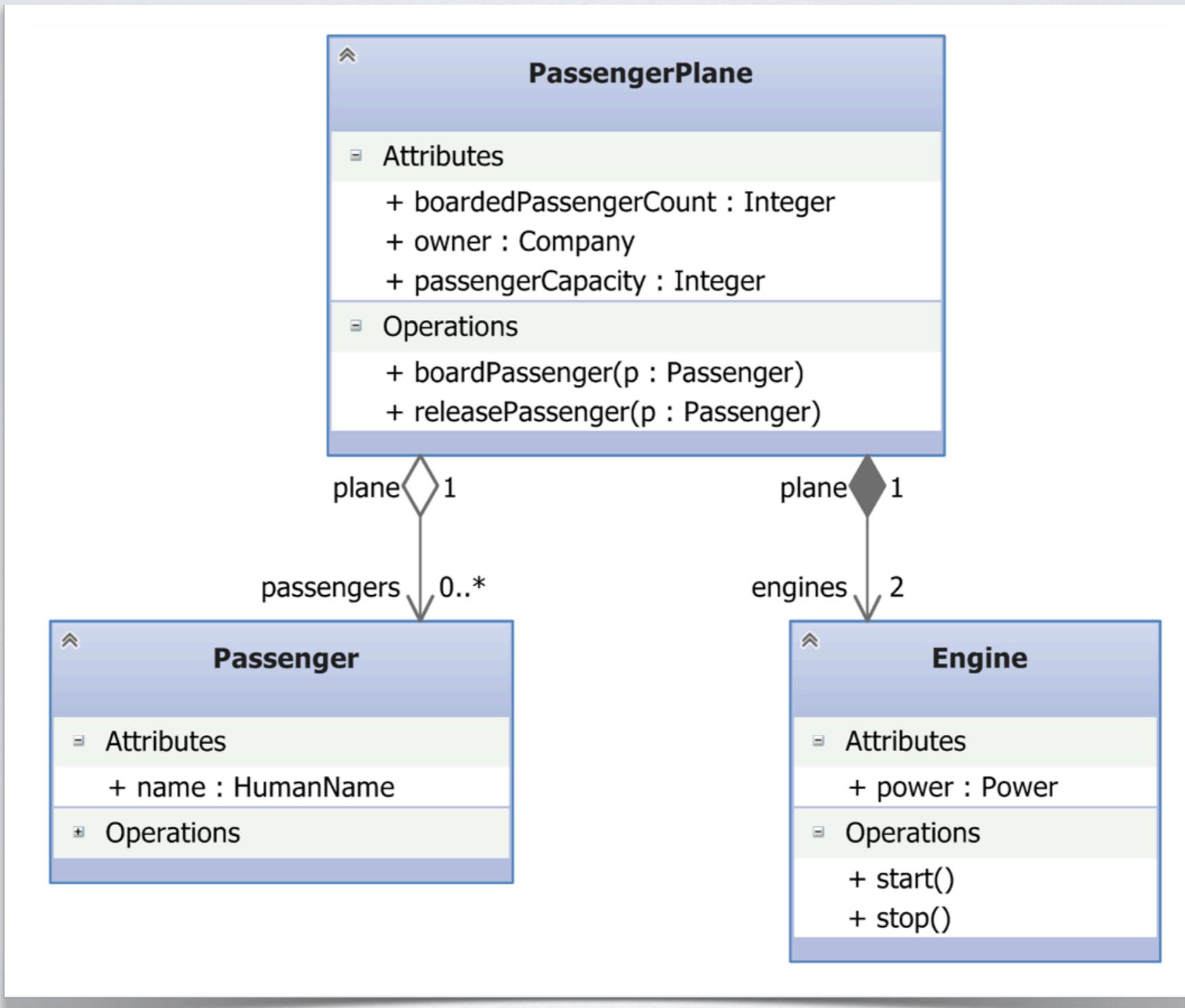
- Objects
- Classes
- Attributes
- Behavior
- Visibility



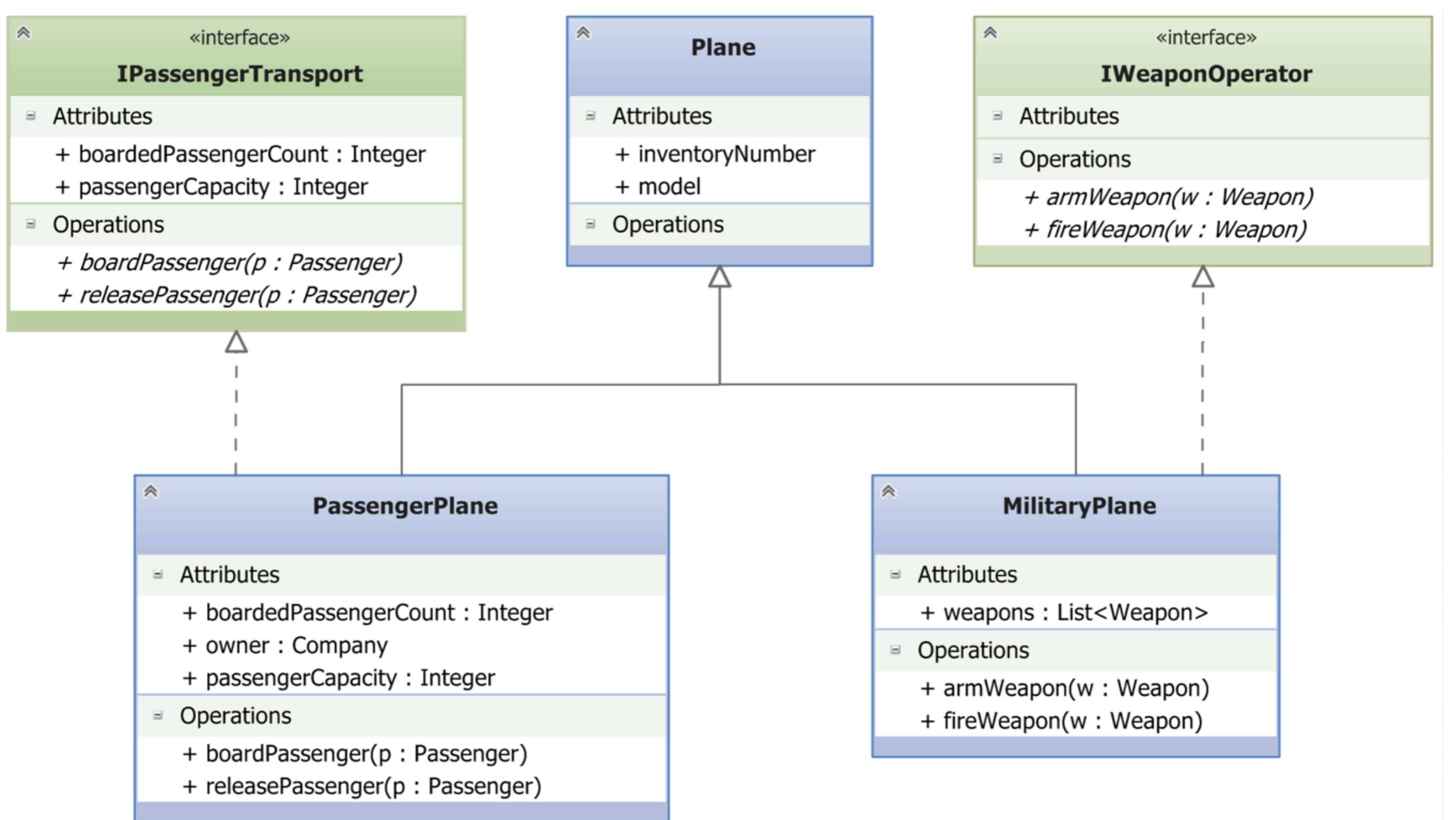
Associations



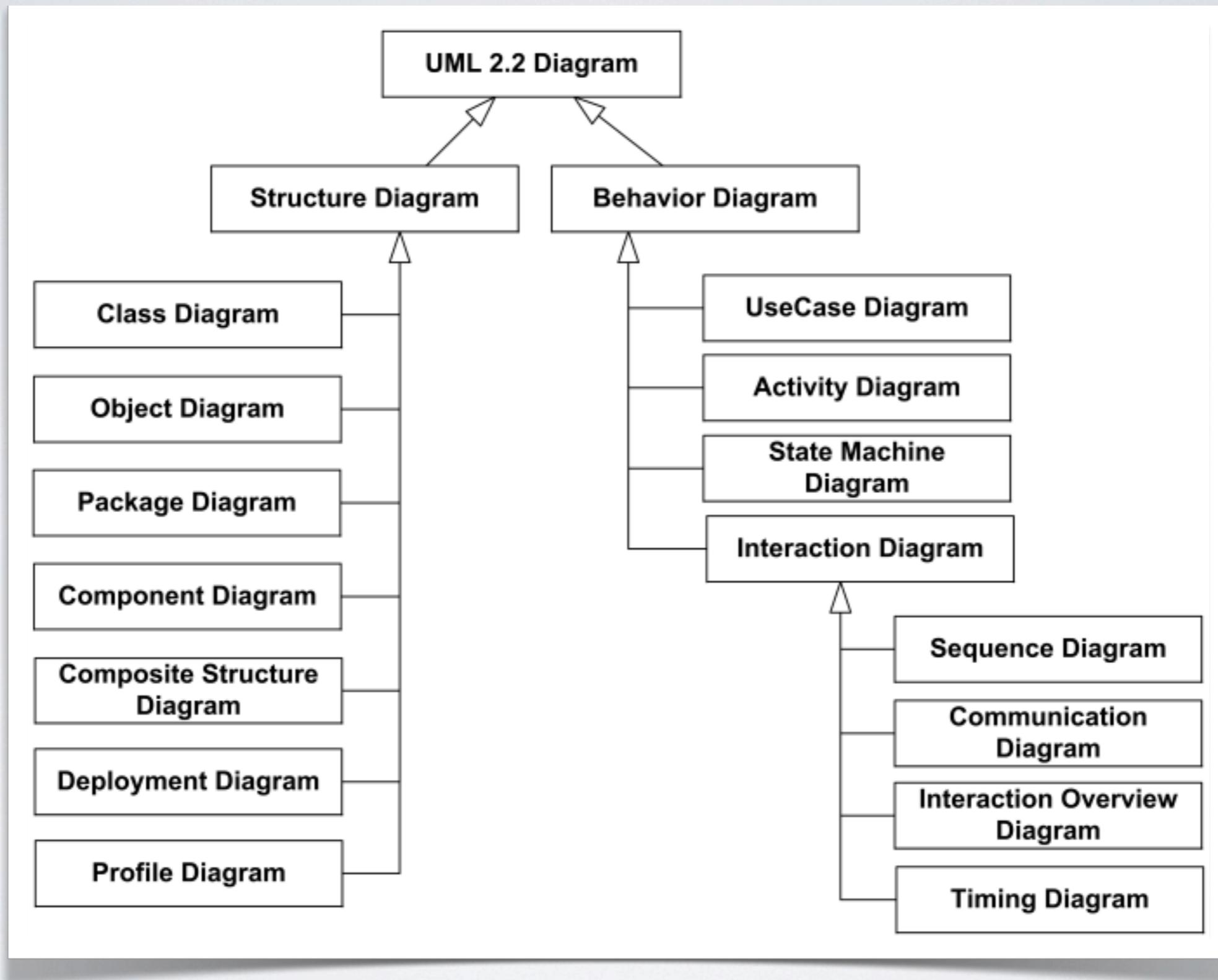
Aggregation & Composition



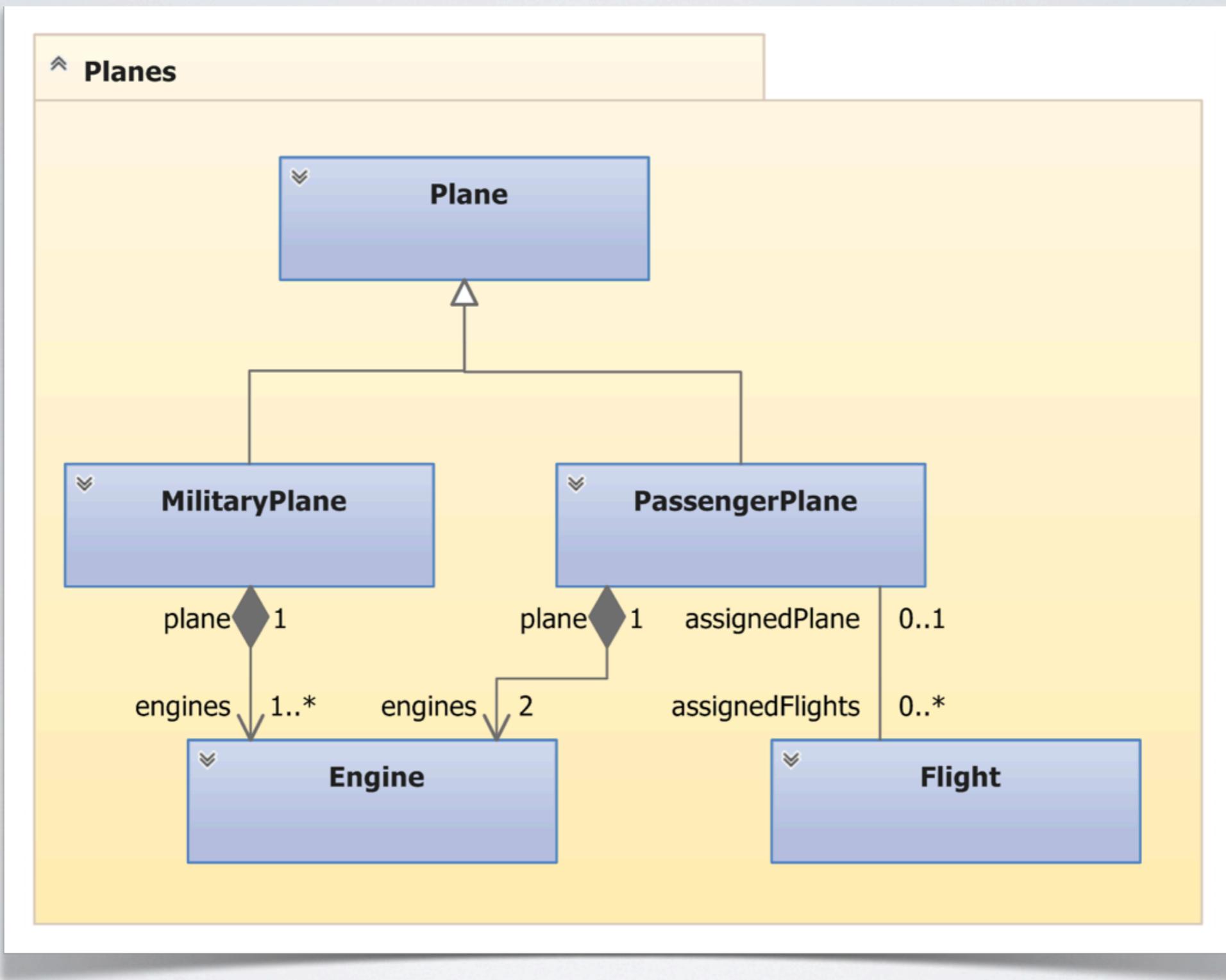
Generalization



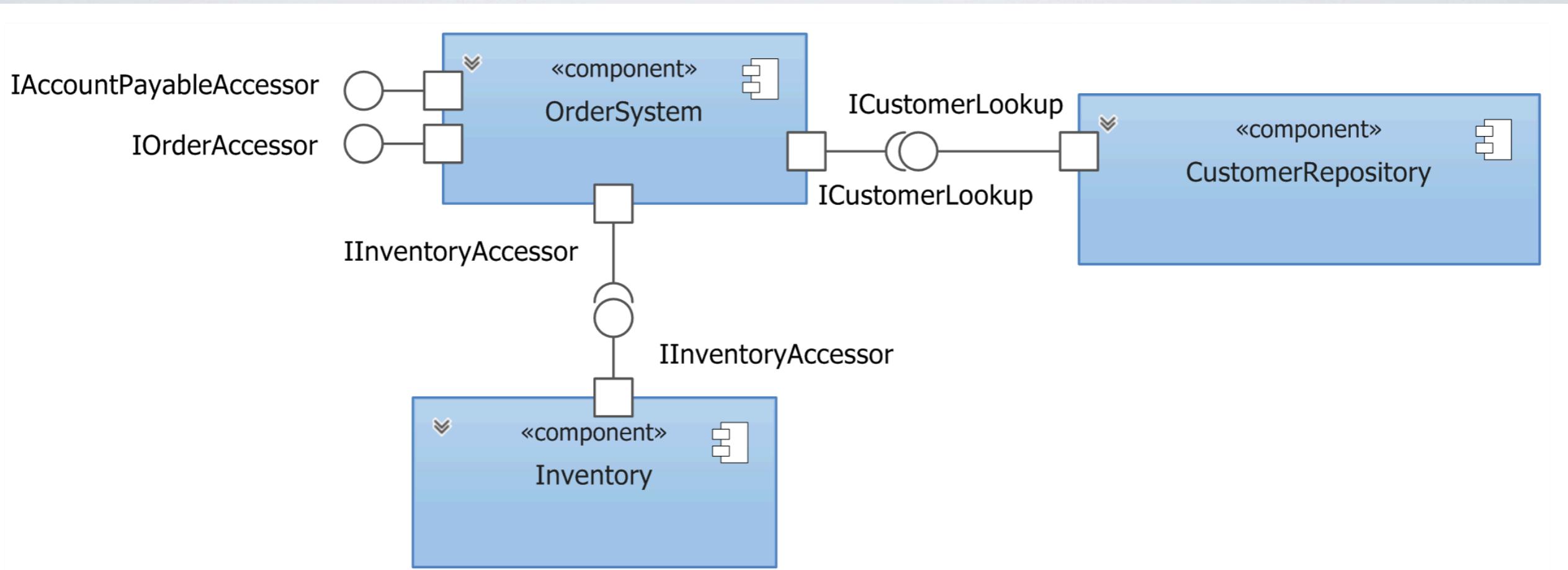
“Meta-UML”: UML Diagram Types



Packages



Component Diagrams



Structure diagrams: why you should care as an analyst

- Class diagrams can be used to describe the domain model
- Connectors explain the relationships between the “building blocks”
- Component diagrams enable you to see the big picture

UML Tools: Differentiation

- Drawing or actually modeling?
- UML version support
- Generated languages
- Reverse engineered languages
- Integration with other software

UML Tools: Examples

- ArgoUML
- Altova UModel
- IBM Rational Rhapsody
- MagicDraw UML
- Sparx Enterprise Architect

DEMO!

Q & A

yuriy.guts@eleks.com

Thank you!

