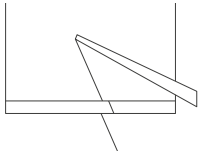
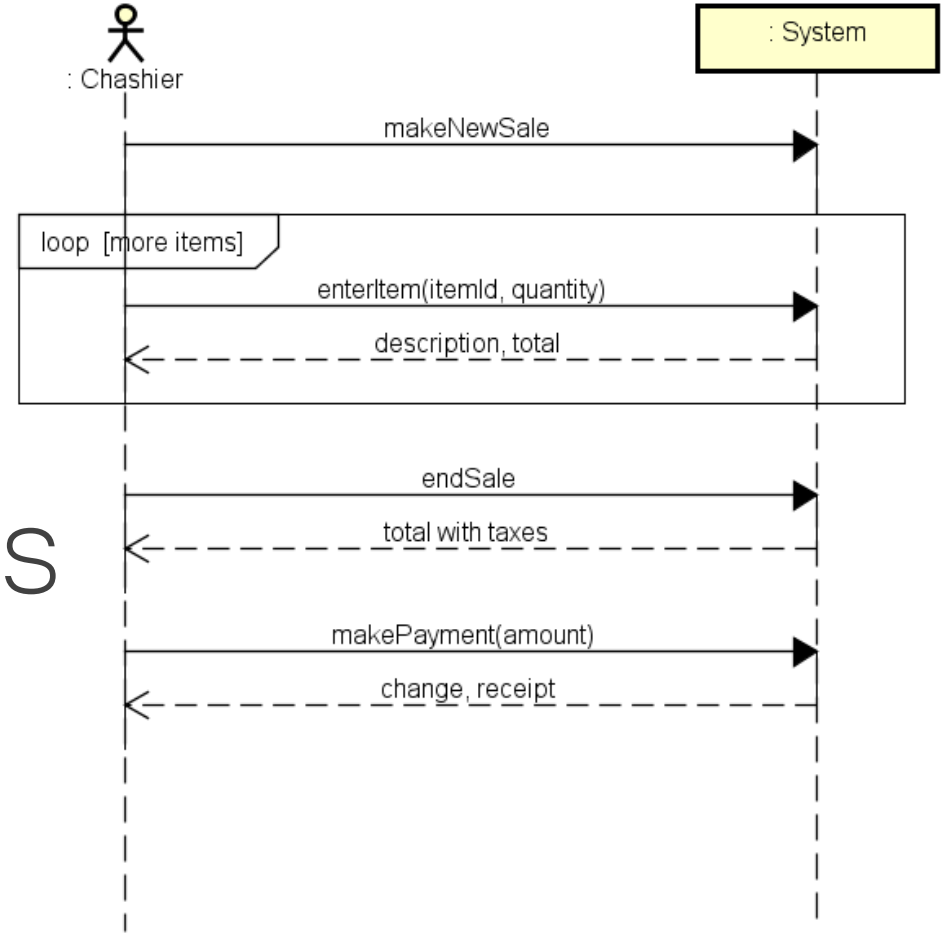
Bring ideas to life
VIA University College



System Sequence Diagrams (SSD)

SWE 1



Drawing UML diagrams is a reflection of making decisions about the design
What really matters are the fundamental object design skills!!!

SSD In- and output Events to the System

An SSD shows – for **one** particular scenario of a Use Case
Ex. The "sunny scenario"

- The events that actors generate to the System
- In timely order
- Events to/from other systems
- The system is treated as a **black-box** (Don't show what happens inside)
- SSDs are derived from use cases

SSDs are often drawn for the

- Main success scenarios of each use case
- And alternative/exception scenarios
- SSDs are used as input for later object design

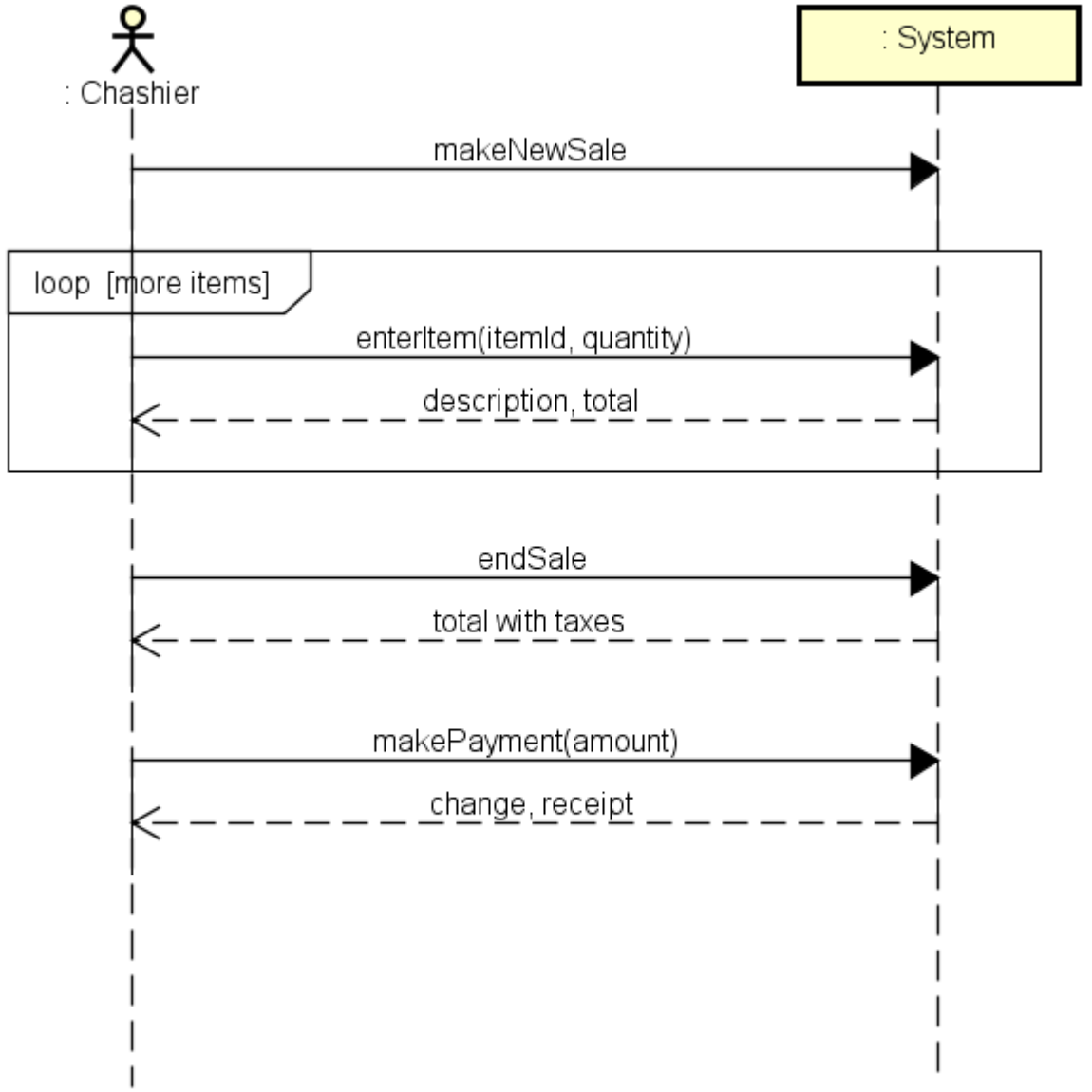
SSD Example

NextGen POS example [Larman, 2005] p. 68
Use Case Process Sale
- Sunny Scenario shown here

Exercise:
Make SSDs for these (*a, 1a, 2-4a)
Alternative flows thru the Use Case

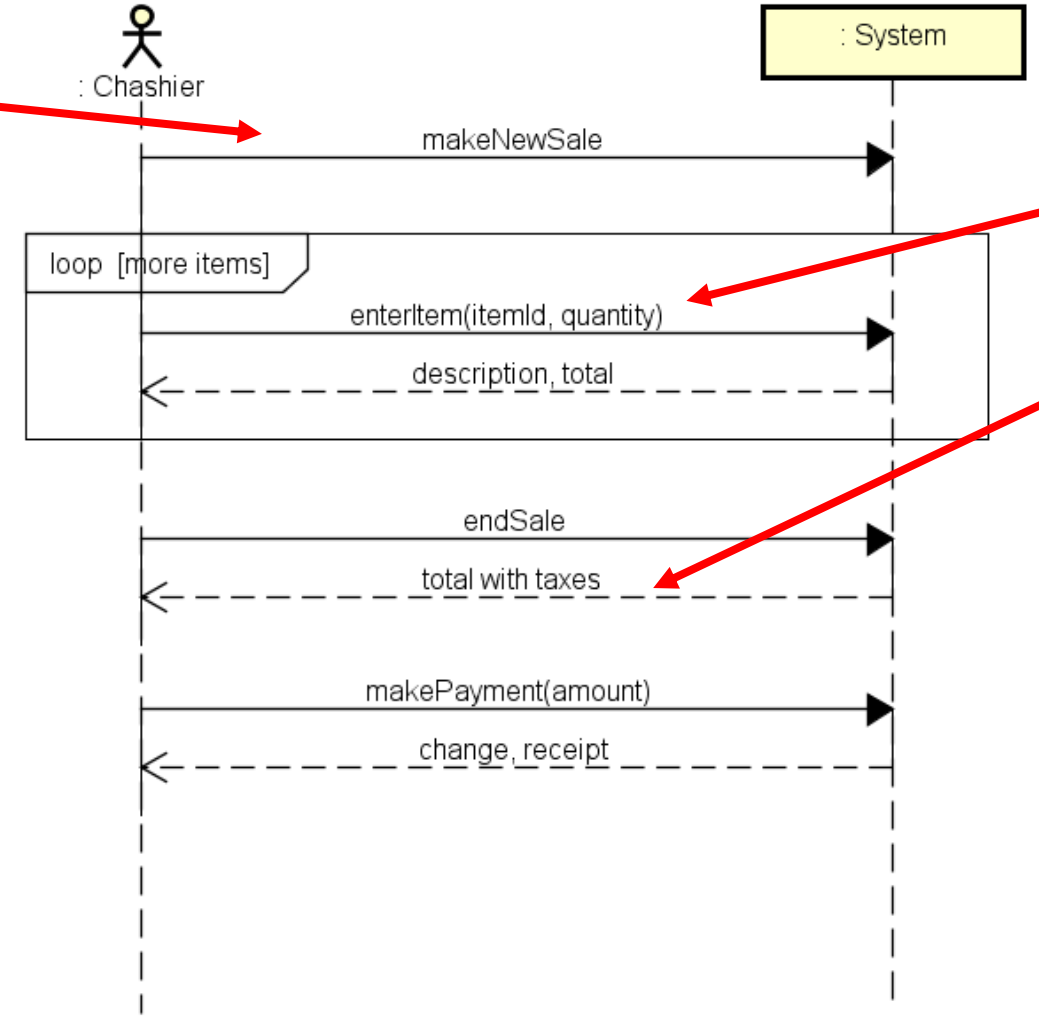
Start using Pen and Paper!!

SSD Drawn with Astah – try to tune Astah to draw it with the same amount of details!



SSD Example

All events comes from Use Case Description



Parameters are conceptual, and are coming from the Use Case Description

Return values are also conceptual from the Use Case Description

Why draw SSDs

Specifies **clearly** what events comes in- and out to/from the System

The System must be ready to react on three types of events

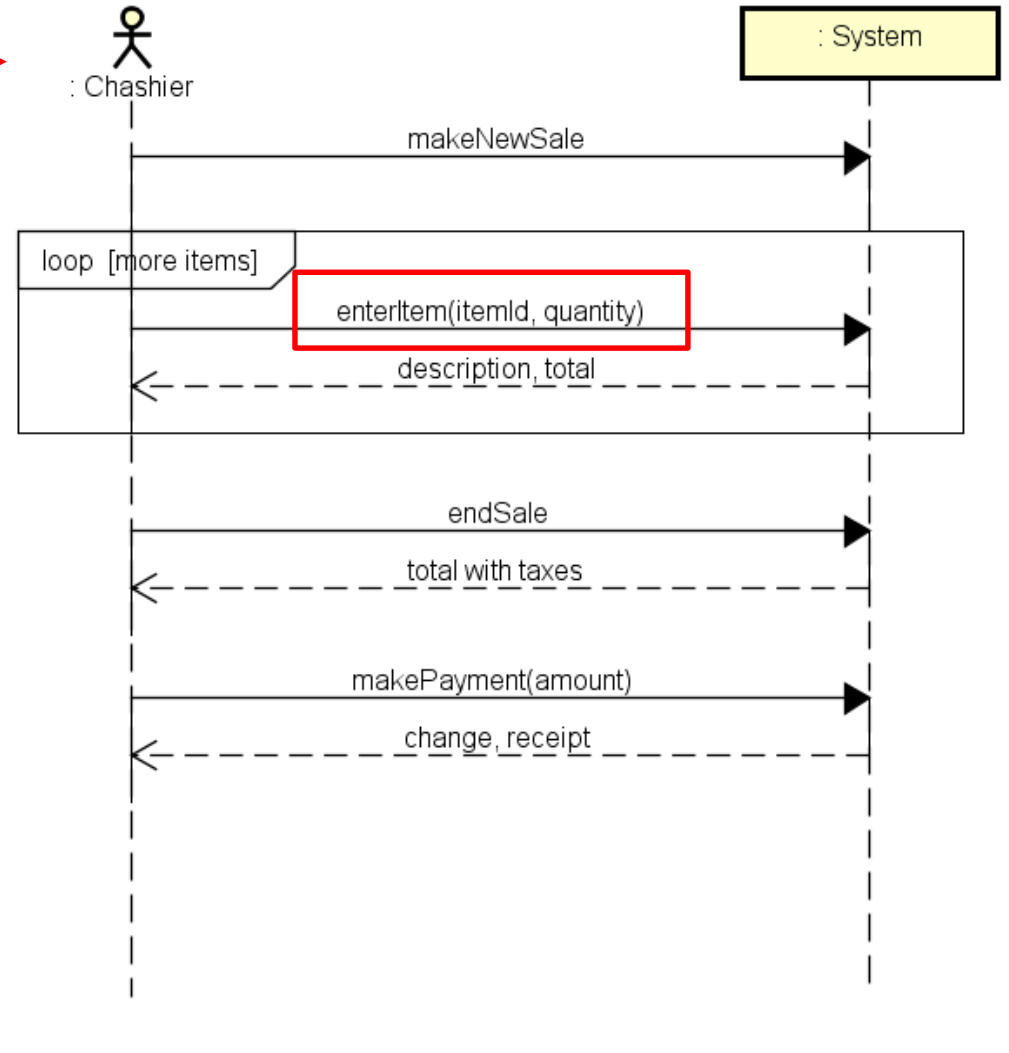
1. External events to/from Actors
   - Humans or other systems
2. Timer events
3. Faults or exceptions
   - Typical from external systems

Remember the system is still a Black-box!

- Focus on what the system does to external events
- NOT how

SSD Details

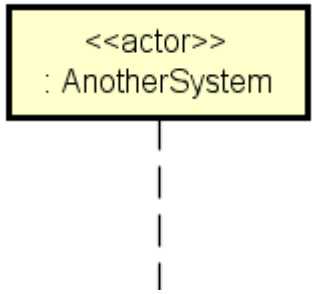
Here everything is objects



Naming Events/Operation

- System events should be on abstract level of intention – not how or from what they are generated
  - *enterItem* is better than *scanItem*
  - *enterItem* covers both keyboard, scanner etc.

System Actors are typical shown like this:



Time increases this way

Exercise

Make SSDs for the scenarios in the Use Cases you have found for your SEP 1 or similar project