

Hoan Ng

MODELLING LANGUAGE

Models are
mechanisms
for communication

Communication
needs language

MODELLING NEEDS LANGUAGE

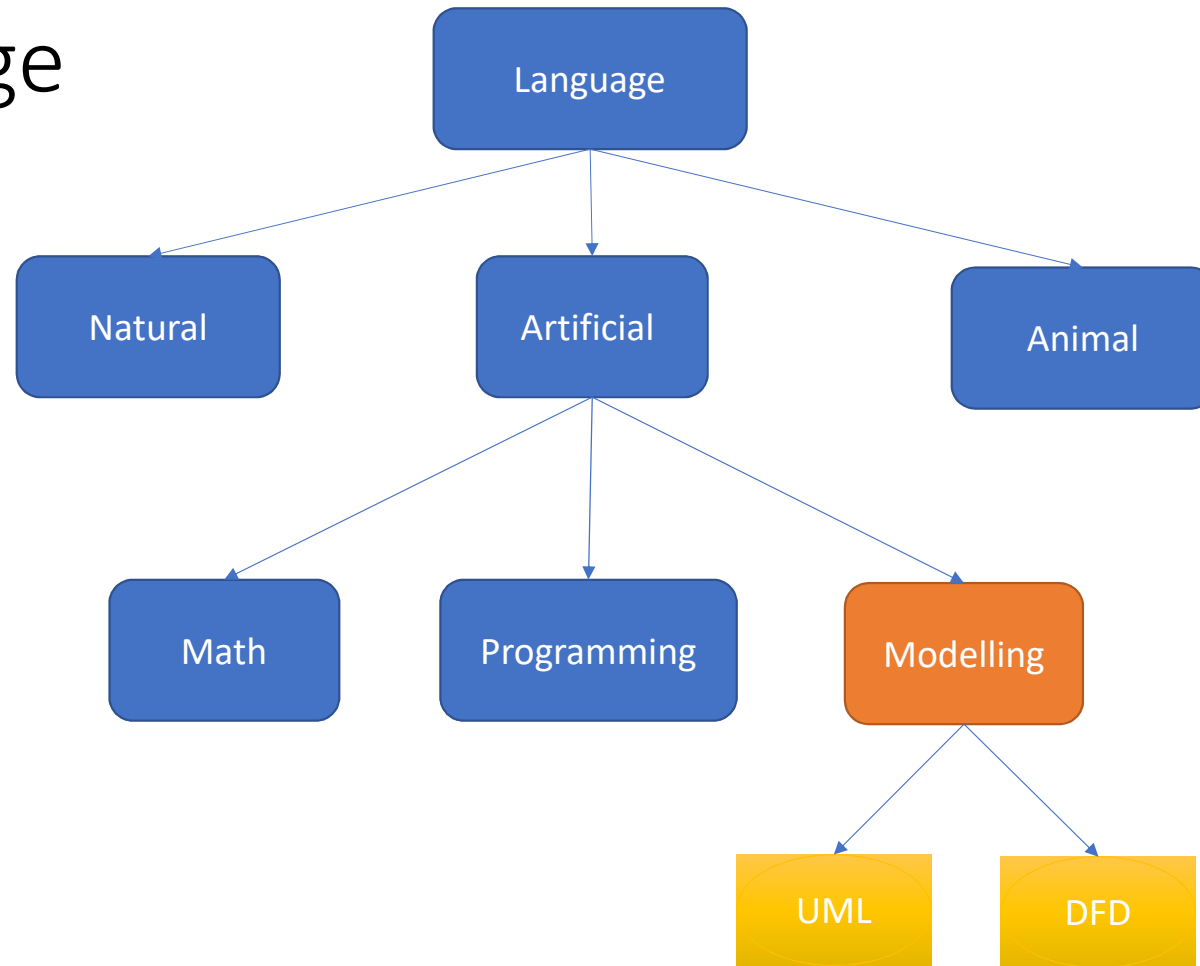
Agenda

Language

Modelling Language

Common Languages

Language



Natural language is
misunderstanding

MODELLING LANGUAGE

Making consistent models



The notion of a modelling language allows the developer to make useful connections between different models



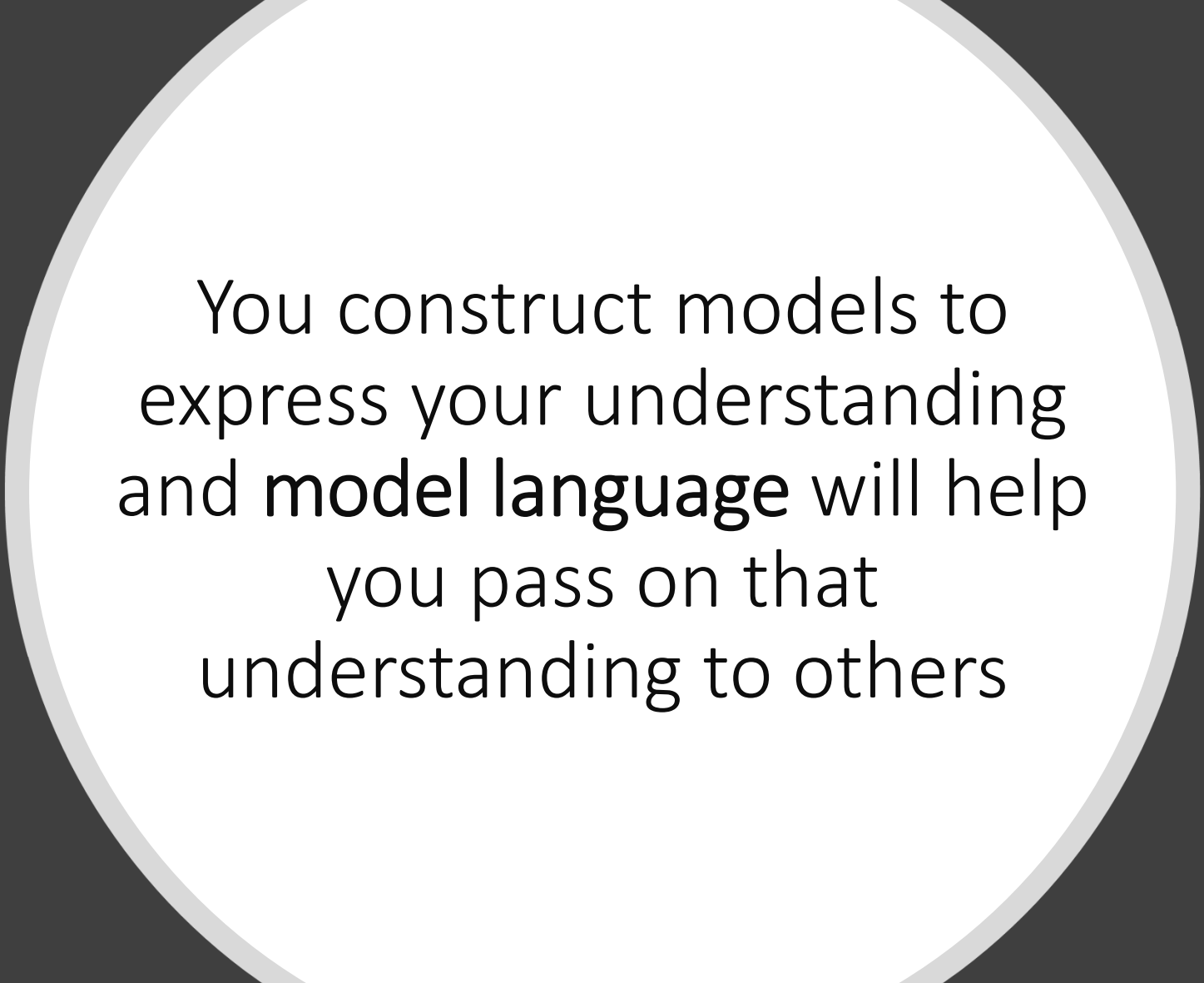
MODELLING LANGUAGE are represented diagrammatically



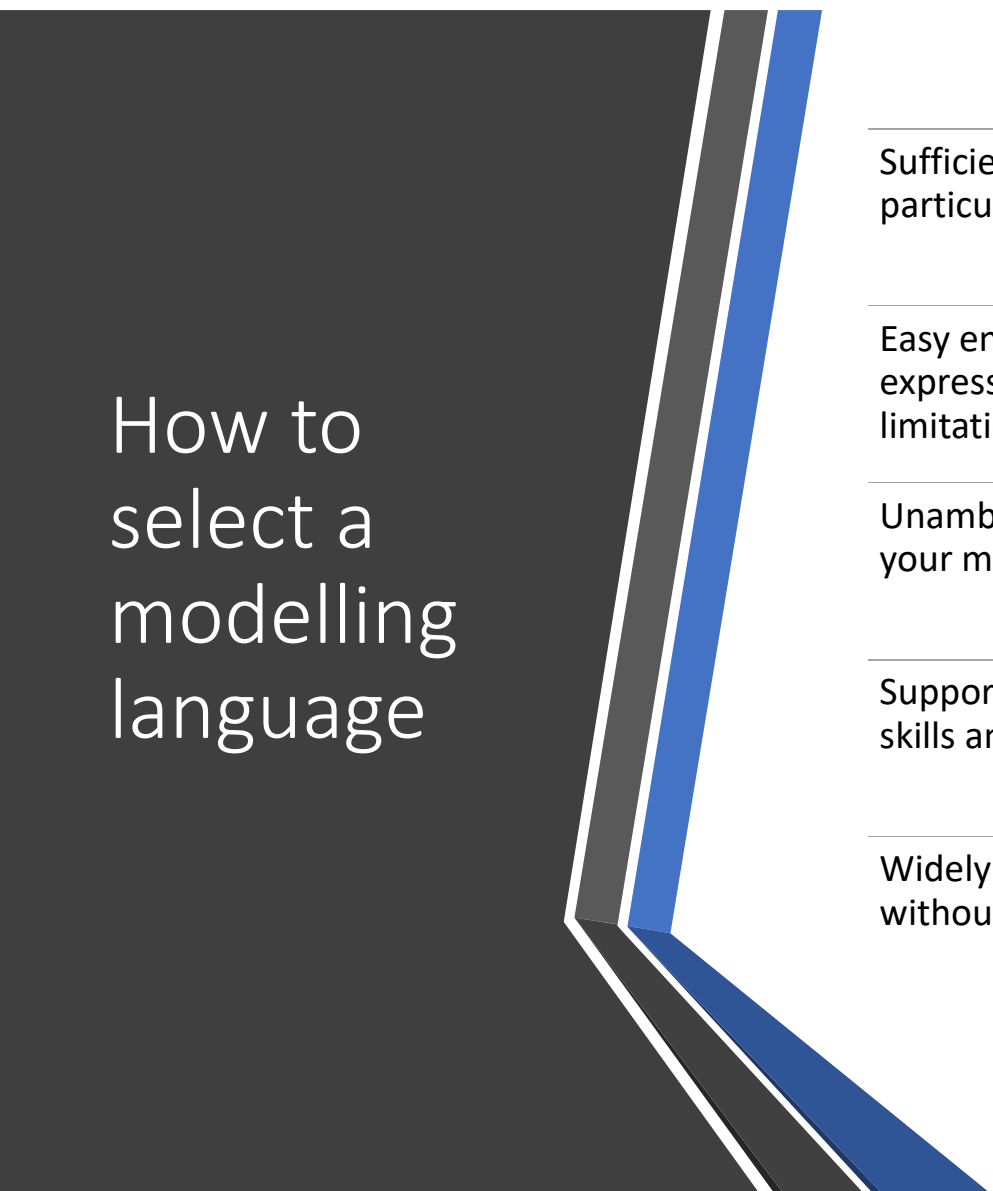
MODELLING LANGUAGE

A set of rules that defines what symbols can be used on a particular type of diagram and what can be constructed with these symbols – its *syntax*;

One that determines what the diagrams and symbols mean – its *semantics*.



You construct models to
express your understanding
and **model language** will help
you pass on that
understanding to others



How to select a modelling language

Sufficiently expressive, so that you can be confident that your particular 'take' on a situation can be represented;

Easy enough to use, but in such a way that its notation allows you to express what you want to say (there will necessarily be some limitations on this because models are a simplification of reality);

Unambiguous, so that the number of possible interpretations of your model are minimised (ideally, that number should be one);

Supported by suitable tools, so that you can apply your modelling skills and not be constrained by your drawing skills;

Widely used, so that you can move to other problem situations without having to learn a new modelling language every time

Modelling Language

Pseudo code

Structured Theory

DFD

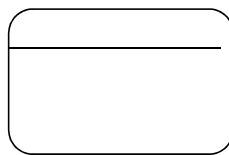
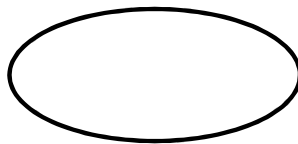
UML

- Class diagram
- Use-case diagram

DFD



**Tác nhân/thiết bị (Người sử dụng,
thiết bị phát sinh hay tiếp nhận dữ
liệu)**



Khối xử lý

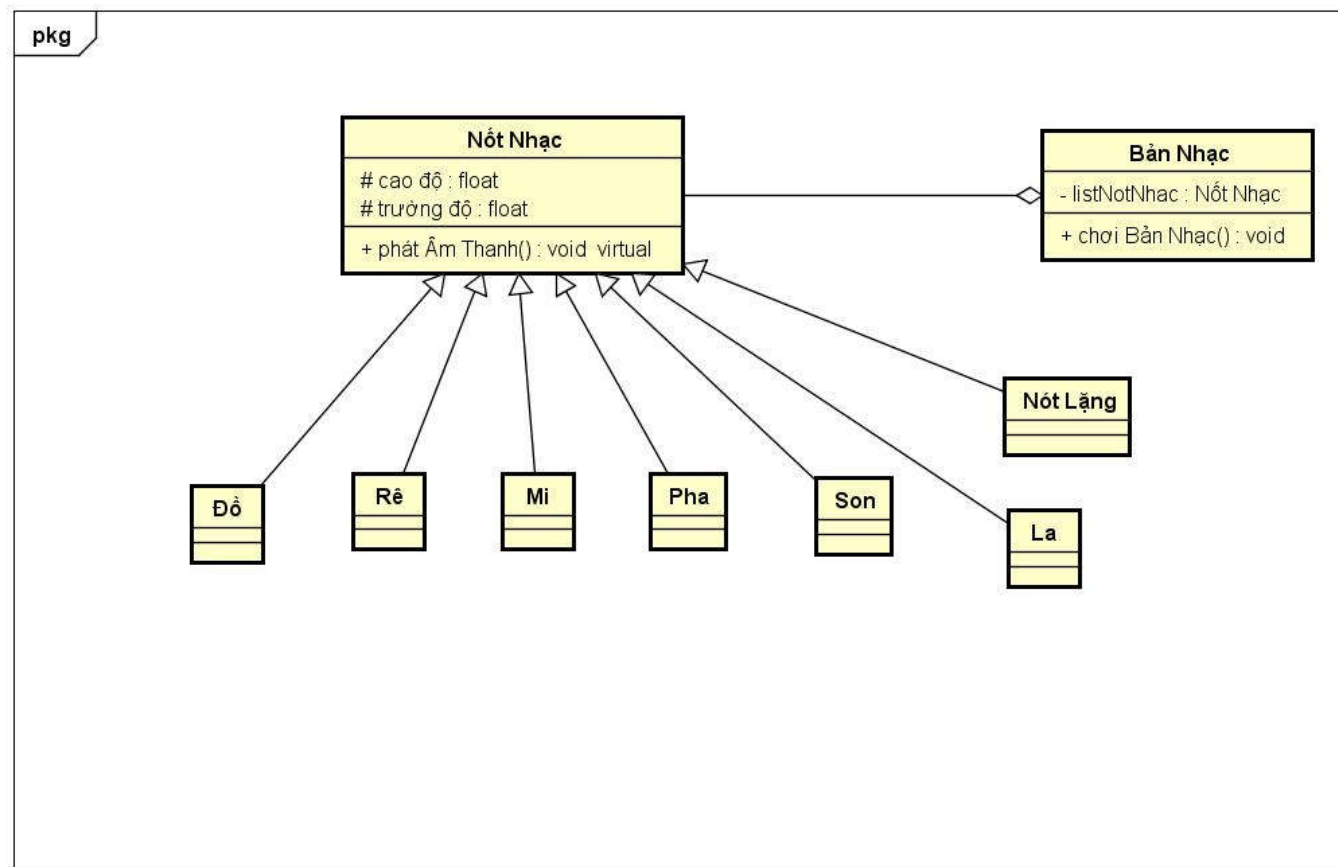


Luồng dữ liệu (thông tin)

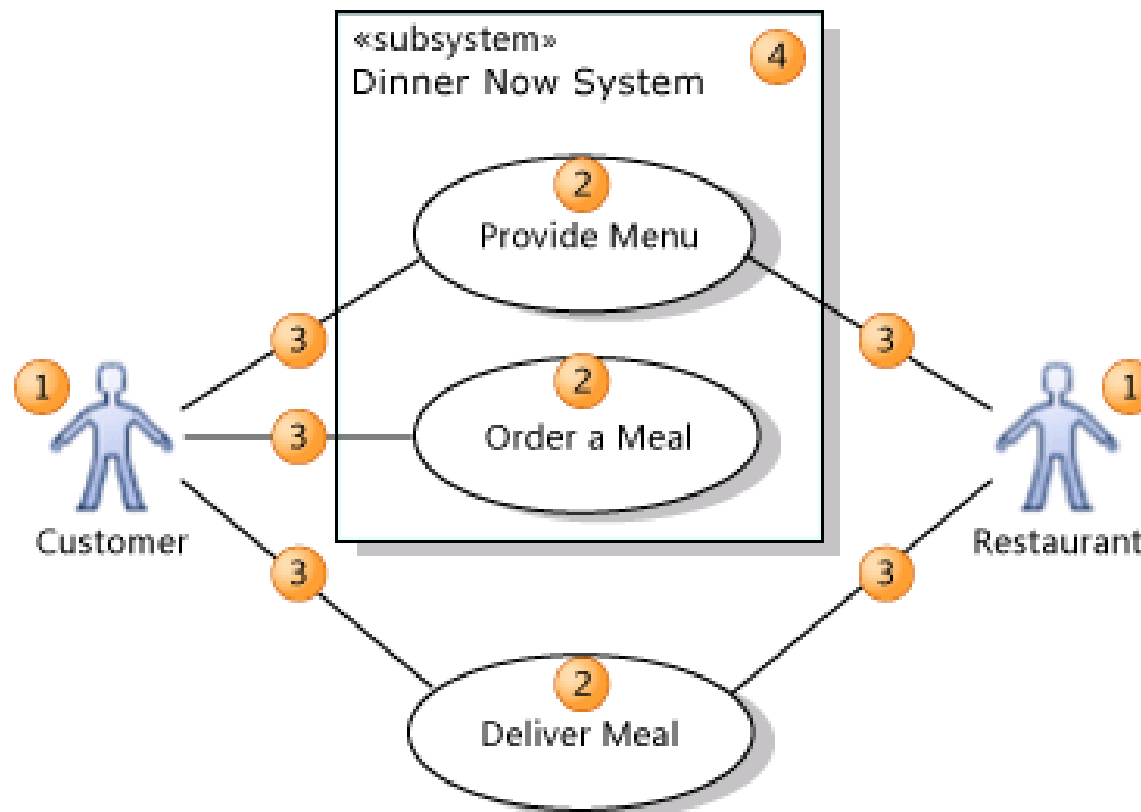


**Bộ nhớ phụ (Hồ sơ, Sổ sách, tập
tin, csdl...)**

UML – Class diagram



UML – Use case diagram



<https://docs.microsoft.com>