





# Computing

Software

Set of inst

General  
Purpose  
Computers

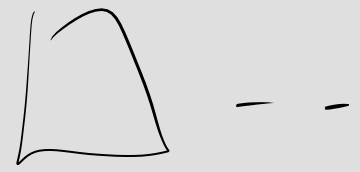
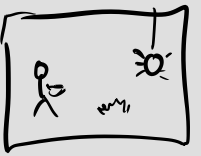
Hardware

Microchips

Draw a picture of Little Miss Muffin

Picture girl in 1800s clothes w/ but, tufted, spider

Requirement } Functional  
non-functional  
Specification



Design

Implement

Testing

Syntax

mix the batter

Mix of the batter and.

Semantic

raise your third nose.

Sum of dirt and 3

Logical

do not take the Exam

Pandial selection is gauche

# Abstraction

Goals

Program

design

Code

Assembly

Computers

Processors

Electricity

Stuff

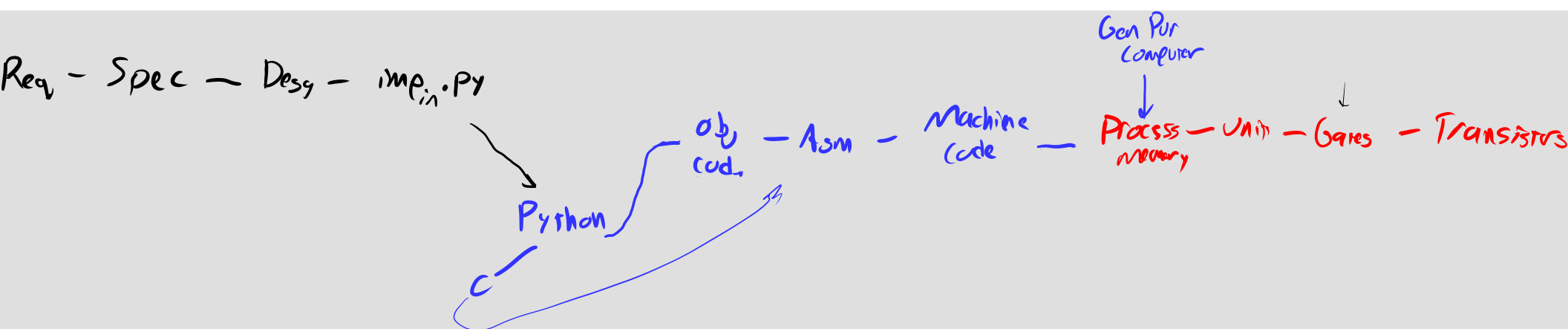
molecules

Liberty  
Democracy

Ü  
abstract

right & wrong





# Ambiguity

non-ambig is hard

noticing Ambig is hard

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1. only need action phrases (Imperative)
2. define each prog element formally
3. add piece as needed
4. def vocab, so add new words