

# EECS3311 Software Design (Fall 2020)

Q&A - Lecture Series W6

Tuesday, October 27

concrete UI

PHYSICAL INTERFACE



synchronous

abstracted

- touch screen ←
- insert card ←
- pin ←
- withdraw ←
- keyboard ←
- amount ←

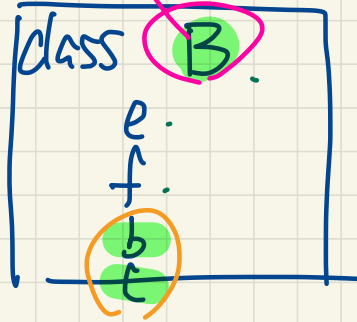
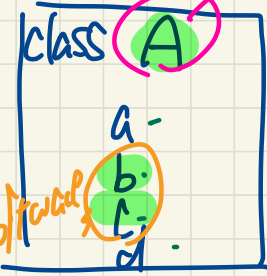
withdraw(  
id: Int ; a: Int)

interaction with  
concrete UI  
(asynchronous)

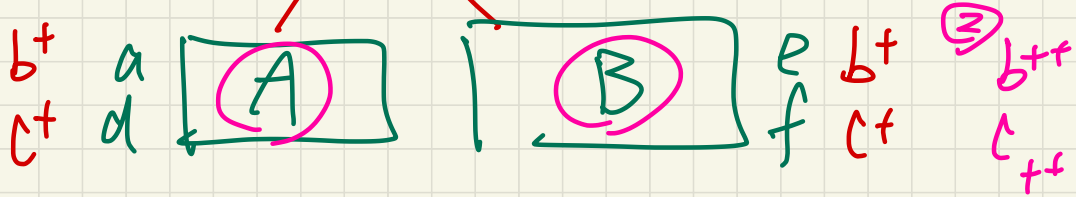
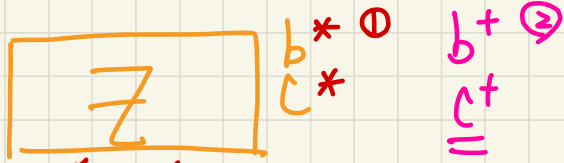
VI

without changing the behaviour of your software  
refactor to improve its architecture.

duplicate  $\rightarrow$  SCP.

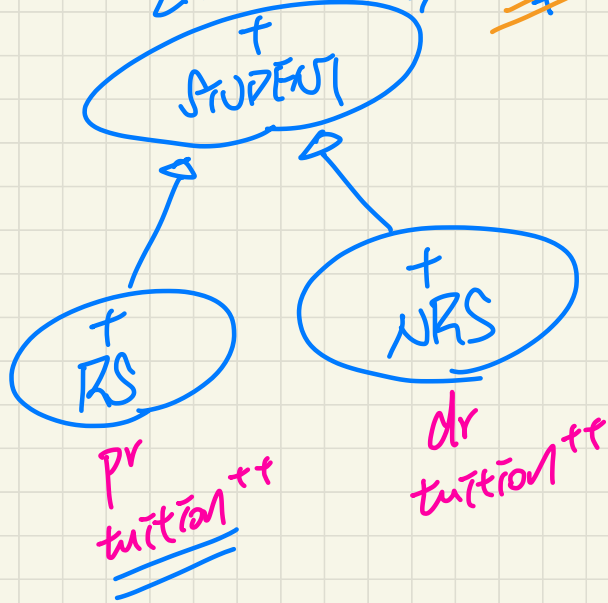


working ✓



# Supplier

1. implement features
2. document (contracts)
3. export



# Client

S: STUDENT

⋮

create { NRS } s.make(...)

⋮

s.set\_dr(0.75)

⋮

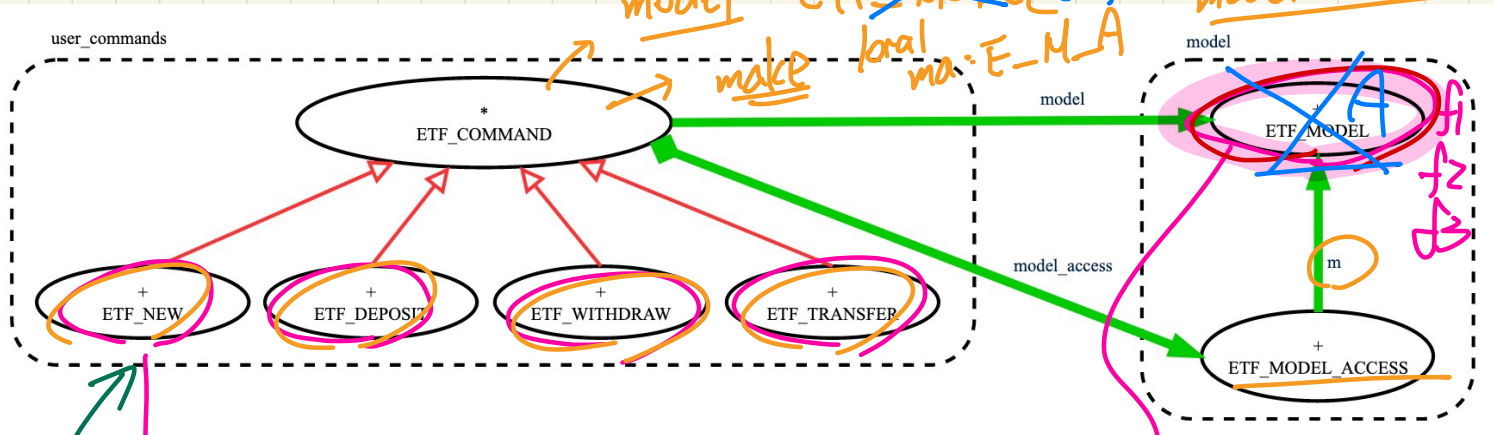
ST: STUDENT

X  
↳ not allowed by compiler.

S.pr

model: ~~ETF~~ MODEL A  
 local ma: E\_M\_A

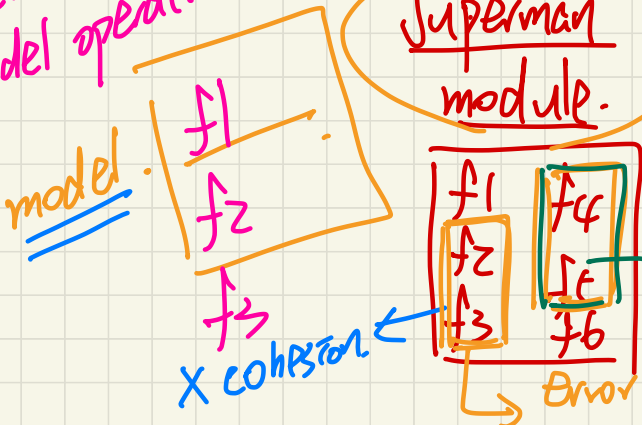
model := ma.m



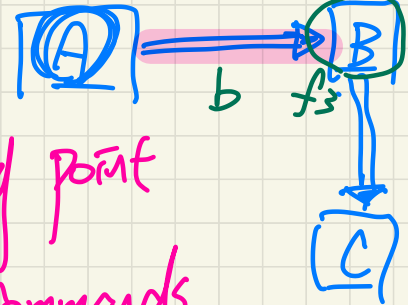
- 1. Error handling
- 2. call relevant model operations

Avoid:

Superman module

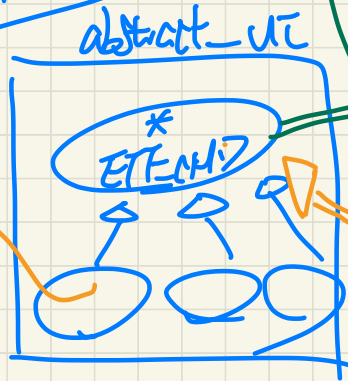


single entry point for ETF commands to work with transactions.



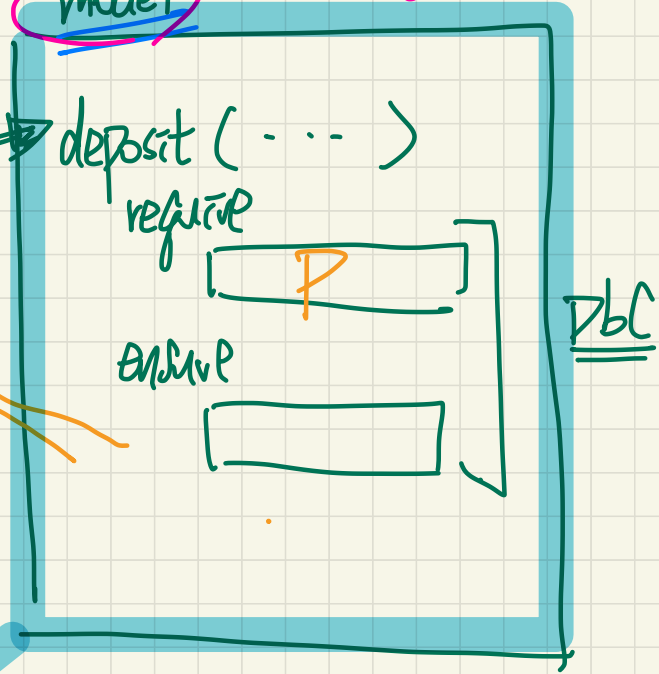
model.b.f3

# Rapid Prototype Development



① abstract-ui depends on model

② model does not depend on abstract-ui



if IP  
error

## After thorough testing

- A. Build some concrete UI and import just the model.
- B. Include 'model' as a library module.