

4156 Thursday 9/26/13

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project proposal due 5pm

next assignments

individual assignment #2

Survey on testing familiarity

10/11 Lecture  
guest or screen  
story cards  
brrms to class!  
due Tue

meet with  
TA  
1st

team assignment #3

requirements & planning

due  
Thu

expanding or replacing user stories  
with use cases

use case also describes one  
thing that your SW needs to do  
but more steps & details  
may cover alternate flows  
(error or special cases)

later  
lecture { approach is intended to more easily  
lead developers to discover the classes  
that will need to be implemented

combines textual description & diagrams UML

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UML = Unified Modeling Language

based on scenarios

sort of like User stories but  
focused on series of actions  
that illustrate behavior

human actor does this  
software ~~computer actor~~ does that  
~~use~~

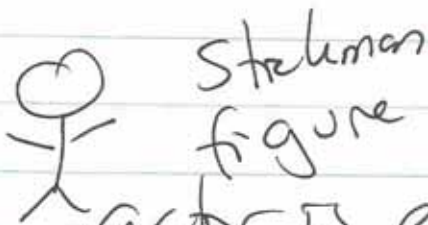
~~used~~ approach to elicitation of  
requirements from stakeholders

use cases specify scenarios,  
including variant sequences ~~error~~  
+ error sequences

UML Symbol for a use case is an oval



name of use case should  
be active voice  
present tense verb  
- do this, do that



Stakeholder  
figure

actor is entity that interacts w/ system  
~~is~~ - not necessarily human { roles not  
individuals

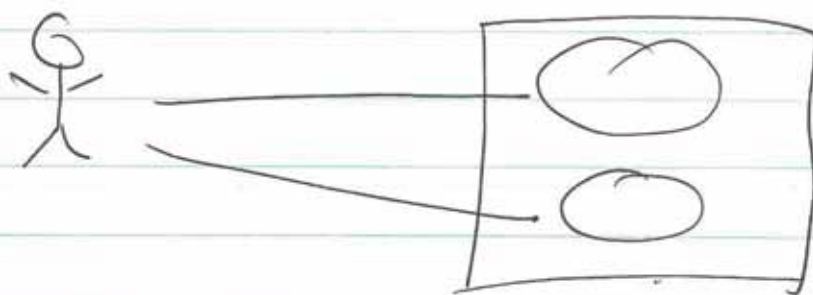
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What is inside the system vs. outside?

denoted by rectangle



so use case diagram looks like



each use case has a prose flow of events

- preconditions
- main flow (with subflows <sup>for</sup> readability)
- alternative flows

consider what could possibly  
go wrong for each step in  
main flow (or its subflows)

alternate flows are useful for  
defining test cases



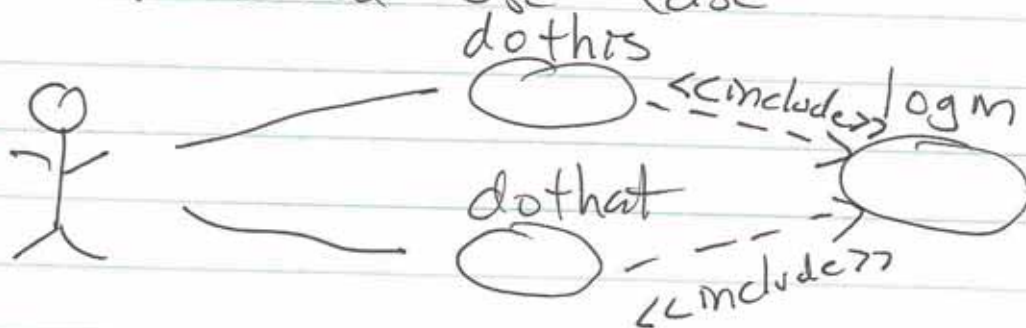
use case diagram can show relationships between actors & use cases and between different use cases

default relationship is communication requests information from or invoke the use case

include relationship - used when a use case is included in 2 or more other use cases.

e.g. login use case  
→ label arrow with <<include>> to distinguish from default communication arrow

flow of events "calls" the included use case



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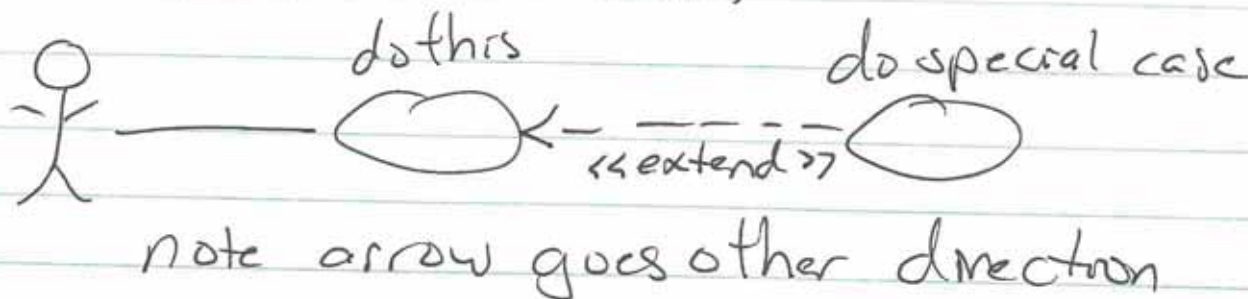
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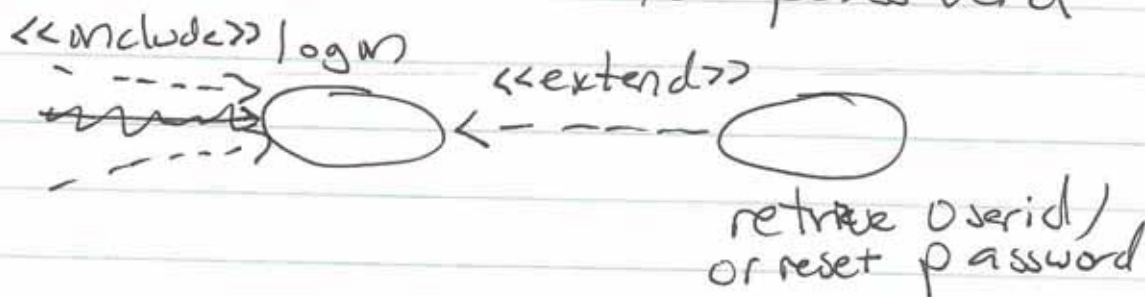
extend relationship <<extend>>  
 similar to include but denotes  
 an exceptional variation  
 (+ doesn't need to be multiply used)  
 - ~~different from all~~  
 - alternative flow that is complex,  
 with subflows & possibly alternate  
 flows of its own

whereas  
 include  
 case  
 \* always  
 done

~~used~~  
~~used~~  
~~avoided~~

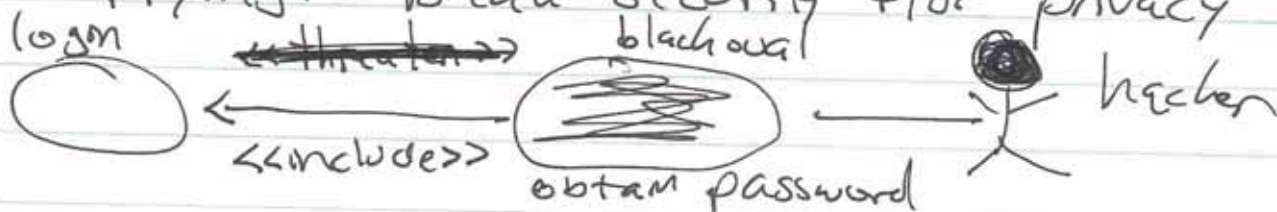


~~exam~~ example - user has forgotten  
 userid &/or password



misuse case - use case from point  
 of view of hostile attacker  
 trying to break security &/or privacy

plan  
 threat  
 mitigation



Do LAST collaboration exercise