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reminder on  
1st individual/pair  
& 1st team assignment

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finish version control

start reading  
book, ch 1-4

User Stories, customers & planning

customers generally have something  
in mind that they want the SW to do  
that will be valuable for them

even in a startup with no customers yet,  
someone has an idea about what  
will attract customers

"requirements elicitation"

role playing - pretend to be the SW  
interacting with the user

observation - how does SW fit into  
business workflow (implicit constraints)

brainstorming

ask who are the target users - not  
necessarily same as customer's employees  
possibly multiple categories of users

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in agile processes, the customer's requirements typically take form of "user stories"

short simple description, about 3 sentences that can fit on a 3" x 5" index card describes ONE feature

"as a <type of user>, I want <some goal> so that <some reason>"

focus is discussing features with customer, conversation

large user story = "epic", that can be broken down into smaller user stories

example - as a user, I can back up my entire hard drive to make sure my files are safe  
epic

example - as a power user, I can specify files or folders to backup based on file size, date created, date modified  
smaller stories

- as a typical user, I can specify folders not to backup so my HD isn't filled with things I don't need

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need to add details - "conditions of Satisfaction"

- high level acceptance test that will be true after the user story is complete

example - as vice president of marketing, I want to select a Holiday Season to be used when reviewing the performance of past advertising campaigns to identify profitable ones

conditions of satisfaction

make sure it works with Christmas, Easter, President's Day, Mother's Day

support holidays that span 2 calendar years (New Year's)

holiday seasons can run from one holiday to the next (Thanksgiving to Christmas)

holiday seasons can be set to a specific number of days before and/or after the actual holiday



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what is not included in user stories?

any terminology that the customer does not understand (the customer could not have asked for it)

e.g., cache, buffer, socket, third normal form

any specific technology, unless required for interoperability

e.g. customer may require that the new software runs on existing hardware & interfaces to existing inventory control software

who writes the user stories?

usually, not the customers

instead written by development team & approved by customer

Some agile processes include a "product owner" primarily responsible for the user stories

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when are user stories written?

throughout the project

usually, story-writing workshop  
near beginning of project, but  
more stories are added later  
(or are modified or removed)  
introduce at beginning of new iteration, not middle

do user stories replace requirements  
document?

yes & no

after user stories are elaborated  
into "use cases" (discussed next lecture)  
that consider steps in workflow,  
& alternative choices, & what  
can go wrong

but user stories are good unit  
for task boards, burn down chart, x for  
priorities & estimates

→ avoid CRUD - create, read,  
update, delete

focus on what  
user wants to do  
not underlying  
database

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where do priorities + estimates come from?

priorities come from customer

what are most important  
features, what is needed  
for minimum viable product

high, medium, low

may change over time

estimates come from developers

how many time units to complete  
a given user storyone developer,  
pair,  
whole  
teamcompletion includes wireframing  
(set of screens for user interface),  
design, coding, & testing

not just the coding part

usually, minimum half-day

day starts  
(0)

1, 2, 3, 5, 8, etc. (13, 20, 40, 100)

? ☹ coffee  
break



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estimates larger than 5 days or  
8 days are suspect

- "I have no clue how long  
this will take!"

(can use  
"points"  
instead of  
days)

how do developers determine estimates?

guess

do NOT ask  
customer!  
too low

previous experience

(formal or informal metrics)

outliers  
& risk

"planning poker" (explain)

"spike solutions" for longer stories

Spend half a day or a day  
implementing guess & dirty  
version separate from main  
line of development

and/or break down long story  
into several shorter stories

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plan the project one iteration at a time

- demo or deliver at end of each iteration
- first release might take ~3 iterations (<sup>financial</sup> quarter)

at beginning of each iteration, start with set of high priority features + corresponding time estimates  
(only consider medium/low priority after all high priority delivered)

how many features will fit in 20 working days? (one month)  
or in 1 week or 2 week (scrum sprints)

20 days of work is unlikely to be completed in 20 working days  
(we'll consider project velocity later in course)

almost certainly more high priority features than will fit in 1st/next iteration  
prioritize within priority

remember time box vs. scope box



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at end of an iteration, some user stories may be left over

re-prioritize & reestimate for remaining high priority features, & plan set to complete in upcoming iteration

customers can introduce new features at beginning of each iteration, but not in middle

except for show-stopper bugs  
(addressed later in course)

if cannot get enough work done in iteration to make customer happy, should we add more people?

almost always the answer should be no  
(discussed later in course)