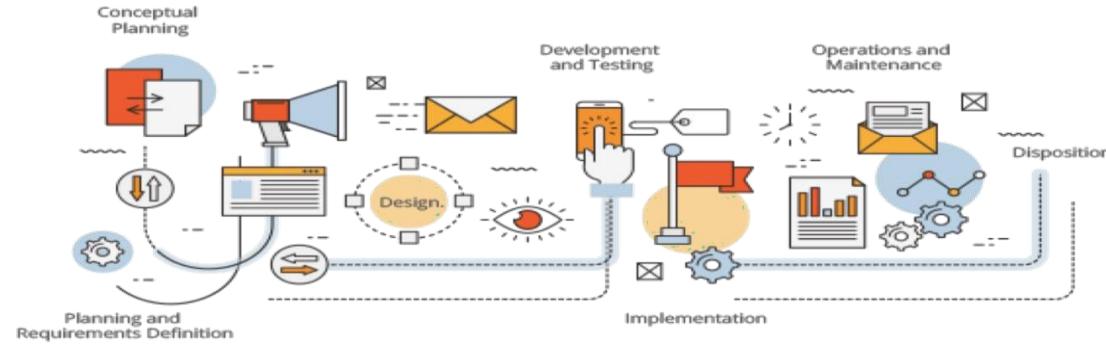
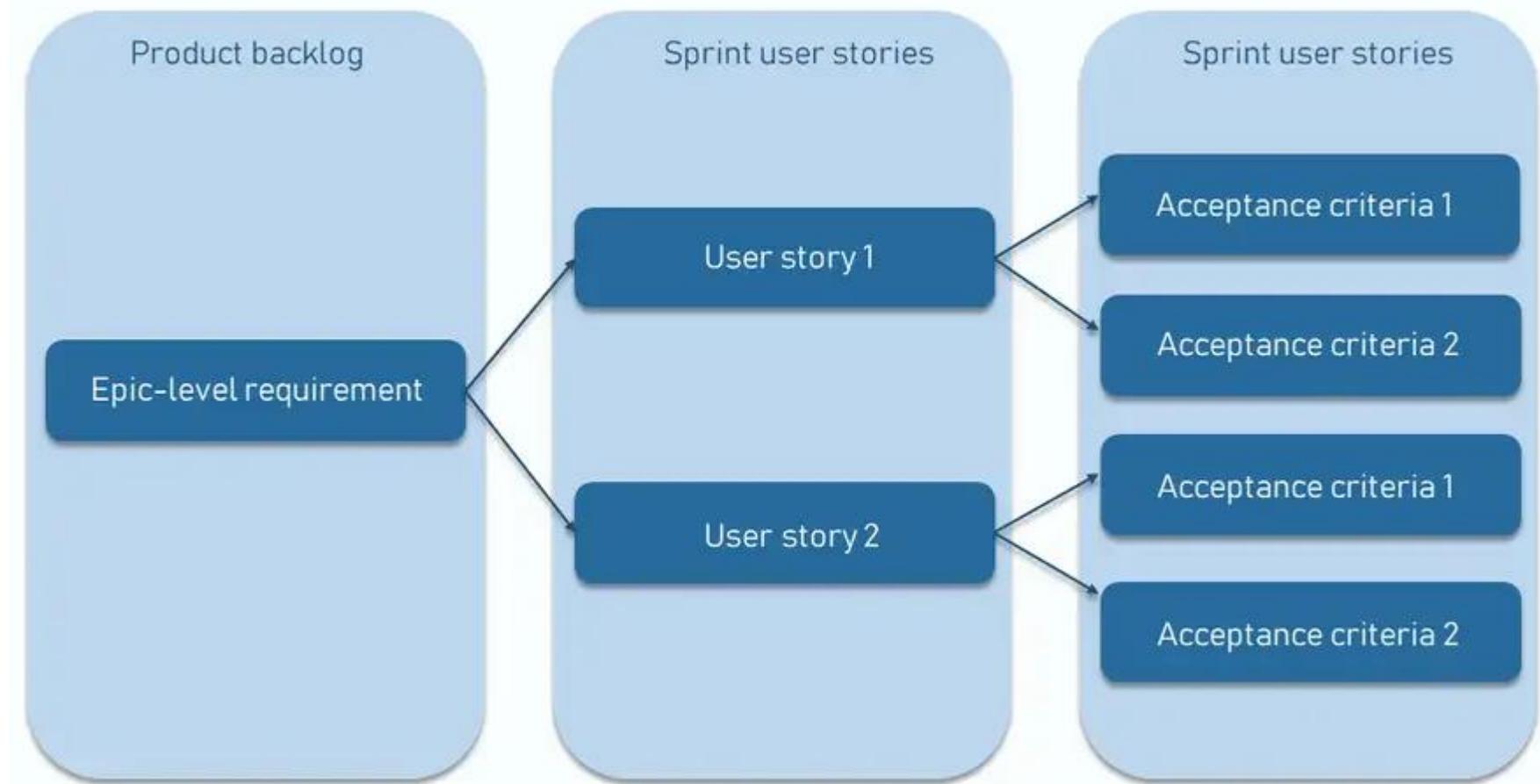


Software Engineering

User Stories



An **epic** is a high-level requirement, task, or feature set that teams can break down into smaller user stories



Acceptance Criteria:

- Describing negative scenarios.
- Your AC may require the system to recognize unsafe password inputs and prevent a user from proceeding further.
- An invalid password format is an example of a so-called negative scenario when a user makes invalid inputs or behaves unexpectedly.
- AC define these scenarios and explain how the system must react to them.

User Story Dos and Don'ts

User story should ...

- describe one thing that the software needs to do for the customer
- be written using language that the customer understands
- be written by the customer (figuratively speaking)
- be short. Aim for no more than three sentences

USs should not ...

- be a long essay
- use technical terms that are unfamiliar to the customer
- mention specific technologies

Principle: Keep requirements customer-oriented



What Makes a Good User Story?

- Make user stories SMART, where SMART stands for
 - *Specific*
 - *Measurable*
 - *Achievable*
 - *Relevant*
 - *Time-bound*
- Minimum Viable Product
 - Subset of the full set of user stories that would make for a viable product

Source: Wake, Bill. INVEST in Good Stories and SMART tasks. Exploring Extreme Programming ([website](#)). 2003.

User Stories: Template and Example

- User Story Template
 - *Feature*: [Name]
As a [kind of stakeholder]
I want to [do some task],
so that [I can achieve some benefit]
- ATM Example
 - *Feature*: Account holder withdraws cash
As a customer
I want to withdraw cash from an ATM,
so that I don't have to wait in line at the bank



As a traveler, I **want to** choose airplane seats online **so that** I have a window seat.

The user role: "As a *traveler*"

The action they want to perform: "*I want to choose airplane seats online*"

The reason or benefit: "*so that I have the window seat*"

Let's consider a user story for an online bookshop:

As a (Who) book enthusiast,

I want to (What) search for books by genre, author, or title,

so that (Why) I can easily find the specific books I'm interested in.



User Stories: Bad Examples

- As a Manny's food service customer, I want to see different food item types displayed in different colors—RGB = #FF0000 for meats, #A52AFA for grains, and #808000 for vegetables and fruits—so that I can quickly identify my food items by food type.

As a Manny's food service customer, I want food item types to be displayed in groups so that I can find them on the screen more quickly.

Avoid low level details ...



- As a customer ordering food, I want to locate previous food order lists so that I can see all the lists that I have.

As a customer ordering food, I want to see my saved food order lists so that I can reuse the list for future orders, making ordering faster and more accurate.



Title: Animated Buttons

Description: Use jQuery to animate buttons.

Title: Review Flight

Description: A user will be able to leave a review for a shuttle flight they have been on.

Figure 1. Two example user stories.

Problem: Of the two user stories in Figure 1, which was better written? Explain your answer.

US Review Flight is better because it is customer oriented. Us Animate buttons talks about implementation technologies (jQuery) that may know nothing.



Acceptance Criteria

- Acceptance criteria are like golden threads that connect user stories to their final form. These criteria help testers shape testing strategies and act as a critical threshold for verifying functionality and quality assurance.
- Acceptance criteria promise that the delivered product will align with customer expectations. With clearly defined customer needs, they mitigate possible misunderstandings and promote transparency. This alignment with customer expectations directly contributes to customer satisfaction.



Acceptance Criteria Template for User Stories

- *Given* some initial context (the givens or preconditions),
 - *And* some more context, ...
- *When* an event occurs,
- *Then* ensure some outcome
 - *And* another outcome ...
- Not all customer scenarios are this simple
 - May need a sequence of “thens” and “whens”; e.g., with menus



Acceptance Tests Should be Executable

- ATM Scenario 1: Account is in credit
 - *Given* the account is in credit
 - *And* the card is valid
 - *And* the dispenser contains cash
- *When* the customer requests cash
- *Then* ensure the account is debited
 - *And* ensure cash is dispensed
 - *And* ensure the card is returned



User story:

As a product manager.
I want to score potential ideas.
So that I can decide what to include on my product roadmap.

Acceptance criteria for that user story could be:

Scenario: The product manager adds potential ideas and ranks the best ideas based on benefit versus cost.

Given that I have added two or more ideas and scored them using the Benefit vs Cost scoring model
When I click the Rank button
Then ideas are sorted with the top-scoring ideas at the top.



User story:

As a credit card holder, I want to view my statement balance, so that I can pay the balance due

Acceptance criteria for that user story could be:

- Display statement balance upon authentication
- Display Total Balance
- Show “Payment Due Date” and “Minimum Payment Due”
- Display Error message if service not responding/ timeout

User story:

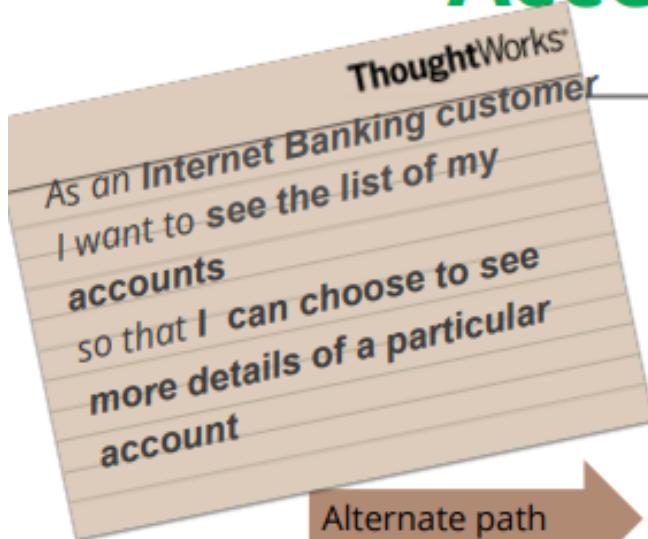
As a teacher, I want to generate assessment report, so I can evaluate student performance

Acceptance criteria for that user story could be:

- Show a student’s current assessment score
- Display past assessment score
- Provide option to Print / Share
- Display Error message if service not responding



Acceptance criteria



Alternate path

Alternate path

Bad path

Given the customer has one transaction account and one credit account

When they have completed logging in

Then the screen should show the names and numbers of the two accounts sorted in account number order

Given the customer has just one transaction account

When they have completed logging in

Then the screen should show the name and number of the account

Given the customer has no accounts

When they have completed logging in

Then the screen should show a message stating that no accounts are available

Given the customer has more than 20 accounts

When they have completed logging in

Then the screen should show the first 20 accounts (in account number order) only

Given the customer has some accounts

And they have completed logging in

When the system cannot retrieve the account details

Then the screen should show an error message with associated code²

User Story: As a registered user, I want to reset my password to regain access to my account if forgotten.

Acceptance Criteria:

1. When accessing the 'Forgot Password' link:

- Given I'm on the login page, when I click on the 'Forgot Password' link, then I should be directed to a password reset page.

2. Entering email for password reset:

- Given I'm on the password reset page, when I enter my registered email address and submit, then a confirmation message should appear indicating that an email has been sent for resetting the password.

3. Receiving password reset email:

- Given I've requested a password reset, when I check my email, then I should receive an email with a password reset link.

4. Clicking the password reset link:

- Given I've received the password reset email, when I click the reset link in the email, then I should be directed to a page where I can enter a new password.

5. Setting a new password:

- Given I'm on the password reset page, when I enter a new password and confirm it, then a success message should confirm that my password has been updated.

6. Logging in with the new password:

- Given I've reset my password, when I try to log in using the new password, then I should be able to access my account successfully.



Who writes acceptance criteria?

- The collaborative nature of cross-functional teams allows different team members to create acceptance criteria for user stories. Typically, the **product owner is the person** who starts the process of defining and writing some criteria while forming the sprint backlog.
- In more complex scenarios, this task may shift to a **business analyst, requirements analyst, or project manager** who may take over writing acceptance criteria, especially in more complex scenarios. Even the **client** can document them if he or she has ample technical and product documentation knowledge. In this case, the client negotiates the criteria with the team to avoid mutual misunderstandings.

