

Supporting Documentation for User Story Analysis

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November 2024

1 Persona: John Smith - Fullstack Developer

Summary Profile: John Smith is a fullstack developer with 5 years of experience. He specializes in building RESTful APIs, managing databases, and developing responsive user interfaces using modern frameworks. John is highly focused on code efficiency, security, data integrity, and creating optimized user experiences. He values seamless integration between frontend and backend and constantly seeks to develop cohesive, efficient, and scalable applications that fully meet stakeholder requirements.

Detailed Profile

Persona Objective: Represent a typical fullstack developer who deals with both backend and frontend challenges and needs well-designed tools, interfaces, and APIs to ensure system integrity and efficiency.

Profile:

- **Name:** John Smith
- **Age:** 30 years
- **Profession:** Fullstack Developer
- **Experience:** 5 years of experience in fullstack development.
- **Technical Skills:** Specialized in building RESTful APIs, managing relational and non-relational databases, developing responsive interfaces using modern JavaScript frameworks (such as React or Angular), and implementing complex business logic.

Motivations: Create systems that are secure, scalable, and efficient, both in the frontend and backend. John is motivated by the ability to build cohesive applications that provide a good user experience.

Needs: Tools that facilitate integration between backend and frontend, clear API documentation, and well-defined user stories covering technical requirements on both sides.

Frustrations:

- Incomplete or confusing documentation.
- User stories that do not specify UI/UX requirements or fail to account for the complexity of fullstack integration.
- Inefficient code that affects application performance.

Goals: Ensure that each feature is efficient, secure, and easy to use. Maintain clean, well-documented code that can be easily understood and maintained by other developers.

Work Environment: Works in an agile team with frontend and backend developers, UX/UI designers, and product owners. Uses agile methodologies, such as Scrum and Kanban, to manage projects.

Usage Scenario: John is reviewing a user story about implementing a new payment functionality in an e-commerce system. He needs to understand not only the business logic for calculating prices and applying discounts on the backend but also how the checkout interface will be designed on the frontend to provide an intuitive user experience. John looks for a clear API definition connecting the frontend to the backend and detailed documentation of requirements for both the server and client sides.

Supporting Data: The persona of John Smith was created based on interviews with fullstack developers and market research identifying common needs and challenges faced by developers working on complex software development projects.

2 User Stories Sources

The user stories were drawn from the following publicly accessible sources:

- GitHub - User Story Examples (Rioux, 2020)
- Gist - Chatbot User Stories (Tyranja, 2017)
- Gist - User Stories for Billing (Yeargin, 2014)
- GitHub - OWASP User Security Stories (Foundation, 2018)
- GitHub - DiSSCo User Stories (DiSSCo, 2021)
- GitHub - OpenSecuritySummit ASVS User Stories (Summit, 2022)
- GitHub - Solid User Stories (Solid, 2020)
- Gist - Agile User Stories (Stark, 2023)

3 Complete Analysis of User Stories

Niche 1: E-commerce, Billing & Financial Applications

In this niche, we analyzed user stories related to e-commerce systems, billing, and financial applications. The persona John Smith provides valuable insights into the

difficulties and needs developers face when working with these systems. The following analysis applies the INVEST criteria to evaluate the effectiveness of each user story.

E-commerce User Stories

User Story 1.1: As a visitor, I want to view a selection of shirts so that I can explore my options.

Developer Analysis (John Smith): What selection filters are required? How should the user interface be designed?

INVEST Analysis:

- **I (Independent):** Yes. This user story is independent, as viewing the shirts does not rely on another functionality.
- **N (Negotiable):** Yes. The list of filters and how the interface will be organized are adjustable based on needs.
- **V (Valuable):** Yes. Allows visitors to explore products, increasing conversion chances.
- **E (Estimable):** Yes. The effort to implement filters and display products is estimable.
- **S (Small):** Yes. The story is small and can be completed in a sprint.
- **T (Testable):** Yes. It is testable to verify whether the interface allows visitors to view the selection correctly.

User Story 1.2: As a potential customer, I want to select a shirt color so that I can match my preferences.

Developer Analysis (John Smith): What color options are available, and how will they be presented?

INVEST Analysis:

- **I (Independent):** Yes. The user can select colors without needing another functionality.
- **N (Negotiable):** Yes. The selection of colors and their visual presentation are negotiable.
- **V (Valuable):** Yes. Facilitates customer personalization.
- **E (Estimable):** Yes. The effort to develop a color selection interface is estimable.
- **S (Small):** Yes. The story is small and focused.
- **T (Testable):** Yes. It is testable to ensure the colors are displayed and selected correctly.

Billing System User Stories

User Story 2.1: As a user, I want to create/update/delete a subscription.

Developer Analysis (John Smith): What will the interface look like for creating, updating, and deleting subscriptions? What are the validation criteria?

INVEST Analysis:

- **I (Independent):** No. This user story covers multiple actions that could be separated.
- **N (Negotiable):** Yes. Subscription management methods can be adjusted.
- **V (Valuable):** Yes. Essential for users to manage subscriptions.
- **E (Estimable):** No. As it covers multiple actions, it's harder to estimate the effort.
- **S (Small):** No. It should be broken into smaller stories.
- **T (Testable):** Yes. Each action can be tested independently.

User Story 2.2: As a support team member, I want to use the billing system to determine who is paying for which service and when.

Developer Analysis (John Smith): What filters will be available for search? How will the information be presented?

INVEST Analysis:

- **I (Independent):** Yes. This story focuses only on searching for billing data.
- **N (Negotiable):** Yes. Filters and interface details can be discussed.
- **V (Valuable):** Yes. Helps support manage customers and resolve issues.
- **E (Estimable):** Yes. Effort to create search filters is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. Tests can verify the search's accuracy.

Financial Application User Stories

User Story 3.1: As a user, I want to view my transaction history so that I can track my expenses.

Developer Analysis (John Smith): How will the history be displayed? What filters will be available? Will there be export options?

INVEST Analysis:

- **I (Independent):** Yes. Viewing the history is a standalone task.
- **N (Negotiable):** Yes. Display format and filters can be negotiated.
- **V (Valuable):** Yes. Helps users manage their finances.

- **E (Estimable):** Yes. Effort for implementation is estimable.
- **S (Small):** Yes. Focused on a specific feature.
- **T (Testable):** Yes. Can test if the history is displayed correctly.

User Story 3.2: As an administrator, I want to generate financial reports so that I can review the company's financial health.

Developer Analysis (John Smith): What types of financial reports can be generated? What formats will be available?

INVEST Analysis:

- **I (Independent):** Yes. Generating reports can be done separately.
- **N (Negotiable):** Yes. Report types and formats can be adjusted.
- **V (Valuable):** Yes. Essential for managing financial health.
- **E (Estimable):** Yes. Effort is estimable.
- **S (Small):** Yes. Focused on a specific task.
- **T (Testable):** Yes. Can test report generation and accuracy.

Digital Banking User Stories

User Story 4.1: As an administrator, I want to process initial payments for monthly accounts to generate revenue.

Developer Analysis (John Smith): What payment methods will be supported? Will there be notifications for successfully processed payments?

INVEST Analysis:

- **I (Independent):** Yes. Initial payment processing is a standalone task.
- **N (Negotiable):** Yes. Payment methods and notifications can be adjusted as needed.
- **V (Valuable):** Yes. Essential for generating revenue and ensuring system functionality.
- **E (Estimable):** Yes. Effort to implement is easily estimable.
- **S (Small):** Yes. Focused on a specific feature.
- **T (Testable):** Yes. Can test if payments are processed correctly and notifications function as expected.

User Story 4.2: As a customer, I want to receive automatic confirmations for completed payments so that I know the process was successful.

Developer Analysis (John Smith): What information should be included in the confirmation? Will the customer receive it via email or in-app notification?

INVEST Analysis:

- **I (Independent):** Yes. Payment confirmation is independent of other system processes.
- **N (Negotiable):** Yes. Message content and delivery method can be adjusted as needed.
- **V (Valuable):** Yes. Provides customers with confidence and peace of mind.
- **E (Estimable):** Yes. Effort to implement confirmation notifications is estimable.
- **S (Small):** Yes. Well-defined task.
- **T (Testable):** Yes. Can verify if confirmations are sent and received correctly.

Niche 2: Security, API & Data Management

Security User Stories

User Story 5.1: As a security engineer, I want to verify the system configuration so that I can ensure all settings are secure.

Developer Analysis (John Smith): What tools will be used for verification? What constitutes a secure configuration?

INVEST Analysis:

- **I (Independent):** Yes. Focused on configuration verification.
- **N (Negotiable):** Yes. Verification methods and tools can be adjusted.
- **V (Valuable):** Yes. Ensures system security.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Specific story.
- **T (Testable):** Yes. Testable with verification tools.

User Story 5.2: As a security manager, I want to validate data protection so that I can ensure compliance with security standards.

Developer Analysis (John Smith): Which security standards are being considered? What validation methods will be used?

INVEST Analysis:

- **I (Independent):** Yes. Focused on data protection validation.
- **N (Negotiable):** Yes. Methods and standards to follow can be adjusted.
- **V (Valuable):** Yes. Ensures compliance and data protection.
- **E (Estimable):** Yes. The effort for validation is estimable.
- **S (Small):** Yes. Focused and specific.
- **T (Testable):** Yes. Compliance with standards can be tested.

API Security User Story

User Story 6.1: As a security engineer, I want to verify API authentication so that I can ensure that only authorized users access the data.

Developer Analysis (John Smith): What tools will be used to verify authentication? What are the acceptance criteria?

INVEST Analysis:

- **I (Independent):** Yes. Authentication verification can be implemented separately.
- **N (Negotiable):** Yes. Tools and methods can be adjusted.
- **V (Valuable):** Yes. Ensures API security.
- **E (Estimable):** Yes. The implementation effort is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. It can be tested if authentication is verified correctly.

Authentication Security User Stories

User Story 7.1: As a security engineer, I want to implement multi-factor authentication so that I can enhance system security.

Developer Analysis (John Smith): Which multi-factor authentication methods will be used? How will they be implemented?

INVEST Analysis:

- **I (Independent):** Yes. The story is focused on implementing multi-factor authentication.
- **N (Negotiable):** Yes. The authentication methods can be negotiated.
- **V (Valuable):** Yes. Enhances system security.
- **E (Estimable):** Yes. The implementation effort is estimable.
- **S (Small):** Yes. Focused on one functionality.
- **T (Testable):** Yes. Multi-factor authentication can be tested.

User Story 7.2: As an administrator, I want to review access logs regularly so that I can detect suspicious activities.

Developer Analysis (John Smith): What types of access logs will be reviewed? What tools or methods will be used for the review?

INVEST Analysis:

- **I (Independent):** Yes. Reviewing logs can be an independent task.
- **N (Negotiable):** Yes. Tools and types of logs can be discussed.

- **V (Valuable):** Yes. Helps maintain system security.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on a specific task.
- **T (Testable):** Yes. Reviewing logs can be tested.

Scientific Collection Management User Stories

User Story 8.1: As a curator, I want physical and virtual access to extinct species samples so that I can study the impact of habitat loss.

Developer Analysis (John Smith): How will access be granted? What security measures will be implemented?

INVEST Analysis:

- **I (Independent):** Yes. Focused on access to samples.
- **N (Negotiable):** Yes. Access methods and security can be adjusted.
- **V (Valuable):** Yes. Important for scientific studies.
- **E (Estimable):** Yes. The effort to implement access can be estimated.
- **S (Small):** Yes. Focused on one functionality.
- **T (Testable):** Yes. It can be tested if access to samples works as expected.

User Story 8.2: As a researcher, I want to access specimen data from different collections so that I can conduct comparative analyses.

Developer Analysis (John Smith): Which data formats will be supported? What access methods will be provided?

INVEST Analysis:

- **I (Independent):** Yes. Focused on accessing specimen data.
- **N (Negotiable):** Yes. Details on formats and access can be adjusted.
- **V (Valuable):** Yes. Important for comparative analyses.
- **E (Estimable):** Yes. The effort to provide data access is estimable.
- **S (Small):** Yes. Focused on one specific functionality.
- **T (Testable):** Yes. It can be tested for access and usability of the data.

Data Management User Story

User Story 9.1: As a curator, I want to quickly catalog new entries so that I can keep the database updated.

Developer Analysis (John Smith): How will the cataloging process be carried out? What tools or interfaces will be used?

INVEST Analysis:

- **I (Independent):** Yes. Focused on cataloging new entries.
- **N (Negotiable):** Yes. The process and tools can be adjusted.
- **V (Valuable):** Yes. Ensures that the database remains updated.
- **E (Estimable):** Yes. The effort to catalog new entries can be estimated.
- **S (Small):** Yes. Focused on one functionality.
- **T (Testable):** Yes. The efficiency of the cataloging process can be tested.

Niche 3: Collaboration Tools & Project Management

Collaboration Tool User Stories

User Story 10.1: As a collaborator, I want to share documents with specific permissions so that I can control who can edit or view them.

Developer Analysis (John Smith): What types of permissions will be available? How will the interface allow managing these permissions?

INVEST Analysis:

- **I (Independent):** Yes. This user story focuses solely on sharing documents with specific permissions.
- **N (Negotiable):** Yes. Types of permissions, such as read, write, or edit, and the interface design can be adjusted as needed.
- **V (Valuable):** Yes. Controlling access to documents is essential to maintaining data integrity and security.
- **E (Estimable):** Yes. The effort to implement permission management is estimable.
- **S (Small):** Yes. The story is small and specific to a single functionality.
- **T (Testable):** Yes. It can be tested whether the specific permissions work correctly and whether the collaborator can control who edits or views the documents.

User Story 10.2: As a project manager, I want to monitor task progress so that I can ensure deadlines are met.

Developer Analysis (John Smith): What progress metrics will be monitored? How will they be displayed?

INVEST Analysis:

- **I (Independent):** Yes. This user story is focused on progress monitoring and can be implemented independently.
- **N (Negotiable):** Yes. The types of metrics and interface can be adjusted based on needs.
- **V (Valuable):** Yes. Enables efficient project management.
- **E (Estimable):** Yes. The development effort is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. It can be tested if task progress is correctly monitored and displayed.

Project Management User Story

User Story 11.1: As a parent, I want to set up a server for my family and only for them, maintaining some control over my children's accounts, to keep them safe on the web.

Developer Analysis (John Smith): What parental control features are required? How will privacy and data security for the family be managed?

INVEST Analysis:

- **I (Independent):** Yes. Setting up a family server is a standalone functionality.
- **N (Negotiable):** Yes. The specifications for controls and security can be adjusted as needed.
- **V (Valuable):** Yes. Ensures the family's safety and privacy on the web.
- **E (Estimable):** Yes. The effort to implement parental controls and server settings is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. The effectiveness of the controls and server security can be tested.

CRM User Stories

User Story 12.1: As a salesperson, I want to manage sales leads so that I can track potential clients and close deals.

Developer Analysis (John Smith): What information will be necessary to manage leads? Will there be integration with other sales systems?

INVEST Analysis:

- **I (Independent):** Yes. Focused on lead management.
- **N (Negotiable):** Yes. Information and integrations can be adjusted.
- **V (Valuable):** Yes. Essential for the sales process.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on one functionality.
- **T (Testable):** Yes. Lead management can be tested.

User Story 12.2: As a sales manager, I want to generate performance reports so that I can monitor the sales team's effectiveness.

Developer Analysis (John Smith): What performance metrics will be included in the reports? What report formats will be available?

INVEST Analysis:

- **I (Independent):** Yes. Focused on report generation.
- **N (Negotiable):** Yes. Metrics and formats can be adjusted.
- **V (Valuable):** Yes. Important for monitoring effectiveness.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. Report generation can be tested.

Niche 4: E-Learning & Language Learning

E-Learning Application User Story

User Story 13.1: As a student, I want to access online study materials so that I can learn anytime and anywhere.

Developer Analysis (John Smith): What types of study materials will be available (PDFs, videos, audios)? Will there be download options?

INVEST Analysis:

- **I (Independent):** Yes. Focused on accessing the material.
- **N (Negotiable):** Yes. Types of materials and options can be adjusted.

- **V (Valuable):** Yes. Facilitates continuous learning.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on a single functionality.
- **T (Testable):** Yes. It can be tested whether the material is accessible.

Language Learning User Stories

User Story 14.1: As a student, I want to practice grammar exercises so that I can improve my language skills.

Developer Analysis (John Smith): What types of grammar exercises? What are the acceptance criteria?

INVEST Analysis:

- **I (Independent):** Yes. Focused on practicing grammar exercises.
- **N (Negotiable):** Yes. The type of exercise and acceptance criteria can be adjusted.
- **V (Valuable):** Yes. Essential for language learning.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on one functionality.
- **T (Testable):** Yes. It can be tested whether the exercises are effective.

User Story 14.2: As a teacher, I want to track student progress so that I can provide targeted feedback.

Developer Analysis (John Smith): What progress metrics will be tracked? How will feedback be provided?

INVEST Analysis:

- **I (Independent):** Yes. Focused on tracking progress.
- **N (Negotiable):** Yes. Metrics and feedback methods can be adjusted.
- **V (Valuable):** Yes. Critical for improving teaching.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. It can be tested whether progress is tracked and feedback is provided.

Niche 5: Chatbot & Ride-Sharing

Chatbot User Stories

User Story 15.1: As a technical support manager, I want to upload FAQ files by simply pointing to a link so that I don't need to compile a Word document.

Developer Analysis (John Smith): What file formats are supported? How will the upload interface work?

INVEST Analysis:

- **I (Independent):** Yes. Can be implemented in isolation.
- **N (Negotiable):** Yes. The upload interface and supported formats can be adjusted.
- **V (Valuable):** Yes. Reduces effort for managers when uploading FAQs.
- **E (Estimable):** Yes. The effort to support different file formats is estimable.
- **S (Small):** Yes. A focused and specific story.
- **T (Testable):** Yes. It can be tested whether uploads work correctly.

User Story 15.2: As a customer, I want to quickly get the answer I need so that I don't have to search through FAQs myself.

Developer Analysis (John Smith): What search algorithms will be used? Will there be an interface for feedback if the answer is unsatisfactory?

INVEST Analysis:

- **I (Independent):** Yes. The answer search can be developed separately.
- **N (Negotiable):** Yes. Search algorithms and interfaces can be discussed.
- **V (Valuable):** Yes. Improves customer experience by speeding up support.
- **E (Estimable):** Yes. The implementation of search algorithms is estimable.
- **S (Small):** Yes. A specific story.
- **T (Testable):** Yes. The effectiveness of the search can be tested.

Ride-Sharing User Stories

User Story 16.1: As a passenger, I want to check the availability of nearby drivers so that I can plan my trip.

Developer Analysis (John Smith): How will driver availability be calculated and displayed?

INVEST Analysis:

- **I (Independent):** Yes. Focused on checking availability.
- **N (Negotiable):** Yes. The calculation and display methods can be adjusted.

- **V (Valuable):** Yes. Important for trip planning.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. Availability accuracy and display can be tested.

User Story 16.2: As a driver, I want to quickly view ride requests so that I can accept more rides.

Developer Analysis (John Smith): How will ride requests be presented? What information will be available?

INVEST Analysis:

- **I (Independent):** Yes. Focused on viewing ride requests.
- **N (Negotiable):** Yes. The layout and information can be adjusted.
- **V (Valuable):** Yes. Helps drivers manage rides.
- **E (Estimable):** Yes. The effort is estimable.
- **S (Small):** Yes. Focused on one task.
- **T (Testable):** Yes. The interface and functionality can be tested.

User Story 16.3: As a passenger, I want to confirm the estimated cost of my ride so that I can book my trip.

Developer Analysis (John Smith): What parameters will be used to calculate the estimated cost? How will the cost be displayed to the user?

INVEST Analysis:

- **I (Independent):** Yes. Focused on cost estimation functionality.
- **N (Negotiable):** Yes. The parameters and display format can be adjusted as needed.
- **V (Valuable):** Yes. Allows passengers to make informed decisions before booking.
- **E (Estimable):** Yes. Development effort is estimable.
- **S (Small):** Yes. Focused on a specific functionality.
- **T (Testable):** Yes. The accuracy of the calculation and clarity of display can be tested.

User Story 16.4: As a passenger, I want to input my destination address so that I can plan my ride.

Developer Analysis (John Smith): How will the address input interface work? Will there be support for location auto-suggestions?

INVEST Analysis:

- **I (Independent):** Yes. Focused on address input, independent of other functionalities.
- **N (Negotiable):** Yes. The interface design and location suggestions can be adjusted.
- **V (Valuable):** Yes. Essential for trip planning.
- **E (Estimable):** Yes. The implementation effort is estimable.
- **S (Small):** Yes. Focused on a well-defined functionality.
- **T (Testable):** Yes. It can be verified whether the address is input and processed correctly.

4 Survey questions and results

Table 1: Response Distribution on User Story Clarity

Question	Response
Have you ever faced difficulties with the clarity or specificity of user stories in your projects?	Yes: 96.4%
	No: 3.6%
If so, what difficulties did you face?	Vague acceptance criteria: 81.8% Lack of clarity: 76.4% Lack of technical details: 60% Lack of knowledge in business rules and application service integration: 1.8% Too large: 1.8% User stories did not represent a valuable functionality: 1.8% Ambiguity: 1.8% Lack of test scenarios for development: 1.8%
Do you agree that clear acceptance criteria are essential for effective user stories?	Strongly agree: 85.7%
	Agree: 14.3%
In your experience, are acceptance criteria usually clear in the user stories you work with?	Strongly agree: 3.36%
	Agree: 48.2%
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Question	Response
	Disagree: 44.6% Strongly disagree: 3.36%
In your experience, do the user stories you work on generally include sufficient technical details?	Strongly agree: 1.8% Agree: 30.4% Disagree: 60.7% Strongly disagree: 7.1%
What technical details do you think are most often omitted from user stories? (Select all that apply)	Validation criteria: 80.4% Data formats: 66.1% Access methods: 39.3% Tools to be used: 28.6% System Design: 1.8% Business rules: 1.8% Our squad has an architect who prepares the technical refinement, giving us a deeper understanding of the subject: 1.8%
What are the biggest challenges you face when working with user stories? (Select all that apply)	Vague acceptance criteria: 71.4% Lack of clarity: 69.6% Lack of technical details: 51.8% Dependencies between stories: 58.9% Does not bring value to the user: 1.8% Breaking down large stories: 1.8%
What additional information do you think should be included in user stories? (Select all that apply)	Clear acceptance criteria: 73.2% Practical examples: 60.7% Technical details: 53.6% User interface details: 57.1% Input and output data examples: 1.8% Better formatted business rules: 1.8% Technical refinement should contain user navigation details and acceptance criteria to ensure the story is fully delivered: 1.8%
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Question	Response
Do you think including practical examples would help improve the understanding of user stories?	Strongly agree: 50% Agree: 44.6% Disagree: 5.4%
Definition of clear acceptance criteria.	Strongly agree: 75% Agree: 35%
Breaking down large stories into smaller, more manageable parts.	Strongly agree: 64.3% Agree: 35.7%
Specification of technical requirements	Strongly agree: 55.4% Agree: 33.9% Disagree: 7.1% Strongly disagree: 3.6%
Inclusion of user interface details	Strongly agree: 48.2% Agree: 39.3% Disagree: 8.9% Strongly disagree: 3.6%
Continuous collection of developer feedback	Strongly agree: 58.9% Agree: 35.7% Disagree: 5.4%

Do you have suggestions on how user stories can be improved to facilitate the work of developers?

- Trying to treat a feature in a distributed system as a standalone issue often underestimates the impact of that feature on past and future behaviors within the system as a whole.
- A good user story should consider the entire system it is integrated into and its future plans.
 - Example: How did the user arrive at accessing this feature? How should or should not this feature impact other parts of the system? How does this feature plan to evolve?
- Users should know more about technology, and developers should know more about the business.
- I believe user stories often lack the necessary technical details for implementation. These details should be supplemented with artifacts like diagrams, attribute lists, sets of constraints, business rules, prototypes, etc.

- They can be improved with better writing and understanding of the feature with the help of the team.
- More meetings with Business Analysts so developers can support BAs in writing the details of user stories.
- It should be clear where the change/evolution will occur, how it will be done, and how to access it.
- Clear acceptance criteria with well-defined and described business rules.
- They should be as descriptive as possible, allowing the developer to simply read the ticket and implement what is being proposed.
- I believe user stories are a great mechanism, but the issue could be resolved with more detailed acceptance criteria.
- Create stories that are clearer and have a reasonable level of detail.
- Performance improved when the development team participated in the process of creating user stories.
- Have a well-defined Definition of Ready (DOR) in the team and strictly follow it to avoid misunderstandings between stories.
- User stories should reflect the user's needs for technical development, containing clear paths for success and error flows.
- Include clear acceptance criteria and business rules that define formats and technologies, or have this as part of the user story.
- Ensure clarity in acceptance criteria and specificity about what is expected from each user story.
- User stories should be written in a simple and straightforward manner, without ambiguities, ensuring that everyone on the team understands what is expected.
- Involve developers in the creation and refinement of user stories to bring more technical insights and improve quality.
- User stories should include more information about what is expected to be developed, including rules, methods, and tools.
- The more detailed the story, the better the execution of the task.
- Use frameworks such as Mike Cohn's Template, SMART, INVEST, and Acceptance Criteria framed using Gherkin.
- Create smaller scoped stories to facilitate deeper analysis and address unforeseen issues.
- Always include a prototype of what will be delivered as an alternative.

- Define clear and well-structured criteria, along with practical examples, to avoid ambiguities.
- Include flowcharts in the stories to understand the need, not just the solution, according to the business model.
- Use artificial intelligence to improve the clarity and structure of user stories.
- Define best practices for developing user stories:
 1. Understand the user's needs.
 2. Focus on value.
 3. Define clear and testable criteria for stories.
 4. Prioritize stories.
 5. Use the "Three Amigos" technique to gather perspectives from business, development, and testing areas, helping to avoid misunderstandings and communication failures.
- Stories should enter the pipeline early enough to allow for proper refinement.
- Define and follow a template that all stories must adhere to. This helps remember important points and avoids mistakes and missing information.

Any additional comments?

- NA
- I support a well-detailed user story regardless of the team's seniority because documentation is for everyone in the project.
- I loved the research topic! We need more visibility on the challenges encountered when working with user stories and their specifications.
- No
- No! Good research.
- "Be careful with too many integrations in user stories, as this can distort the story's scoring if working with history points. That is, work on a backend story separately from a frontend or integration story. This is just a suggestion since we have also gone through this. Best regards, hope this helps!"
- "I was unsure about what a 'Practical Example' in a User Story would look like. Continuous feedback collection, I believe, would also apply to Testing, as it impacts activities when a story is not clear."

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