SDLC (Agile Project Planning)

Project Training – SDLC

19/06/2024
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Version: 1.0

Created: 19/06/2024

Last Updated: 19/06/2024

Status: DRAFT (The status would change to finalized post the BA, PM and dev team review and sign off)

Task1: Agile project planning - create a one-page project plan for a new software feature using agile planning techniques including backlog items with estimated story points and a prioritized list of user stones

Feature Overview:

Develop a new notification feature for a community event organization app to enhance communication and engagement.

1. Product Backlog:

Backlog Item	Description	Estimated Story Points
Notification System	Implement a system to send notifications to users	8
User Preferences	Allow users to set their notification preferences (e.g., email, SMS, push)	5
Event Reminder Notifications	Send reminders for upcoming events	3
Volunteer Task Notifications	Notify volunteers about their assigned tasks	5
Broadcast Notifications	Enable organizers to send broadcast messages to all event participants	8
Notification History	Maintain a history of sent notifications	3
Notification UI Design	Design user interface for notification settings	5
Integration with Calendar	Sync notifications with users' calendar apps	8
Testing and Bug Fixing	Comprehensive testing and fixing of any identified bugs	8

2. Prioritized User Stories:

1. **As an event organizer, I want to send broadcast messages to all participants, so I can quickly communicate important updates.**
    - **Backlog Item:** Broadcast Notifications
    - **Story Points:** 8
2. **As a user, I want to receive reminders for upcoming events, so I don't miss any events I've signed up for.**
    - **Backlog Item:** Event Reminder Notifications
    - **Story Points:** 3
3. **As a volunteer, I want to be notified about my assigned tasks, so I can fulfill my responsibilities on time.**
    - **Backlog Item:** Volunteer Task Notifications
    - **Story Points:** 5
4. **As a user, I want to set my notification preferences, so I can choose how I receive notifications (email, SMS, push).**
    - **Backlog Item:** User Preferences
    - **Story Points:** 5
5. **As a user, I want to view a history of notifications I've received, so I can refer back to past messages.**
    - **Backlog Item:** Notification History
    - **Story Points:** 3
6. **As an app developer, I want to integrate notifications with users' calendar apps, so events and reminders sync seamlessly.**
    - **Backlog Item:** Integration with Calendar
    - **Story Points:** 8
7. **As a designer, I want to create a user-friendly UI for notification settings, so users can easily manage their preferences.**
    - **Backlog Item:** Notification UI Design
    - **Story Points:** 5
8. **As a QA tester, I want to conduct comprehensive testing and fix any bugs, so the notification feature is reliable and user-friendly.**

- **Backlog Item:** Testing and Bug Fixing
- **Story Points:** 8
9. **As an app developer, I want to implement a robust notification system, so notifications are sent reliably and on time.**
    - **Backlog Item:** Notification System
    - **Story Points:** 8

3. Sprint Planning:

- **Sprint 1 (2 weeks):**
    - Notification System (8 points)
    - User Preferences (5 points)
    - Notification UI Design (5 points)
    - Total: 18 points
- **Sprint 2 (2 weeks):**
    - Event Reminder Notifications (3 points)
    - Volunteer Task Notifications (5 points)
    - Notification History (3 points)
    - Testing and Bug Fixing (7 points)
    - Total: 18 points
- **Sprint 3 (2 weeks):**
    - Broadcast Notifications (8 points)
    - Integration with Calendar (8 points)
    - Testing and Bug Fixing (1 point)
    - Total: 17 points

4. Key Milestones:

- **End of Sprint 1:**
    - Basic notification system in place

- User can set notification preferences
  - Notification settings UI available
- **End of Sprint 2:**
  - Event reminders and volunteer task notifications functional
  - Notification history accessible
  - Initial round of testing and bug fixing
- **End of Sprint 3:**
  - Broadcast notifications implemented
  - Calendar integration completed
  - Final testing and bug fixing for release

Task2: Daily standup simulation - write a script for a daily standup meeting for a development team working on the software feature from assignment 1. Address a common challenge and incorporate a solution into the communication flow

Daily Standup Meeting

[Team Lead (Alex)]: Good morning, team! Let's get started with our daily standup. We'll go around and briefly discuss what we did yesterday, what we're working on today, and any blockers we're facing. Let's start with Jamie.

[Jamie (Frontend Developer)]: Morning, everyone. Yesterday, I finished implementing the new user profile page UI and began integrating it with our backend services. Today, I'll be working on connecting the frontend with the API to fetch user data and ensure the profile page displays correctly.

[Team Lead (Alex)]: Thanks, Jamie. How's the integration with the backend going?

[Jamie]: Actually, I ran into a bit of a challenge. The API responses are taking longer than expected, which is causing the frontend to time out. I'm trying to identify the bottleneck.

[Alex]: Got it. Let's come back to that in a moment. Next, let's hear from Chris.

[Chris (Backend Developer)]: Morning. Yesterday, I worked on optimizing the API endpoints for the user profile feature. I've implemented some caching mechanisms to improve response times. Today, I'll continue fine-tuning these optimizations and start working on the user authentication module.

[Alex]: Thanks, Chris. How's the caching going?

[Chris]: It's making a difference, but I noticed that it's not addressing all the performance issues. I think we might need to look into further optimizations or possibly consider asynchronous processing for certain tasks.

[Alex]: Good point. We'll need to monitor the performance and adjust as needed. Let's move on to Taylor.

[Taylor (QA Engineer)]: Good morning. Yesterday, I created test cases for the user profile page and started running them. I'm facing some issues with intermittent failures in the test automation suite. Today, I'll be investigating these failures to pinpoint the cause.

[Alex]: Thanks, Taylor. Are there any blockers we should address?

[Jamie]: Yes, the slow API responses are a concern for me, and it's affecting the frontend testing.

[Alex]: Understood. Chris, can you help out with this? Perhaps we can look into further optimizations or review the API response times together.

[Chris]: Absolutely. I'll coordinate with Jamie to review the API performance and see if there are any additional improvements we can make.

[Alex]: Great. Taylor let's make sure you have what you need to proceed with your testing once the API issues are resolved. We'll have a follow-up discussion on this issue later today. Anything else to address?

[Taylor]: No, that's all for now.

[Alex]: Alright, team. Let's stay focused on resolving these performance issues and continue to push forward with our tasks. We'll have a quick follow-up on the API optimization this afternoon. Have a productive day!

Task2: Explain these concepts- agile planning techniques (backlog grooming, story points) conductive effective daily stand-up meetings. common challenges and solutions in daily standup communication. sprint review and stakeholder communication

Agile Planning Techniques

Backlog Grooming (or Refinement):

> **Definition**: Backlog grooming is an ongoing process where the product backlog is reviewed and updated to ensure it remains relevant, detailed, and prioritized. This process involves refining user stories, breaking them down into smaller tasks, and re-prioritizing based on new insights or changes in project scope.
> **Purpose**: It helps ensure that the backlog contains well-defined and prioritized items that are ready for future sprints. It also helps the team understand the requirements and the work involved.
> **Activities**: Includes reviewing backlog items, clarifying requirements, estimating effort, and removing outdated or irrelevant items.

Story Points:

 Definition: Story points are a unit of measure used to estimate the effort required to complete a user story or task. They are abstract and relative, representing the complexity, effort, and time needed.

 Purpose: Story points help the team estimate how much work can be completed in a sprint and measure progress over time. They promote a shared understanding of the work involved without tying it to specific time units.

 Activities: Teams often use techniques like Planning Poker or T-shirt sizes to assign story points. The estimates are based on historical data and team experience.

Conductive Effective Daily Stand-up Meetings

Common Challenges:

 Lack of Focus: Meetings can drift off-topic, leading to lengthy discussions that are not relevant to the whole team.

 Inconsistent Participation: Team members may not be equally engaged, leading to incomplete updates or missing information.

 Unresolved Blockers: Issues and blockers might not be addressed immediately, impacting the team's progress.

Solutions:

 Set Clear Agenda: Stick to the three key questions: What did you do yesterday? What will you do today? Are there any blockers?

 Encourage Participation: Ensure everyone has a chance to speak and provide updates. Foster a culture of openness and accountability.

 Address Blockers: Identify and document blockers during the stand-up and have a plan to resolve them outside the meeting.

Sprint Review and Stakeholder Communication

Sprint Review:

    Definition: A sprint review is a meeting held at the end of a sprint where the team demonstrates the work completed and discusses what was achieved versus the sprint goal. It's an opportunity to gather feedback from stakeholders and adjust for future sprints.

    Purpose: It allows the team to showcase their work, validate the increment with stakeholders, and gather valuable feedback that can be used to improve the product.

    Activities: Demonstrate completed work, discuss what went well and what didn't, review progress towards the project goals, and adjust the product backlog based on feedback.

Stakeholder Communication:

    Definition: Stakeholder communication involves engaging with individuals or groups who have an interest in the project's outcome, including customers, executives, and other teams.

    Purpose: Effective communication ensures that stakeholders are informed about progress, changes, and issues. It helps align expectations and gather input that can drive project success.

    Activities: Regular updates, feedback sessions, presentations, and collaborative discussions to keep stakeholders engaged and informed.