**Methodology**

**Methodology to be Used**

The development of SK MaduyAssist follows the **Agile Methodology**, an iterative and incremental approach that ensures flexibility, adaptability, and continuous feedback throughout the development process. Agile allows for ongoing collaboration with stakeholders, frequent testing, and the ability to refine system functionalities based on real-time requirements. This methodology is well-suited for the SK MaduyAssist platform as it prioritizes user engagement, transparency, and responsiveness to community needs.

Agile methodology is characterized by iterative development cycles known as **sprints**, where small, functional parts of the system are designed, developed, tested, and deployed in phases. This approach ensures that the system remains flexible and accommodates changing requirements from SK officials and youth users.

1. **Planning Phase** The project began with identifying the core functionalities of SK MaduyAssist, including:
   * Event management for SK initiatives
   * Transparency features for financial reporting
   * A scholarship application system
   * A feedback and engagement platform

The project team, consisting of developers and stakeholders (SK officials and youth members), collaborated to prioritize requirements and establish a product backlog containing all necessary system features.

1. **Sprint Cycles and Iterative Development** The development process was broken into several **sprints**, each lasting one to two weeks. Each sprint focused on developing a specific module or feature of the system.
   * **Sprint 1: System Setup and Core Infrastructure**
     + Environment setup (server, database, frameworks)
     + User authentication system
     + Basic UI wireframing
   * **Sprint 2: Event Management Module**
     + Implementation of an event listing and announcement system
     + Admin functionalities for event creation and updates
     + User interface enhancements for accessibility

**Sprint 3: Financial Transparency Module**

* + - Secure upload feature for project receipts and reports
    - Role-based access control for financial documents
    - Dashboard integration for transparency tracking

**Sprint 4: Scholarship Application System**

* + - Online form submission for scholarship applications
    - Document verification and review functionality
    - Notification system for application status updates

**Sprint 5: Feedback and Engagement Features**

* + - Comment section for community discussions
    - Feedback form for user suggestions and concerns
    - Manual moderation system for content filtering
  + **Sprint 6: Final Integration and User Testing**
    - Bug fixes and performance optimizations
    - Deployment and user training

1. **Continuous Testing and Feedback** **Agile’s** **test-driven development (TDD)** approach was implemented, ensuring that each feature underwent rigorous testing before deployment. User feedback was actively gathered at the end of each sprint, allowing for iterative improvements.
   * **Unit Testing:** Ensured each system component functioned as intended.
   * **Integration Testing:** Verified seamless interaction between modules.
   * **User Acceptance Testing (UAT):** SK officials and community youth tested the platform to ensure usability and efficiency.
2. **Deployment and Continuous Improvement** After the completion of sprint cycles, the system was deployed in phases:

**Full Deployment:** Official launch after resolving issues identified in the beta phase.

**Post-Deployment Maintenance:** Continuous monitoring, bug fixes, and feature enhancements based on user feedback.