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COURSE : Agile software tools and practices

Assignment :

Title:

Study and hands on sonar cloud (sonarqube) for project quality Methodology:

Analyzing a project

Now that you're logged in to your local SonarQube instance, let's analyze a project:

1. Select Create new project.
2. Give your project a Project key and a Display name and select Set up.
3. Under Provide a token, select Generate a token. Give your token a name, select Generate, and click Continue.
4. Select your project's main language under Run analysis on your project, and follow the instructions to analyze your project. Here you'll download and execute a scanner on your code (if you're using Maven or Gradle, the scanner is automatically downloaded).

After successfully analyzing your code, you'll see your first analysis on SonarQube:

Theory:

Sonar is a software quality management tool that helps to assess the quality of code and identify areas that require improvement. It is beneficial for improving software quality and the agile software development process in the following ways:

1. Continuous Inspection: Sonar helps to conduct a continuous inspection of the codebase, which enables early identification and prevention of defects, leading to better software quality.
2. Code Analysis: Sonar analyzes the code quality based on various metrics such as code complexity, duplication, and code coverage. This helps to identify areas that require refactoring, leading to better maintainability and extensibility of the code.
3. Reporting: Sonar generates detailed reports that provide insights into the code quality, enabling teams to identify areas that need improvement and track progress over time.
4. Integration with Agile Tools: Sonar integrates with agile development tools such as Jenkins, Git, and Jira, enabling developers to incorporate code quality into their agile process and continuous integration and deployment pipeline.
5. Automated Code Review: Sonar automates the code review process, saving time and effort for developers and enabling them to focus on more critical tasks.
6. Technical Debt Management: Sonar helps to manage technical debt by identifying and prioritizing areas that require refactoring or improvement, leading to better long-term maintainability of the software.
7. Code Standards Compliance: Sonar ensures compliance with coding standards and best practices, reducing the risk of code defects and ensuring the overall quality of the software.

In summary, Sonar is an essential tool for improving software quality and facilitating the agile software development process by providing continuous inspection, code analysis, reporting, integration with agile tools, automated code review, technical debt management, and code standards compliance.

Conclusion:

In conclusion, SonarQube is a practical tool for software development teams to improve code quality and streamline the agile development process. It provides a continuous inspection of the codebase, automated code review, and comprehensive reports that enable developers to identify areas for improvement and track progress over time. Additionally, SonarQube integrates with popular agile tools such as Jenkins, Git, and Jira, making it easy for teams to incorporate code quality into their development pipeline. By using SonarQube, teams can improve the maintainability, extensibility, and reliability of their software, resulting in higher customer satisfaction and reduced technical debt. Overall, SonarQube is a valuable tool for software development teams looking to build high-quality, scalable, and maintainable software applications.