**Course Code- CSET455**

**Assignment 1**

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1.Six tools and their features that are utilized in the agile software development process:

* Jira: Jira is a popular project management tool that helps agile teams track their work, manage their tasks, and collaborate with each other. It has a variety of features that are specifically designed for agile development, such as issue tracking, sprint planning, and burndown charts.
* Trello: Trello is a kanban board tool that helps teams visualize their work and track their progress. It is a very visual tool that makes it easy to see what tasks are in progress, what tasks are waiting to be started, and what tasks have been completed.
* Git: Git is a version control system that helps teams track changes to their code. It is essential for agile development, as it allows teams to easily revert to previous versions of the code if necessary.
* Jenkins: Jenkins is a continuous integration and continuous delivery (CI/CD) server that helps teams automate their build, test, and deployment process. This can save teams a lot of time and effort, and it can help to improve the quality of their code.
* Docker: Docker is a containerization platform that helps teams package and deploy their applications. This can make it easier to deploy applications to different environments, and it can also help to improve the security of applications.
* SonarQube: SonarQube is a code quality analysis tool that helps teams identify and fix code defects. This can help to improve the quality of the code, and it can also help to reduce the risk of bugs in the application.

2. Jira and Git are two popular tools that are often used together in agile software development. Jira is a project management tool that helps teams track their work, manage their tasks, and collaborate with each other. Git is a version control system that helps teams track changes to their code.

The best option for your team will depend on your specific needs and preferences. If you are looking for a project management tool that can help you track your work, manage your tasks, and collaborate with your team, then Jira is a good option. If you are looking for a version control system that can help you track changes to your code, then Git is a good option.

In general, Jira is a better option for teams that are using an agile development methodology. Git is a better option for teams that are working on smaller projects or that are not using an agile development methodology.

Here are some additional factors to consider when choosing between Jira and Git:

Team size: Jira is a better option for larger teams, as it can handle more complex projects. Git is a better option for smaller teams, as it is more lightweight.

Development methodology: Jira is a better option for teams that are using an agile development methodology. Git is a better option for teams that are not using an agile development methodology.

Budget: Jira is more expensive than Git.

Learning curve: Jira has a steeper learning curve than Git.

Ultimately, the best way to decide which tool is right for you is to try both of them and see which one you prefer.