Department of Computer Engineering

Academic Term: First Term 2023-24

Class: T.E /Computer Sem – V / Software Engineering

Practical No:	**3**
Title:	**Implementing Project using KANBAN method on JIRA Tool**
Date of Performance:	**7th August 2023**
Roll No:	**9539**
Team Members:	**Crystal Fernandes**

Rubrics for Evaluation:

Sr. No	Performance Indicator	Excellent	Good	Below Average	Total Score
1	On time Completion & Submission (01)	01 (On Time)	NA	00 (Not on Time)	
2	Theory Understanding(02)	02(Correct)	NA	01 (Tried)	
3	Content Quality (03)	03(All used)	02 (Partial)	01 (rarely followed)	
4	Post Lab Questions (04)	04(done well)	3 (Partially Correct)	2(submitted)	

Signature of the Teacher:

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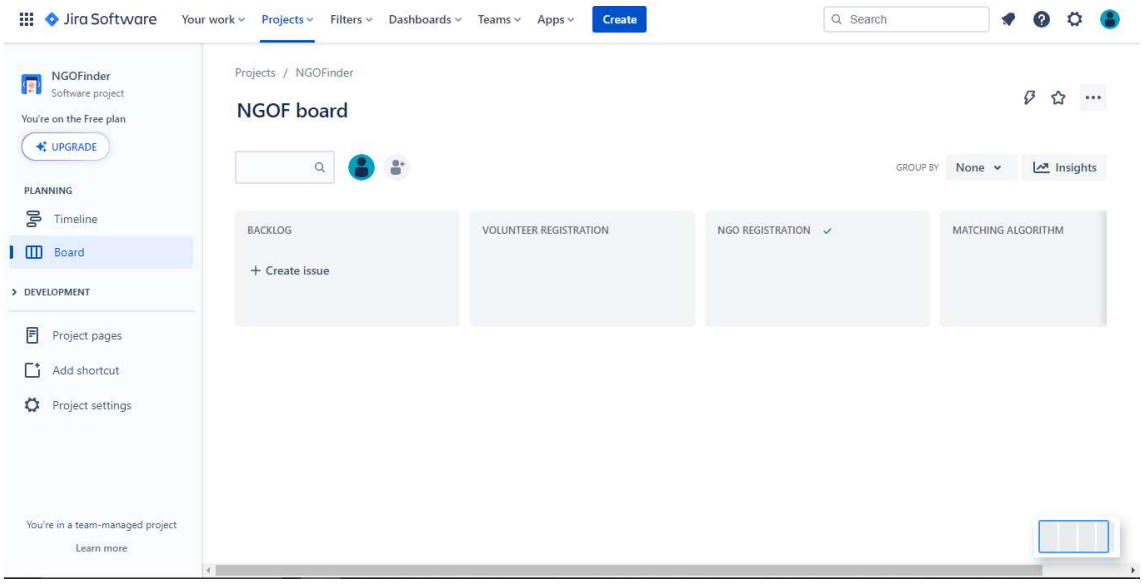
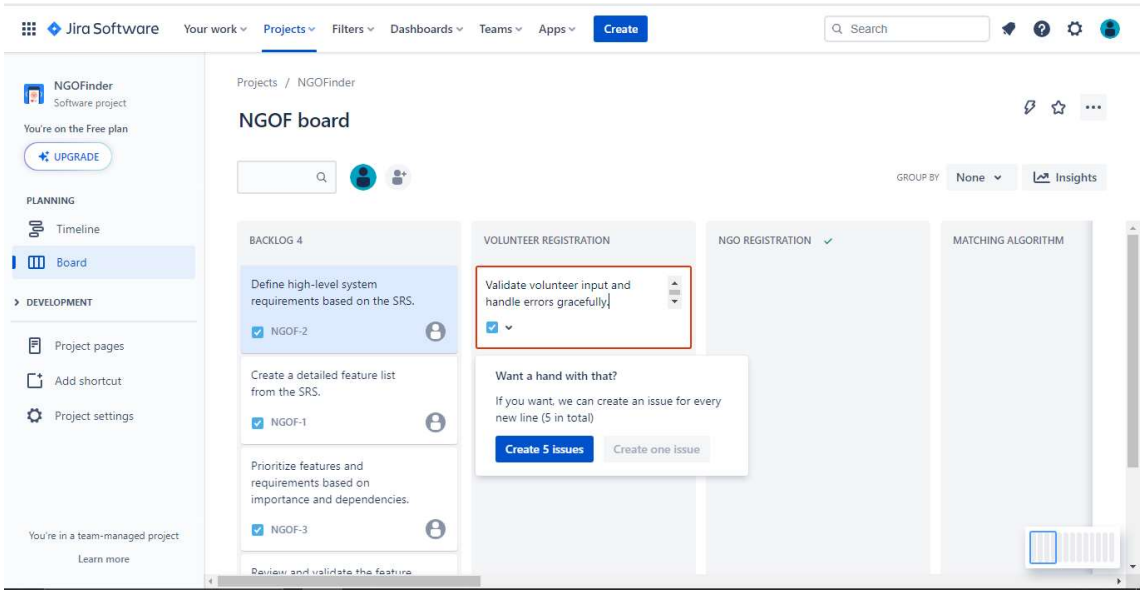
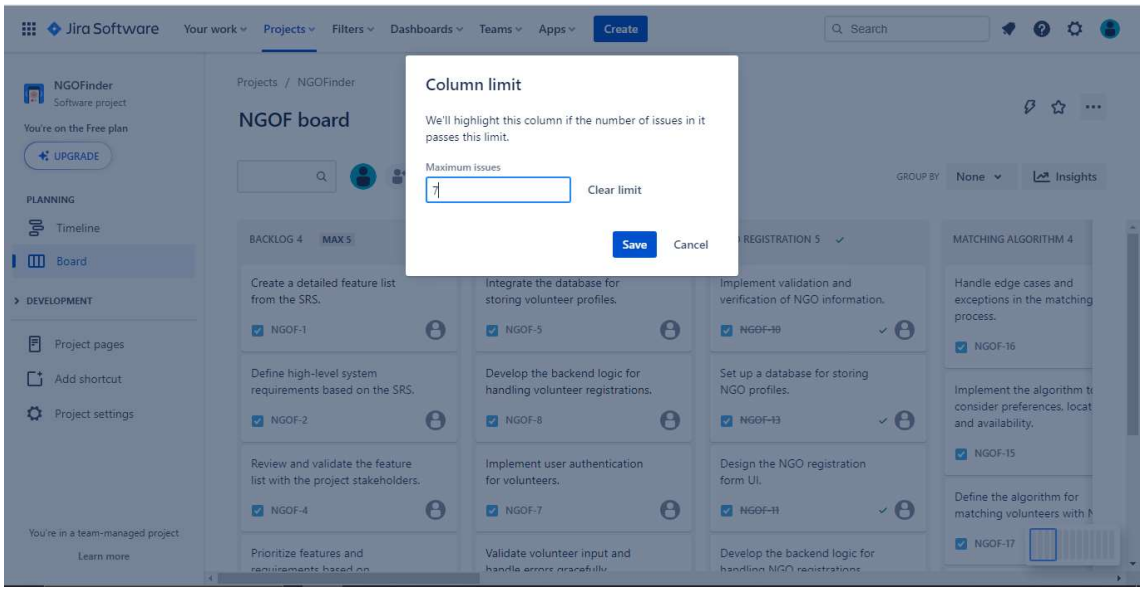
CREATING NEW COLUMNS



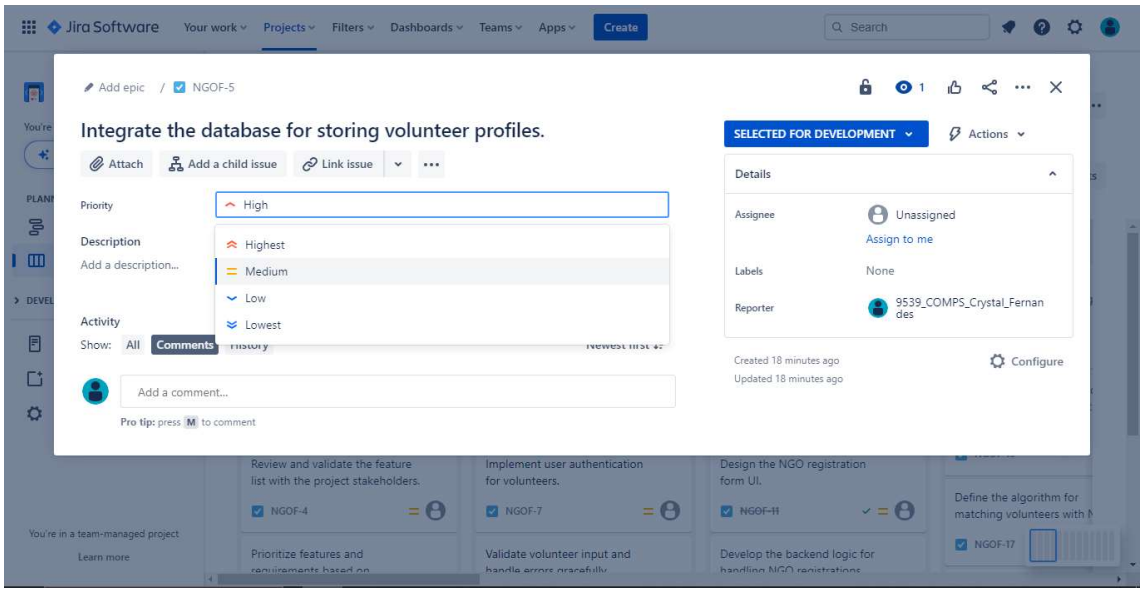
CREATING CARDS



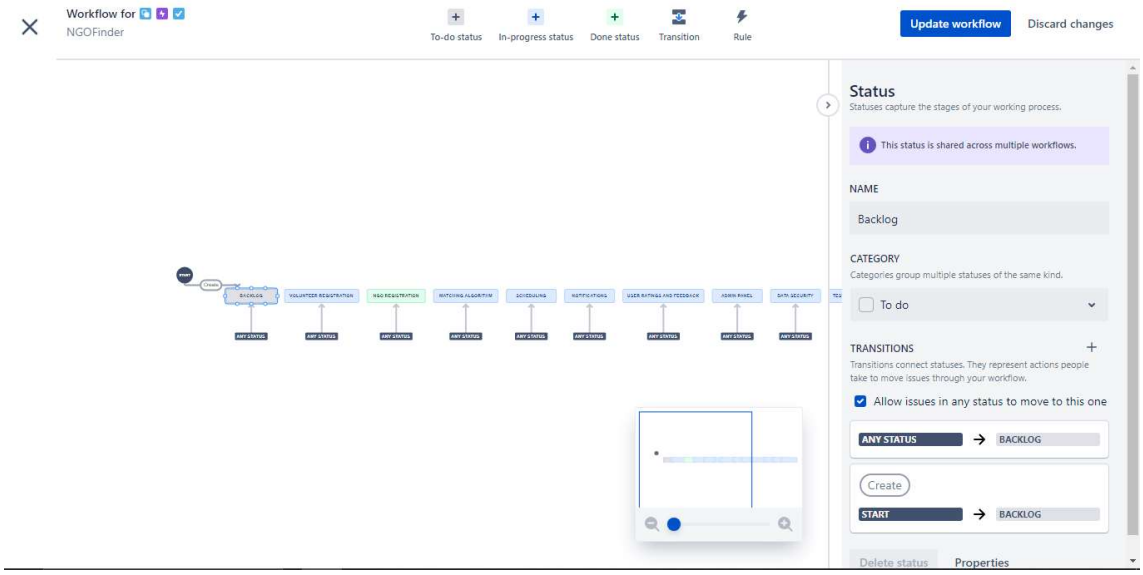
SETTING COLUMN LIMIT



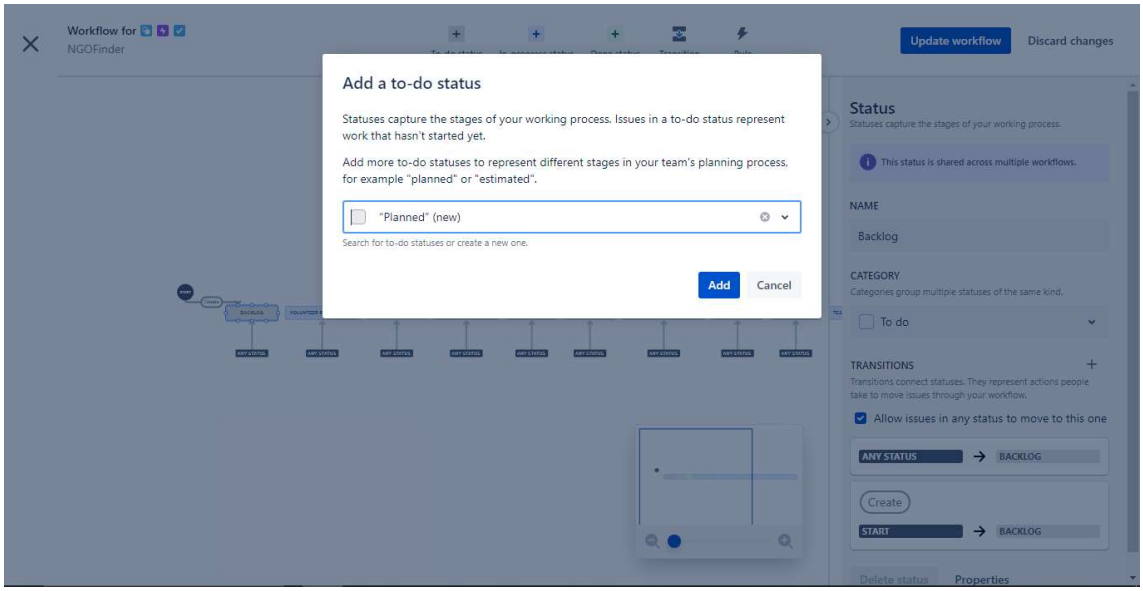
PRIORITIZING CARDS



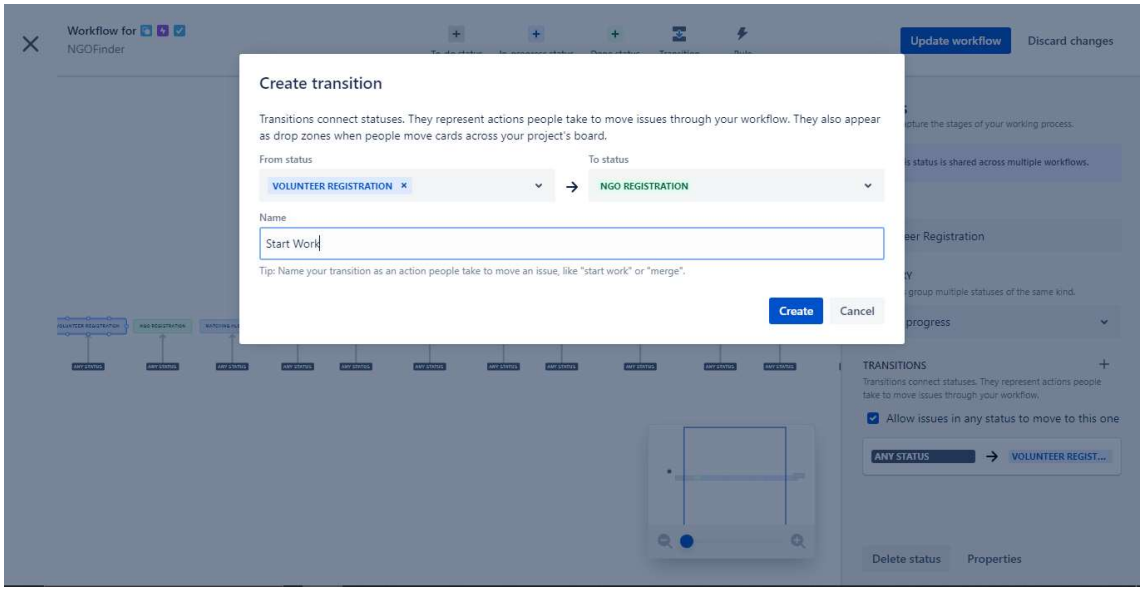
VIEWING WORKFLOW



ADDING A TODO STATUS TO WORKFLOW



CREATING TRANSITION FOR WORKFLOW



POSTLAB

a) Comparison of Kanban and Scrum Methodologies

Aspect	Kanban	Scrum
Flexibility	Highly flexible, allows changes at any time.	More structured with fixed sprint durations.
Adaptability	Adaptable to changing requirements mid-sprint.	Changes are typically accommodated in the next sprint.
Workflow Management	Continuous flow, tasks move as soon as ready.	Work is divided into time-boxed sprints.
Planning	No fixed sprint planning; work is pulled as needed.	Sprint planning occurs at the beginning of each sprint.
Roles	No prescribed roles; roles can vary.	Roles are well-defined (Scrum Master, Product Owner, etc.).
Meetings	Few formal meetings; daily standup is common.	Multiple ceremonies (sprint planning, review, retrospective, daily standup).

Iterations	No fixed iterations; tasks completed when ready.	Fixed iterations (sprints) typically 2-4 weeks.
Delivery Time Prediction	Provides cycle time data for forecasting.	Uses velocity for forecasting delivery.

- Flexibility and Adaptability: Kanban offers high flexibility and adaptability, allowing changes at any time, making it suitable for projects with evolving requirements. Scrum is more structured with fixed sprint durations, making it better for projects with stable requirements.
- Workflow Management: Kanban uses a continuous flow model, allowing tasks to move as soon as they are ready. Scrum divides work into time-boxed sprints, which can be more predictable.

b) Analysis and Proposed Improvements to a Kanban Board in JIRA

- WIP Limits: Review and adjust WIP limits for each column to balance workloads and prevent bottlenecks.
- Column Names: Ensure column names accurately reflect the workflow stages. Make them clear and intuitive for all team members.
- Card Details: Encourage team members to provide comprehensive card details, including task descriptions, priorities, and dependencies.
- Labels and Tags: Use labels or tags to categorize tasks (e.g., by priority, type, or team member) for better organization.
- Attachments and Links: Ensure relevant documents, links, or references are attached to cards for easy access.
- Comments and Communication: Promote active communication through card comments for discussions, updates, and issue resolution.
- Regular Review: Schedule regular board reviews with the team to identify bottlenecks, blockers, or inefficiencies and take corrective actions promptly.
- Performance Metrics: Monitor and analyze metrics such as cycle time, lead time, and throughput to identify areas for improvement.

c) Evaluation of WIP Limits in a Kanban Board

Work In Progress (WIP) limits are crucial in Kanban for managing workflow efficiency. Here's how they impact the team's throughput and cycle time:

- Throughput: WIP limits help control the number of tasks in progress simultaneously, preventing overloading of team members. This, in turn, improves throughput—the rate at which tasks are completed. Teams can focus on completing work before starting new tasks, leading to a more predictable delivery rate.
- Cycle Time: WIP limits influence cycle time—the time it takes to complete a task from start to finish. By limiting WIP, tasks move more smoothly through the workflow. Reduced multitasking and smoother flow generally lead to shorter cycle times.

- Reduced Multitasking: WIP limits discourage team members from working on too many tasks at once. This minimizes context switching and improves focus on the tasks at hand, enhancing efficiency.
- Identifying Bottlenecks: WIP limits highlight bottlenecks in the workflow. When a column reaches its limit, it signals that the team needs to address the bottleneck before pulling in more work. This proactive approach leads to faster issue resolution.
- Steady Flow: WIP limits promote a steady and predictable flow of work. This predictability helps with better project planning and delivery time estimation.
- Balanced Workload: Teams can balance workloads across team members and stages, ensuring that no one is overwhelmed while others have idle time.