Introduction of Jira, integration with slack and GitHub

Class 24

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Acknowledgement

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Ministry of Economy, Trade and Industry

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What you have Learnt Last Week

We were focused on following points.

- Usage of control and loop flow statement
- Performing Linear Algebra in Numpy
- Why Requirement Analysis is so important in the process?
- Software development Life cycle
- Importance of Security compliance
- Introduction of Bash Scripting
- Introduction of Ansible, docker and docker compose
- API testing with Postman

What you will Learn Today

We will focus on following points.

1. An introduction to Jira's functionalities, including task tracking, agile boards, and customizable workflows for managing projects
2. Integrating Jira with Slack enhances team communication, automating update
3. Linking GitHub with Jira allows for seamless tracking of code commits
4. Quiz
5. Q&A Session

Introduction to Jira

A Smart Project Management Solution

- Jira is a project management and issue tracking tool developed by Atlassian.

- Widely used in agile software development, IT service management, and business workflows.

- Helps teams plan, track, and manage tasks efficiently.

Key Use Cases of Jira

Where Jira Shines

- **Software Development:** Sprint planning, bug tracking, code integration

- **Service Desk:** Ticket handling, SLAs, incident management

- **Business Projects:** HR onboarding, marketing campaign tracking, operations

Task and Issue Tracking

Manage Everything in One Place

- Create issues like:

- **Task** – general work

- **Bug** – fix needed

- **Story** – feature unit

- **Epic** – large goal

- Assign issues to users, add priorities (High, Medium, Low)

- Track issue progress across different statuses

- Add comments, attachments, and watchers for collaboration

Understanding Agile Boards

Scrum & Kanban in JiraScrum & Kanban in Jira

- **Scrum Board:**
- Sprint backlog, sprint planning
- Track via burndown charts

- **Kanban Board:**
- Visualizes tasks across statuses
- Uses WIP (Work In Progress) limits to reduce bottlenecks
- Drag-and-drop interface to move tasks through workflow

Customizable Workflows

Tailor Jira to Your Process

• Use **default workflows** or create custom ones

• Components of a workflow:
  • **Statuses:** To Do, In Progress, Done
  • **Transitions:** Movement between statuses
  • **Conditions:** Rules for who can transition tasks

• Add **automation**: auto-close tasks, send alerts, assign tasks

Reports & Dashboards

Insights That Drive Action

- **Reports Include:**

- Velocity chart

- Sprint report

- Control chart

- **Dashboards:**

- Combine multiple views (graphs, charts, lists)

- Share dashboards with teams

- Use filters and JQL (Jira Query Language) to customize views

A Centralized Work Management Hub

- Streamlines task tracking, team collaboration, and agile planning

- Fully customizable and scalable for teams of any size

- Real-time updates, metrics, and team visibility

Bridging Project Management and Communication

Why integrate?

•Real-time visibility into Jira updates

•Keep the team aligned without switching tools

•Streamline discussions right where collaboration happens — Slack

Benefits of Jira-Slack Integration

More Clarity, Less Switching Tabs

- Instant notifications for issue creation, updates, comments

- Assign and update tickets *without opening Jira*

- Centralize project conversations

- Ideal for remote and distributed teams

- Boost team productivity by reducing email clutter

Setting Up the Integration

Step-by-Step Configuration

1. Open Slack > **Apps** > Search for "Jira Cloud"

2. Click **Install** and select your Slack workspace

3. In Slack, type /jira connect

4. Authorize Jira via OAuth and select your site

5. You're connected! Now map Slack channels to Jira projects

💡 *Live demo:* Walk through /jira connect and linking your Jira site

Configuring Notifications

Stay Updated Without Noise

Choose what events trigger alerts:
- •Ticket created, assigned, status changed, commented

- •Use /jira notify to pick what to receive

Example:
/jira notify issues created updated commented

- •Assign each project to a Slack channel for focused alerts
e.g., #frontend-tasks, #backend-bugs

Demo tip: Show a Jira ticket being updated and Slack reflecting the change instantly

Using Slash Commands in Slack

Jira Control at Your Fingertips

Common slash commands:

- /jira create – Quickly create a new issue

- /jira assign – Assign issues to team members

- /jira update – Change issue status

- /jira view – View issue details

Saves time and keeps work in one place

Live example: Run /jira create with title and description

Best Practices for Team Communication

Keep Slack Productive, Not Noisy

Create dedicated channels per project or function

- Avoid noise:
  - Use filters in /jira notify
  - Mute or minimize less relevant notifications

Use threads for ticket discussions
Pin key tickets or link to Confluence for deeper docs
Rotate Slack "standups" integrated with Jira boards

Linking GitHub with Jira

Bringing Your Code and Tasks Together

- Code and project tracking in one place

- Developers + PMs = same page

- Auto-link commits, PRs, and branches to Jira issues

- Great for CI/CD traceability and audits

Visibility Across the Dev Lifecycle

- See who did what, when, and why

- Jira issues show linked commits & PRs

- Enable team leads and QA to trace updates

- PR reviews stay aligned with Jira task statuses

- Stronger DevOps workflows

Setting Up the Integration

Connect GitHub & Jira (Cloud version)

1. Go to **Jira Settings > Apps > Find New Apps**

2. Search and install **GitHub for Jira**

3. In GitHub, install **Atlassian for Jira** app

4. Authorize organization & repo access

5. In Jira, confirm GitHub is connected in **"Git Repositories"**

Demo Tip: Show both marketplace and GitHub steps side-by-side

Using Smart Commits

Automate Jira Actions from Git Messages

Format:
git commit -m "JIRA-101 #comment Fixed bug #time 1h #done"

Supports:
- #comment – add comment
- #time – log time
- #done or #transition – change status

Link commit directly to Jira issue

Demo Idea: Make a small commit and show its effect on the Jira issue

Pull Requests and Branches

Code Meets Ticket Management

- Create branches from Jira issue panel

- PRs auto-linked to related Jira tasks

- View status of PRs and reviewers

- Branch naming: use key like feature/JIRA-202-add-login

- PR comments and merges show in Jira

Demo Tip: Create a branch from a Jira issue and show PR link
in live view

Tracking Development Status in Jira

The Development Panel View

In each Jira issue, see:

- Linked branches
- Commit history
- Open and merged pull requests

Clickable links to GitHub
Clear picture of issue progress without leaving Jira

Showcase: Open a real Jira issue and walk through the Development Panel

Assignment

Assignment

1. Create a task and start tracking, and share on slack

Quiz Section

Quiz

Everyone student should click on submit button before time ends otherwise MCQs will not be submitted

[Guidelines of MCQs]

1. There are 20 MCQs
2. Time duration will be 10 minutes
3. This link will be share on 12:25pm (Pakistan time)
4. MCQs will start from 12:30pm (Pakistan time)
5. This is exact time and this will not change
6. Everyone student should click on submit button otherwise MCQs will not be submitted after time will finish
7. Every student should submit Github profile and LinkedIn post link for every class. It include in your performance

Assignment

Assignment should be submit before the next class

[Assignments Requirements]

1. Create a post of today's lecture and post on LinkedIn.

2. Make sure to tag @Plus W @Pak-Japan Centre and instructors LinkedIn profile

3. Upload your code of assignment and lecture on GitHub and share your GitHub profile in respective

   your region group WhatsApp group

4. If you have any query regarding assignment, please share on your region WhatsApp group.

5. Students who already done assignment, please support other students

Q&A Session