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**Day 4**

**Assignment 2**

**1. Recap Key Concepts**

**Meaning:** Understanding the fundamental concepts of defect tracking is crucial for effective use of Jira.

**Definitions:**

* **Defect Life Cycle:** This describes the various stages a defect goes through in Jira:
  + **New:** The defect is reported but not yet reviewed.
  + **Open:** The defect has been acknowledged and is under investigation.
  + **In Progress:** Work is actively being done to resolve the defect.
  + **Resolved:** The defect has been fixed but needs verification.
  + **Closed:** The defect has been verified as fixed.
  + **Reopened:** A defect that was previously closed has been encountered again.
* **Types of Defects:**
  + **UI (User Interface):** Issues that affect the appearance and usability of the application. In Jira, these can be tagged with labels to easily identify them.
  + **Functional:** Defects that affect the functionality of the application. For example, a button that does not perform as expected.
  + **Performance:** Issues that cause the application to operate slowly or crash under load.
* **Severity vs. Priority:**
  + **Severity:** Indicates the impact of the defect on the system. In Jira, you can set this in the issue details.
    - **Critical:** System crash, needs immediate fix.
    - **Major:** Significant functionality loss.
    - **Minor:** Cosmetic issues that do not affect functionality.
  + **Priority:** Indicates how urgently the defect needs to be fixed. This can also be set in Jira.
    - **High:** Must be fixed before the next release.
    - **Medium:** Should be fixed but not critical.
    - **Low:** Can be fixed at a later time.

**2. Use a Bug Tracking Tool to Record Data**

**Meaning:** Recording defects systematically in Jira allows for effective tracking and management.

**Steps:**

* **Access Jira:** Log in to your Jira account.
* **Create a New Issue:** Click on the “Create” button.
* **Select Issue Type:** Choose "Bug" or "Defect" from the drop-down menu.
* **Fill in Details:**
  + **Summary:** Write a concise title describing the defect.
  + **Description:** Provide detailed information, including steps to reproduce the issue.
  + **Severity and Priority:** Set these values to categorize the defect appropriately.
* **Assign the Issue:** Select the appropriate team member to handle the defect and link it to the relevant project.

**3. Extract Defect Data into Excel**

**Meaning:** Analyzing defect data in Excel can provide insights and facilitate reporting.

**Steps:**

* **Export Data from Jira:**
  + Navigate to the search issues section in Jira.
  + Use filters to display the relevant defects (e.g., by project, status).
  + Select the "Export" option and choose the Excel format.
* **Select Required Fields:** Ensure you include necessary information such as:
  + Issue ID
  + Summary
  + Status
  + Assignee
  + Severity
  + Priority
* **Open Excel:** Import the exported data into an Excel spreadsheet for further analysis.

**4. Analyze Defects by Status**

**Meaning:** Understanding the distribution of defects based on their current status helps track progress.

**Steps:**

* **Create a Pivot Table in Excel:**
  + Select the range of your defect data.
  + Insert a Pivot Table.
  + Drag “Status” to the rows area and “Count of ID” to the values area to see how many defects are in each status (e.g., Open, In Progress, Resolved).
* **Visualize Data:** Create a chart (like a pie chart) to represent the distribution visually, making it easier to identify bottlenecks.

**5. Analyze Defects by Severity**

**Meaning:** This analysis helps understand the impact of defects on the overall project.

**Steps:**

* **Create Another Pivot Table:**
  + Select the defect data range again.
  + Insert a new Pivot Table.
  + Drag “Severity” to the rows area and “Count of ID” to the values area.
* **Visualize Data:** Use a bar chart to display the severity distribution, highlighting critical areas needing attention.

**6. Analyze Trends and Summarize Insights**

**Meaning:** Drawing conclusions from defect data helps improve processes and prevent future issues.

**Steps:**

* **Identify Common Defects:** Look for patterns in the data. For instance, you might notice that most defects are of a certain severity or type.
* **Backlog Growth Analysis:** Assess how many defects remain unresolved and their implications for project timelines.
* **Document Insights**
  + Common defect types
  + Recommendations for process improvements
  + Observations regarding trends (e.g., an increase in defects after a specific release).