**Document 1: Definition of Done:**

Definition of Done (DOD) checklist for my project “Implementation of front running alert in ATS system is given below.

**Produced Code for Presumed Functionalities:**

The code developed should fulfill the functionalities outlined in the user stories.

All intended features and scenarios should be implemented as described.

**Assumptions of User Story Met:**

All assumptions and conditions specified in the user stories should be validated and met.

User stories should be reviewed to ensure that all implicit and explicit assumptions are addressed.

**Project Builds Without Errors:**

The project should build successfully in the development environment.  
There should not be any compilation or build errors.

**Unit Tests Written and Passing:**

Unit tests should be created for all new features and functionalities.

All unit tests should pass successfully, ensuring the code behaves as expected.

**Project Deployed on the Test Environment Identical to Production Platform:**

The application which is deployed to a test environment should be the replication of the production setup.

Deployment scripts and procedures should be tested and validated.

**Tests on Devices/Browsers Listed in the Project Assumptions Passed:**

The application should be tested on all specified devices and browsers.

Compatibility and performance tests should be conducted to ensure cross-platform functionality.

**Feature OK-ed by UX Designer:**

The feature should be reviewed and approved by the UX designer.

Design and usability criteria should meet, ensuring a positive user experience.

**QA Performed & Issues Resolved:**

Quality Assurance (QA) testing should be completed, including functional, regression, and performance tests.

All identified issues and bugs should be resolved before marking the user story as done.

**Feature Tested Against Acceptance Criteria:**

The feature should be tested thoroughly against the predefined acceptance criteria.

Acceptance tests should be documented and results should be reviewed with the Product Owner.

**Feature OK-ed by Product Owner:**

The Product Owner should review and approve the feature.

Any feedback or changes requested by the Product Owner should be addressed.

**Refactoring Completed:**

Code is refactored to improve readability, maintainability, and performance.

Refactoring should not introduce new bugs or regressions.

**Any Configuration or Build Changes Documented:**

All configuration changes and build processes should be documented.

Documentation should be updated to reflect the current state of the project.

**Documentation Updated:**

User manuals, technical documentation, and help guides should be updated to include new features and changes.

Documentation should be reviewed for accuracy and completeness.

**Peer Code Review Performed:**

Code changes should be peer-reviewed by other developers.

Feedback from code reviews should be incorporated, and any issues raised should be addressed.

**Document 2- Product Vision:**

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| **Scrum Project Name** | Implementation of Front Running Alert in ATS | | |
| **Venue** | Meeting Room at Client Location | | |
| **Date** | **Start Time:** | **End Time:** | **Duration:** |
| **Client** | CBA | | |
| **Stakeholder List** | Business Team | Compliance Team of Bank | |
| Trade Desk | |
| Bank Users | |
| Bank Technology Team | Abinitio Team | |
| Scrum Team | Product Owner | |
| Scrum Master | |
| Business Analyst | |
| 2 Kdb Developers | |
| 2 Testers | |
| **Scrum Team** | | | |
| **Scrum Master** | Julian Jacobs | | |
| **Product Owner** | Rahul Ramesh O | | |
| **Kdb Developer 1** | Jaganmayee Sahoo | | |
| **Kdb Developer 2** | Amit Kumar | | |

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| **Vision** | **To establish a robust and efficient Front Running Alert mechanism within the Automated Trade Surveillance (ATS) system that ensures proactive detection of potential market abuse, safeguards market integrity, and enhances compliance with regulatory standards by leveraging advanced analytics, real-time data processing, and intuitive dashboards.** | | |
| **Market Segment** Financial institutions in institutional banking and capital markets, focusing on regulatory compliance and trade surveillance and Organizations in regulated markets requiring automated monitoring solutions to prevent market manipulation.   **Target Users** **Primary Users:** Compliance Officers, Trade Surveillance Teams, and Risk Management Professionals at CBA. **Secondary Users:** Regulatory Auditors and IT/Data Teams supporting the ATS system. | **Needs:** -Detects and prevents front running, a type of market manipulation, by analyzing order and trade data in real-time -Addresses gaps in existing trade surveillance systems by providing automated alerts for suspicious activities. -Reduces compliance risks by ensuring adherence to regulatory standards.   **Benefits Provided:** **Enhanced Market Integrity:** Builds trust by identifying and mitigating potential market abuse. **Improved Efficiency:** Automates the detection process, reducing manual efforts and investigation time. **Regulatory Compliance:** Ensures CBA meets local and international trade surveillance requirements. **User-Friendly Insights:** Offers intuitive dashboards for quick and effective alert review and decision-making. | **Product:** The Front Running Alert is a feature integrated into CBA's Automated Trade Surveillance (ATS) system. It is designed to detect and flag potential front running activities by analyzing order and trade data in real-time, ensuring proactive monitoring and compliance.   **What Makes It Desirable and Special?** **Proactive Detection:** Identifies suspicious trading patterns before they escalate into significant risks. **Data-Driven Insights:** Leverages high-performance Kdb and an intuitive Kx dashboard for actionable analytics. **Customization:** Offers configurable thresholds and filters to meet specific regulatory and business requirements. **Streamlined Investigations:** Provides a user-friendly interface with features like date selection for quick alert analysis.  **Is It Feasible to Develop the Product?** **Existing Infrastructure:** Leveraging CBA's ATS system and established data pipelines like MODS and Abinitio. **Technical Capability:** High-performance Kdb and Kx dashboard ensure scalability and real-time processing. **Vendor Expertise:** Luxoft's experience in developing surveillance systems and implementing regulatory solutions for financial institutions. | **How Is the Product Going to Benefit the Company?** -Ensures regulatory compliance and reduces penalties. -Builds trust by enhancing market integrity. -Automates monitoring, cutting costs and manual efforts. -Mitigates financial and reputational risks.    **What Are the Business Goals?** -Ensure regulatory compliance. -Reduce risks of market manipulation. -Improve monitoring efficiency and accuracy. -Strengthen client trust through robust surveillance.    **What Is the Business Model?** -Use existing ATS infrastructure for cost efficiency. -Avoid fines through compliance-driven ROI. -Provide a scalable system for future needs. -Regularly optimize based on market and regulatory changes. |

**Document 3: User stories:**

I have created 15 user stories as below.

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| **User Story No: 1** | **Task:** Display Alert in Kx Dashboard | **Priority: High** |
| **As a Trade Analyst,** I want to view a list of front running alerts on the Kx Dashboard, so I can quickly identify suspicious trading activities. | | |
| **BV: 500** | **CP: 13** |  |
| **Acceptance Criteria:**  **Display Alerts:**   * The Kx Dashboard must display a list of front-running alerts in a tabular format. * Each alert should include the following details:   + Alert ID   + Order ID   + Trade ID   + Timestamp   + Suspicious Activity Indicator   + Trader ID (or Entity)   + Order and Trade Volume   + Order and Trade Price   + Other relevant metadata (e.g., Market or Instrument). | | |

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| **User Story No: 2** | **Task:** Customization of Kx Dashboard | **Priority: Medium** |
| **As a Trade Analyst,** I want to filter alerts by date range, so I can focus on a specific time period for my investigation. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * **Date Range Selection:**   Provide a date picker to select a start and end date for filtering alerts.   * **Default Display:**   Show the most recent day’s alerts when no date range is selected.   * **Filtered Results:**   Display only alerts that fall within the selected date range.   * **Validation:**   Ensure the selected start date is earlier than or equal to the end date.   * **Real-Time Update:**   Refresh the displayed alerts dynamically based on the selected date range. | | |

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| **User Story No: 3** | **Task:** Trade and Order Data checking | **Priority: High** |
| **As a Trade Analyst,** I want to view detailed trade and order data for each alert, so I can analyze the underlying patterns. | | |
| **BV: 500** | **CP: 13** |  |
| **Acceptance Criteria:**   * **Drill-Down View:**   Each alert must provide a drill-down feature to view detailed trade and order data.   * **Data Details:** * Include the following information:   + Order ID, Trade ID, Timestamp   + Trader ID, Instrument, Market   + Order and Trade Volume, Price   + Execution details (e.g., counterparty, trade type). * **Navigation:**   Allow users to return to the main alert list after viewing details.   * **Data Accuracy:**   Ensure the detailed data matches the source ATS system records.   * **Performance:**   Load detailed data within 2 seconds of selecting an alert. | | |

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| **User Story No: 4** | **Task:** Exporting the report | **Priority: Medium** |
| **As a Trade Analyst,** I want to export alert details in a report format, so I can share findings with my team or regulators. | | |
| **BV: 200** | **CP: 8** |  |
| **Acceptance Criteria:**   * **Export Functionality:**   Provide an option to export alert details in commonly used formats (e.g., CSV, Excel, PDF).   * **Customizable Export:**   Allow users to select specific alerts or filter criteria for the export.   * **Report Contents:**   Include relevant alert details:   * + Alert ID, Order ID, Trade ID, Timestamp   + Trader ID, Volume, Price, Severity Level   + Market/Instrument details. * **Formatting:**   Ensure the report is well-structured and readable, with clear headers and data alignment.   * **Access Control:**   Restrict export functionality to authorized users.   * **Performance:**   Generate and download the report within 5 seconds. | | |

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| **User Story No: 5** | **Task:** Status marking of alerts | **Priority: Medium** |
| **As a Trade Analyst,** I want to mark alerts as reviewed or under investigation, so I can track their status effectively. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * **Mark Status:**   Provide options to mark alerts as **Reviewed** or **Under Investigation**.   * **Status Update:**   Ensure the alert status can be updated directly from the dashboard.   * **Visual Indicators:**   Display distinct visual markers (e.g., icons or color codes) for each status.   * **Filter by Status:**   Allow filtering of alerts based on their status.   * **Audit Trail:**   Log status changes with details such as the user who made the update and timestamp. | | |

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| **User Story No: 6** | **Task:** Alert notification | **Priority: High** |
| **As a Compliance Officer,** I want to receive notifications for high-priority front running alerts, so I can take immediate action. | | |
| **BV: 500** | **CP: 5** |  |
| **Acceptance Criteria:**   * **Notification Triggers:**   Send notifications for high-priority alerts based on predefined criteria.   * **Delivery Channels:**   Provide notifications via email and/or dashboard alerts.   * **Content Details:**   Include Alert ID, Timestamp, Severity, Trader ID, and Instrument in the notification.   * **Timeliness:**   Deliver notifications within 1 minute of alert generation.   * **Access Control:**   Ensure only Compliance Officers receive these notifications. | | |

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| **User Story No: 7** | **Task:** Front running alert summary | **Priority: High** |
| **As a Compliance Officer,** I want to access a summary of front running trends, so I can identify recurring patterns and mitigate risks. | | |
| **BV: 200** | **CP: 3** |  |
| **Acceptance Criteria:**   * The summary should display aggregated front-running alerts grouped by key attributes (e.g., trader, instrument, time period). * Trends must be visualized using graphs or charts (e.g., line, bar). * The summary must update in near real-time as new alerts are generated. | | |

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| **User Story No: 8** | **Task:** Configuring thresholds (Amount/Time Window) | **Priority: High** |
| **As a Compliance Officer,** I want to configure thresholds for triggering alerts, so the system aligns with regulatory requirements. | | |
| **BV: 500** | **CP: 5** |  |
| **Acceptance Criteria:**   * The system should allow configuration of thresholds for time intervals, price deviation, and volume percentage. * Thresholds must be editable through a user-friendly interface. * Changes to thresholds must be logged with timestamps and user details for audit purposes. * The system should validate inputs to ensure thresholds are within permissible ranges. * Alerts must reflect the updated thresholds immediately after configuration changes. | | |

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| **User Story No: 9** | **Task:** Regulatory report generation | **Priority: Medium** |
| **As a Compliance Officer,** I want to generate regulatory compliance reports based on front running alerts, so I can demonstrate adherence to authorities. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * Reports must include key details: alert ID, trader, instrument, timestamp, threshold breached, and alert status. * The system should allow selecting a date range and filtering by trader or instrument for report generation. * Reports must be exportable in regulatory-compliant formats (e.g., PDF, Excel). * The system should maintain a history of generated reports for at least 12 months. * Each report must display a unique identifier and generation timestamp for traceability. | | |

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| **User Story No: 10** | **Task:** Auditing the history of alerts | **Priority: Medium** |
| **As a Compliance Officer,** I want to audit the history of alerts and their resolution, so I can ensure accountability and transparency. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * The system must display a log of all alerts, including alert ID, timestamp, trader, instrument, threshold breached, and status (e.g., pending, resolved). * Each alert entry should include resolution details such as action taken, resolution timestamp, and the responsible user. * The system must support filtering and sorting by date, status, trader, and instrument. * Audit logs must be immutable and retain data for a minimum of 24 months. * An export option should be available for audit logs in CSV and PDF formats. | | |

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| **User Story No: 11** | **Task:** Validation of Abinitio ingestion | **Priority: Low** |
| **As a Bank User** I want to validate that all data from Abinitio is accurately ingested into the ATS system, so I can ensure data integrity. | | |
| **BV: 50** | **CP: 3** |  |
| **Acceptance Criteria:**   * The system must log all data ingested from Abinitio with timestamps and record counts. * A validation process should compare ingested data against source data to ensure completeness and accuracy. * The system should provide a summary of ingestion validation results, including success and error metrics. * Logs and validation results must be retained for audit purposes for at least 12 months. | | |

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| **User Story No: 12** | **Task:** Performance testing under high data loads | **Priority: Medium** |
| **As a Bank User,** I want to test the performance of the Front Running Alert system under high data loads, so I can ensure reliability. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * The system must process at least 10 transactions per second under high data load conditions without performance degradation. * Alerts should be generated within a maximum of 10 seconds from data ingestion under high data loads. * The system must maintain a response time of less than 10 seconds for dashboard queries during stress testing. * Error rates during high-load scenarios must not exceed 5% of total transactions. * A detailed performance report must be generated post-test, including metrics such as throughput, latency, and error rate. | | |

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| **User Story No: 13** | **Task:** Checking regulatory compliance | **Priority: High** |
| **As a Bank User,** I want to review the system’s compliance with regulatory standards, so I can ensure it meets legal requirements. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   1. The system must provide a compliance checklist mapped to applicable regulatory standards. 2. A compliance summary report should highlight areas of adherence and non-compliance. 3. Reports must include details such as regulatory requirements, implemented controls, and gaps, if any. 4. The system should allow users to attach evidence or comments to compliance checkpoints for review. 5. Compliance reports must be exportable in standard formats (e.g., PDF) and retained for a minimum of 24 months. | | |

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| **User Story No: 14** | **Task:** Training for dashboard features | **Priority: Medium** |
| **As a Bank User,** I want to have a dashboard training session, so I can understand its features and use it effectively. | | |
| **BV: 200** | **CP: 8** |  |
| **Acceptance Criteria:**   * The training session must cover all key dashboard features, including navigation, filtering, and report generation. * The session should include a hands-on demonstration with real or simulated data. * Users must receive a training manual or quick reference guide post-session. * A Q&A segment must be included to address user-specific queries. * Feedback from participants should be collected to assess the training's effectiveness and identify improvement areas. | | |

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| **User Story No: 15** | **Task:** Tracking project progress | **Priority: Medium** |
| **As a Bank User,** I want to monitor implementation progress and receive regular updates, so I can track the project’s alignment with business goals. | | |
| **BV: 200** | **CP: 3** |  |
| **Acceptance Criteria:**   * Jira should provide a progress displaying key milestones, current status, and completion percentages. * Updates must include details on tasks completed, in progress, and pending, along with timelines. * Notifications or email updates should be sent weekly, summarizing progress and any risks or delays. * A download option for progress reports should be available in PDF and Excel formats. | | |

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| **User Story No: 16** | **Task:** Core detection logic | **Priority: High** |
| **As a system**, I want to implement the core detection logic for front running pattern so I can generate the alert if it found in the order and trade data. | | |
| **BV: 500** | **CP: 13** |  |
| **Acceptance Criteria:**   * Analyze order and trade data * Find out the patterns which breached threshold time window, asset type, order and trade price, order and trade volume * Generate alert for these trades to display in the Kx dashboard * Create logs for found patterns | | |

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| **User Story No: 17** | **Task:** Alert confidence score | **Priority: Medium** |
| **As a Trade Analyst**, I want to view an alert confidence score, so I can assess the reliability of each alert. | | |
| **BV: 200** | **CP: 3** |  |
| **Acceptance Criteria:**   * The confidence score is calculated * display for every alert on the Kx dashboard. | | |

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| **User Story No: 18** | **Task:** Duplicate trade removal | **Priority: Medium** |
| **As a Trade Analyst**, I want to suppress duplicate alerts for the same trade/order, so I can focus only on unique issues. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * View duplicate alerts are identified * suppressed based on defined criteria. * Provide option to remove duplicates in the system | | |

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| **User Story No: 19** | **Task:** Visualizing trade and order data trends | **Priority: Medium** |
| **As a Trade Analyst**, I want to visualize the trade and order data trends related to alerts, so I can spot anomalies easily. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * Trend charts are available on the Kx dashboard for selected alerts. * Provide filters for data parameters * Provide options for visual charts as various types of graphs | | |

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| **User Story No: 20** | **Task:** Real time status change | **Priority: Low** |
| **As a Trade Analyst**, I want to receive real-time updates on changes to the status of alerts, so I am always informed of the latest developments. | | |
| **BV: 100** | **CP: 8** |  |
| **Acceptance Criteria:**   * The Kx dashboard refreshes alert statuses automatically when updated. * Refresh dynamically if new data ingestion happens at the ingestion side * Show last updated date and time on the dashboard | | |

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| **User Story No: 21** | **Task:** Risk level categorization | **Priority: Medium** |
| **As a Trade Analyst**, I want to categorize alerts by risk level, so I can prioritize my work efficiently. | | |
| **BV: 200** | **CP: 8** |  |
| **Acceptance Criteria:**   * Alerts are color-coded based on their risk level and displayed on the Kx dashboard. * Provide the sorting and select option in the dashboard for risk option | | |

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| **User Story No: 22** | **Task:** False positive filtering | **Priority: High** |
| **As a Trade Analyst**, I want to filter out false-positive alerts based on predefined rules, so I can focus on genuine cases. | | |
| **BV: 500** | **CP: 8** |  |
| **Acceptance Criteria:**   * A filter option for false-positive rules is available on the dashboard. * Show the rules in the dropdown menu as configured by compliance team | | |

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| **User Story No: 23** | **Task:** Rules for false positive cases | **Priority: High** |
| **As a Compliance Officer**, I want to define and manage false-positive filtering rules, so the system adapts to changing regulatory needs. | | |
| **BV: 500** | **CP: 8** |  |
| **Acceptance Criteria:**   * Rules can be added, edited, or deleted via an admin interface. * Rules should be entered one by one * Duplicate rules and the rules which are not in scope should not allow to save | | |

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| **User Story No: 24** | **Task:** False positive metrics | **Priority: High** |
| **As a Compliance Officer**, I want to track metrics on false-positive reduction, so I can measure system improvements. | | |
| **BV: 500** | **CP: 8** |  |
| **Acceptance Criteria:**   * False-positive reduction metrics are included in compliance reports. * Metric parameters are to be customized. * Option to select default metric * Option to add and modify the metric name | | |

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| **User Story No: 25** | **Task:** Alert notification for new false positive | **Priority: High** |
| **As a Compliance Officer**, I want to be notified when a new type of false-positive pattern is detected, so I can refine detection rules. | | |
| **BV: 500** | **CP: 3** |  |
| **Acceptance Criteria:**   * Notifications are triggered for new patterns of false positives. * Notification to be triggered to email and alert dashboard | | |

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| **User Story No: 26** | **Task:** Comparison of accuracy over time periods | **Priority: Low** |
| **As a Compliance Officer**, I want to compare alert accuracy over different time periods, so I can assess the effectiveness of updates. | | |
| **BV: 50** | **CP: 5** |  |
| **Acceptance Criteria:**   * A comparison report of alert accuracy by time period is available. * Option to select different time periods * Option to unselect the parameters * Need to accessible for all roles | | |

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| **User Story No: 27** | **Task:** Alert review workflow | **Priority: Low** |
| **As a Compliance Officer**, I want to customize the alert review workflow, so it aligns with internal policies. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * The workflow is configurable, including review, escalation, and resolution steps. * Policy document upload option * Version of documents to be updated | | |

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| **User Story No: 28** | **Task:** Explanatory notes | **Priority: High** |
| **As a Compliance Officer**, I want to add explanatory notes to resolved alerts, so audit trails are comprehensive. | | |
| **BV: 500** | **CP: 3** |  |
| **Acceptance Criteria:**   * An option to add notes is available for resolved alerts. * Maximum 2000 letters to be accepted * All alpha numeric letters should be accepted * Logs must be saved | | |

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| **User Story No: 29** | **Task:** Ingestion Process Stories-monitor | **Priority: Medium** |
| **As a Bank User,** I want to monitor the ATS ingestion process, so I can ensure that all files are processed without delays. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * Data validation logs are generated for every ingestion. * Logs must be captured * System should show file names, details and timestamp | | |

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| **User Story No: 30** | **Task:** Ingestion Process Stories-data lose | **Priority: Medium** |
| **As a Bank User,** I want to validate that no data is lost during the pipeline process, so I can ensure end-to-end integrity. | | |
| **BV: 200** | **CP: 8** |  |
| **Acceptance Criteria:**   * Data validation logs are generated for every ingestion. * Data mapping should be visible * Screen to compare the columns | | |

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| **User Story No: 31** | **Task:** Ingestion Process Stories-retry | **Priority: Medium** |
| **As a Bank User,** I want the ATS system to retry ingestion automatically for failed files, so I can avoid manual interventions. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * Failed files are retried up to three times before generating an error report. * Log should be captured | | |

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| **User Story No: 32** | **Task:** Ingestion Process Stories-Performance | **Priority: Medium** |
| **As a Bank User,** I want to track ingestion performance metrics, so I can identify bottlenecks in the pipeline. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * Metrics such as ingestion time and error rates are displayed in a performance dashboard. * Logs should be available | | |

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| **User Story No: 33** | **Task:** Ingestion Process Stories-Delays | **Priority: Medium** |
| **As a Bank User,** I want the ATS system to alert me for ingestion delays, so I can investigate promptly. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * Alerts are sent via email or dashboard for ingestion delays exceeding a defined threshold. * Configuration of time should be available * Log the change of time | | |

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| **User Story No: 34** | **Task:** Ingestion Process Stories-Testing | **Priority: Medium** |
| **As a Bank User,** I want to test high-volume ingestion scenarios, so I can ensure the system is scalable. | | |
| **BV: 200** | **CP: 5** |  |
| **Acceptance Criteria:**   * Test scenarios for ingestion of large data sets are executed without failures. * Test cases to be logged * Validate and verify the results * Timestamp to be captures * Logs should be available | | |

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| **User Story No: 35** | **Task:** Optimization and performance tuning stories-Indexing | **Priority: Medium** |
| **As a Developer**, I want to optimize data indexing in Kdb, so the ATS system retrieves alerts faster. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * Query execution time is reduced by at least 20% after indexing improvements. | | |

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| **User Story No: 36** | **Task:** Optimization and performance tuning stories-Load time | **Priority: Medium** |
| **As a Developer**, I want to improve the dashboard’s load time, so users can access alerts without delay. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * Dashboard load time is under 2 seconds for 95% of requests. | | |

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| **User Story No: 37** | **Task:** Optimization and performance tuning stories-Error handling | **Priority: Medium** |
| **As a Developer**, I want to enhance the pipeline’s error handling mechanism, so data ingestion issues are resolved faster. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * Error logs are comprehensive and provide actionable details. | | |

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| **User Story No: 38** | **Task:** Optimization and performance tuning stories- Cashing | **Priority: Medium** |
| **As a Developer**, I want to implement caching for frequently accessed data, so system performance improves. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * Cached data reduces repeat query times by at least 30%. | | |

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| **User Story No: 39** | **Task:** Optimization and performance tuning stories-parallel process | **Priority: Medium** |
| **As a Developer**, I want to implement parallel processing for ingestion tasks, so the system handles larger workloads efficiently. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * Ingestion throughput increases by at least 50% under heavy loads. | | |

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| **User Story No: 40** | **Task:** Optimization and performance tuning stories-performance tool | **Priority: Medium** |
| **As a Developer**, I want to integrate ATS with a performance monitoring tool, so system performance is continuously tracked. | | |
| **BV: 100** | **CP: 5** |  |
| **Acceptance Criteria:**   * Integration is completed, and key metrics are visible in the monitoring tool. * Tool should be accessible to admin roles * Easily usable and configurable * Able to generate report in pdf format | | |

**Document 4: Agile PO Experience:**

As a Product Owner, I played a pivotal role in bridging business needs with development efforts. My primary focus was on delivering a product that aligned with market demands, stakeholder expectations, and organizational goals. By leveraging Agile practices, I ensured seamless collaboration among teams, prioritized features for maximum value, and maintained a clear product vision throughout the project lifecycle. This approach enabled the successful delivery of a high-quality product within defined timelines.

**Market Analysis**

* I analyzed the market demand and gathered insights on user needs by engaging with stakeholders and reviewing industry trends.
* I conducted research on similar products in the market to identify gaps and opportunities.

**Enterprise Analysis**

* I performed due diligence to assess the viability of the market opportunity and aligned it with business goals.

**Product Vision and Roadmap**

* I crafted the product vision based on market analysis and business needs, ensuring alignment with stakeholder expectations.
* I developed a product roadmap outlining high-level features and timelines for delivery.

**Managing Product Features**

* I balanced stakeholder expectations by prioritizing features that provided the highest value and ROI.
* I worked closely with the team to define and prioritize epics, stories, and features based on their criticality.

**Managing Product Backlog**

* I organized and prioritized user stories to ensure alignment with project goals and stakeholder needs.
* I continuously reprioritized the backlog to adapt to changing business requirements and feedback.
* I planned epics to provide a clear structure for the development team.

**Managing Overall Iteration Progress**

* I reviewed sprint progress regularly to track milestones and ensure deliverables were on track.
* I adjusted sprint priorities and epics when necessary to address risks or new requirements.
* I collaborated with the team during sprint retrospectives to identify improvements and refine processes.

**Handling Sprint Meetings**

* I facilitated sprint meetings like planning, daily scrums, reviews, retrospectives, and backlog refinements to keep the team aligned and focused on goals.
* Each meeting was used to prioritize work, track progress, gather feedback, and make necessary adjustments.

All the sprint ceremonies that I have facilitated with the help of my scrum team is given below.

**Sprint Planning**- I have planned the sprint by selecting the highly prioritized backlogs added into the next sprint.

**Daily Stand-Up meeting**- I have focused to get the updates- what dev did yesterday, what are they doing now, what are the challenges and what’s next

**Backlog refinement**- I have facilitated continuous evaluation and refinement of backlogs added, prioritized and sized (estimated)

**Sprint Review**- Reviewed and asked to demo the completed items to me as well as the stakeholders.

**Sprint Retrospective meeting**- Conducted to find out what went well, didn't go well and improvements required in our work culture.

**User Stories Creation**

* I created detailed user stories, ensuring they included story numbers, tasks, priority levels, acceptance criteria, and business value (BV) and cost of delay (CP) metrics.
* This helped the team understand the scope and focus on delivering valuable outcomes.

**Liaison Between Teams and Stakeholders**

* I acted as a bridge between business stakeholders and Scrum teams, ensuring clear communication and alignment of project goals.
* My collaboration kept all stakeholders informed about project progress and priorities.

**Defining Product Vision and Features**

* I developed a clear product vision, enabling the team to focus on functionality and user needs.
* I broke down the product vision into actionable backlog items and prioritized them to maximize value delivery.

**Document 5: Product and sprint backlog and product and sprint burndown charts:**

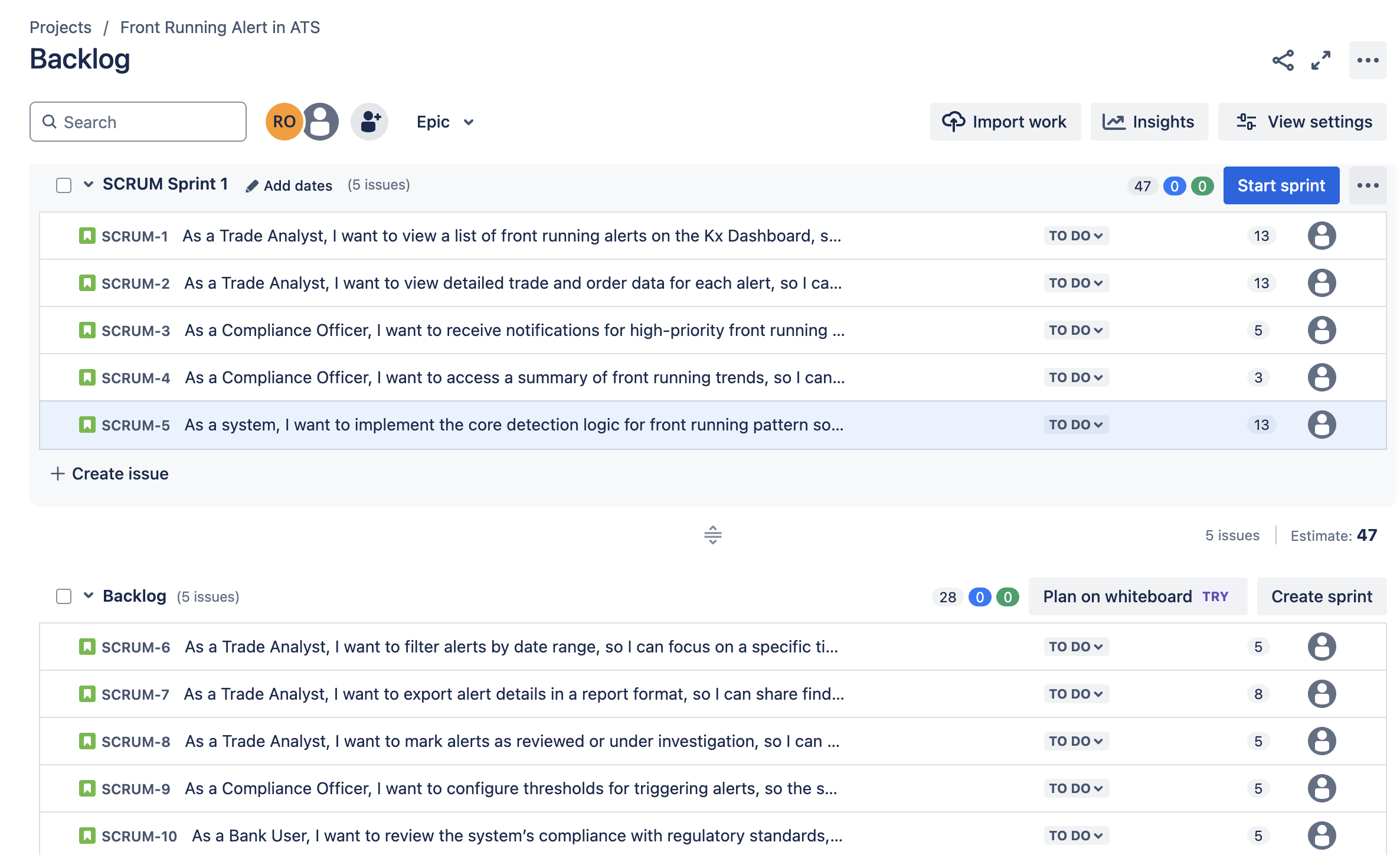
**Product Backlog:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User story ID** | **User Story** | **Tasks** | **Priority** | **BV** | **CP** | **Sprint** |
| US001 | As a Trade Analyst, I want to view a list of front running alerts on the Kx Dashboard, so I can quickly identify suspicious trading activities. | Display Alert in Kx Dashboard | High | 500 | 13 | S1 |
| US002 | As a Trade Analyst, I want to filter alerts by date range, so I can focus on a specific time period for my investigation. | Customization of Kx Dashboard | Medium | 200 | 5 | S2 |
| US003 | As a Trade Analyst, I want to view detailed trade and order data for each alert, so I can analyze the underlying patterns. | Trade and Order Data checking | High | 500 | 13 | S1 |
| US004 | As a Trade Analyst, I want to export alert details in a report format, so I can share findings with my team or regulators. | Exporting the report | Medium | 200 | 8 | S2 |
| US005 | As a Trade Analyst, I want to mark alerts as reviewed or under investigation, so I can track their status effectively. | Status marking of alerts | Medium | 100 | 5 | S2 |
| US006 | As a Compliance Officer, I want to receive notifications for high-priority front running alerts, so I can take immediate action. | Alert notification | High | 500 | 5 | S1 |
| US007 | As a Compliance Officer, I want to access a summary of front running trends, so I can identify recurring patterns and mitigate risks. | Front running alert summary | High | 200 | 3 | S1 |
| US008 | As a Compliance Officer, I want to configure thresholds for triggering alerts, so the system aligns with regulatory requirements. | Configuring thresholds (Amount/Time Window) | High | 500 | 5 | S2 |
| US009 | As a Compliance Officer, I want to generate regulatory compliance reports based on front running alerts, so I can demonstrate adherence to authorities. | Regulatory report generation | Medium | 200 | 5 | S3 |
| US010 | As a Compliance Officer, I want to audit the history of alerts and their resolution, so I can ensure accountability and transparency. | Auditing the history of alerts | Medium | 100 | 5 | S3 |
| US011 | As a Bank User I want to validate that all data from Abinitio is accurately ingested into the ATS system, so I can ensure data integrity. | Validation of Abinitio ingestion | Low | 50 | 3 | S4 |
| US012 | As a Bank User, I want to test the performance of the Front Running Alert system under high data loads, so I can ensure reliability. | Performance testing under high data loads | Medium | 100 | 5 | S3 |
| US013 | As a Bank User, I want to review the system’s compliance with regulatory standards, so I can ensure it meets legal requirements. | Checking regulatory compliance | High | 200 | 5 | S2 |
| US014 | As a Bank User, I want to have a dashboard training session, so I can understand its features and use it effectively. | Training for dashboard features | Medium | 200 | 8 | S4 |
| US015 | As a Bank User, I want to monitor implementation progress and receive regular updates, so I can track the project’s alignment with business goals. | Tracking project progress | Medium | 200 | 3 | S4 |
| US016 | As a system, I want to implement the core detection logic for front running pattern so I can generate the alert if it found in the order and trade data | Core detection logic | High | 500 | 13 | S1 |

**Sprint Backlog (For 2 sprints):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **User story ID** | **User Story** | **Owner** | **Status** | **Estimated Efforts** |
| US001-S1 | As a Trade Analyst, I want to view a list of front running alerts on the Kx Dashboard, so I can quickly identify suspicious trading activities. | Trade Analyst Desk |  | 13 |
| US003-S1 | As a Trade Analyst, I want to view detailed trade and order data for each alert, so I can analyze the underlying patterns. | Trade Analyst Desk |  | 13 |
| US006-S1 | As a Compliance Officer, I want to receive notifications for high-priority front running alerts, so I can take immediate action. | Compliance Team |  | 5 |
| US007-S1 | As a Compliance Officer, I want to access a summary of front running trends, so I can identify recurring patterns and mitigate risks. | Compliance Team |  | 3 |
| US016-S1 | As a system, I want to implement the core detection logic for front running pattern so I can generate the alert if it found in the order and trade data | Business Logic (Business Team) |  | 13 |
| US002-S2 | As a Trade Analyst, I want to filter alerts by date range, so I can focus on a specific time period for my investigation. | Trade Analyst Desk |  | 5 |
| US004-S2 | As a Trade Analyst, I want to export alert details in a report format, so I can share findings with my team or regulators. | Trade Analyst Desk |  | 8 |
| US005-S2 | As a Trade Analyst, I want to mark alerts as reviewed or under investigation, so I can track their status effectively. | Trade Analyst Desk |  | 5 |
| US008-S2 | As a Compliance Officer, I want to configure thresholds for triggering alerts, so the system aligns with regulatory requirements. | Compliance Team |  | 5 |
| US013-S2 | As a Bank User, I want to review the system’s compliance with regulatory standards, so I can ensure it meets legal requirements. | Compliance Team |  | 5 |

**Product Burndown chart** can be prepared in paid version of Jira, so I just attached the screenshot of product backlog and sprint backlog here as below from Jira.



**Sprint Burndown Chart:**

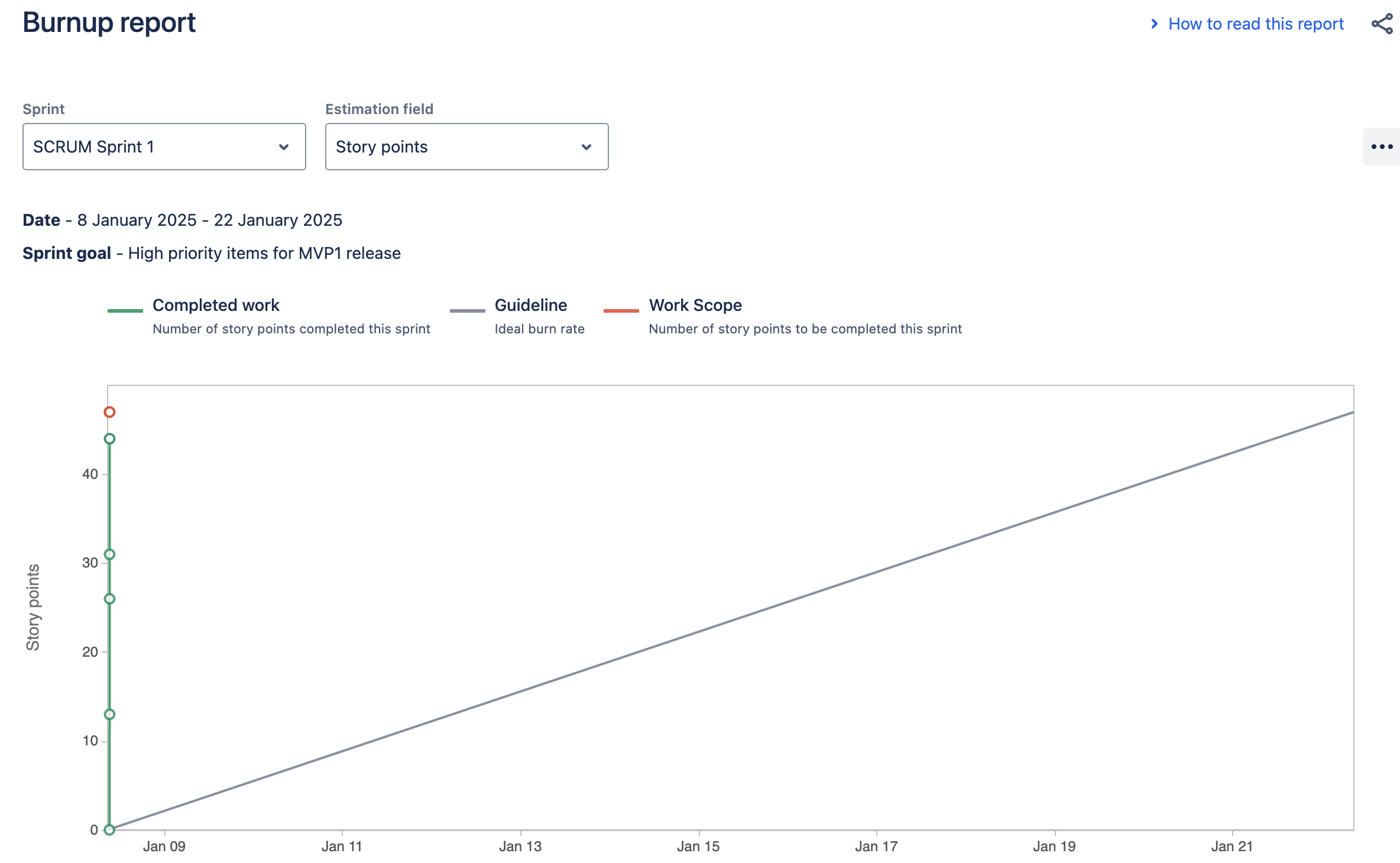
Sprint burndown chart for the Sprint-1 is attached below from Jira software. Except one story with 3 CPs, all other stories are completed in the first sprint. Incomplete story is moved to next sprint.



**Velocity Report:**



**Burnup Chart:**



**Document 6: Sprint meetings:**

**Meeting Type 1: Sprint Planning meeting**

|  |  |
| --- | --- |
| **Date** | 20/04/2022 |
| **Time** | 10.30 AM |
| **Location** | Meeting Room Sonic 1 |
| **Prepared By** | Rahul Ramesh O |
| **Attendees** | Scrum Master, Product Owner, Kdb Developers, Testers |

|  |  |  |
| --- | --- | --- |
| **Topic** | **Presenter** | **Time Allotted** |
| Display Alert in Kx Dashboard | Rahul Ramesh O | 15 min |
| Trade and Order Data checking | Rahul Ramesh O | 20 min |
| Alert notification | Rahul Ramesh O | 20 min |
| Front running alert summary | Rahul Ramesh O | 15 min |
| Core detection logic | Rahul Ramesh O | 15 min |

|  |  |
| --- | --- |
| **Observers** | Kdb Developers, Testers |
| **Resources** | MS Teams, Internet, Meeting Room, Monitor, concall devices |
| **Special notes** | Sprint 1 is planned |

**Meeting Type 2: Sprint review meeting**

|  |  |
| --- | --- |
| **Date** | 5/5/2022 |
| **Time** | 4.30 PM |
| **Location** | Meeting Room Sonic 1 |
| **Prepared By** | Rahul Ramesh O |
| **Attendees** | Scrum Master, Product Owner, Kdb Developers, Testers, Business Team, Trade Desk Team |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sprint Status** | **Things to Demo** | **Quick Updates** | **What's next** |
| Completed | 4 completed tickets for demo | Completed ticket will schedule for the release on this weekend (7th May 2022 night) and pending ticket moved to next sprint. | Time constraint and extension of core detection logic caused one ticket to be in pending. But analysis has completed and planned to take up on the next sprint without any change in backlogs as planned for second sprint |

**Meeting Type 3: Sprint retrospective meeting**

|  |  |
| --- | --- |
| **Date** | 6/6/2022 |
| **Time** | 4.30 PM |
| **Location** | Meeting Room Sonic 1 |
| **Prepared By** | Rahul Ramesh O |
| **Attendees** | Scrum master, Product Owner, Kdb Developers, Testers |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Agenda** | **What went well** | **What didn't go well** | **Questions** | **Reference** |
| Front-running Pattern | Threshold configuration | Core detection logic (User Story US016-S1) | How did we overcome the challenge and discussed about it | NA |
| Kx dashboard | All tickets | NA | Additional features in Kx dashboard | NA |
| Alert notification | Configuration | NA | NA | NA |

**Meeting Type 4: Daily Stand-up meeting**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Question** | **Role** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | **Sunday** |
| **What did you do yesterday** | **Dev 1** | Analyzed the trade and order data to find out the key columns | Started writing code to create the configuration set up for threshold | Configuration checked. Worked on alert notification | Threshold and pattern completed and unit testing done | Successfully tested the threshold and pattern. | Holiday | Holiday |
| **Dev 2** | Started working on Kx Dashboard design | Kx dashboard confirmation received | Dashboard is completed 50% | Unit testing done for Kx dashboard. | Kx dashboard showing the detected data | Holiday | Holiday |
| **What will you do today** | **Dev 1** | Writing the code to create configuration set up for threshold | Configuration set up will be completed | Will complete alert notification today | Will work on alert notification | Will progress on alert notification | Holiday | Holiday |
| **Dev 2** | Will progress on the design. Challenge on filters, need some confirmation | Will be working on the dashboard configuration | Progressing on the filter creation | Will check with dev2 for the detected data for alert | Will complete the dashboard ticket | Holiday | Holiday |
| **What (if any) blocking your progress?** | **Dev 1** | None | None | Facing challenge to identify the pattern as per the threshold | None | None | Holiday | Holiday |
| **Dev 2** | Require confirmation of filters to generate data on dashboard table | None | Require confirmation for the default column details | None | None | Holiday | Holiday |