**Task #2**

You have issue tracker log / export file. “bond\_issue\_log.zip”

Please create metrics answering these questions:

1. **What is the least reliable component of the system?**

**Reliability Score = (Bug Frequency \* 0.4) + (Severity Index \* 0.3) + (Reopened rate \* 0.3)**

Bug frequency per module = the total number of bugs reported per module

Severity Index per module = the average severity of the bugs reported per module

Reopned Rate per module = divide the number of reopened bugs by the total number of bugs per module

Module with highest Reliability Score will be the least reliable module.

1. **Is the situation improving over timeline?**

**Quality Trend Score =** **(Bug Frequency Trend \* 0.4) + (Severity Index Trend \* 0.3) + (Reopened Rate Trend \* 0.3)**

Trend in Bug Counts: the total count of bugs reported for all modules over sprints timeframe.

Trend in Severity Index: the average severity of reported bugs over sprints timeframe.

Trend in Reopen Rate: the average of reopened rate over sprint timeframe

If Quality Trend Score is increasing, it will mean that situation is improving.

1. **What weeks were the most dynamic in testing/development?**

Bugs Found: Count the number of bugs identified/verified each week. A high number of reported bugs could indicate a week of intensive testing.

Bugs Resolved: Count the number of bugs resolved each week. A high number of resolved bugs could point to the productive and dynamic development period.

1. **What weeks were the most silent?**

Bugs Found: Weeks with a lower number of discovered, verified bugs could indicate quieter testing periods.

Bugs Resolved: Weeks with a less number of resolved bugs could point towards a less active development period.

1. **Suggest a threshold for bug quantity per week (take into consideration their severity)**

To calculate a threshold, we could assign points to bugs based on their severity level. For example I would suggest to set threshold to 200 points, this could be reached with ten tiny-severity bugs, or mix of severity of bugs.

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| Severity | Point |
| Tiny | 1 |
| Low | 2 |
| Normal | 3 |
| High | 4 |
| Critical | 5 |