SOEN 6431 : SOFTWARE COMPREHENSION AND MAINTENANCE

DÉJÀ VU

TEAM B

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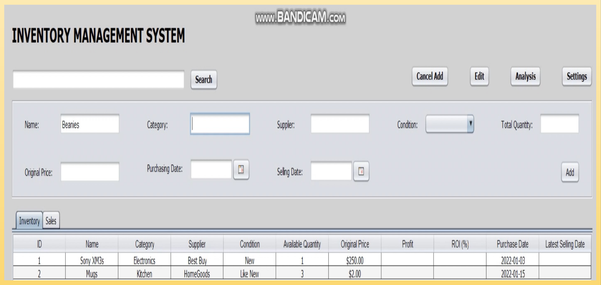
Collaboration Plan

- **Design Thinking**
- **Pair Programming**
- **Environments Utilized:**
  - **GitHub :** Source-code version control
  - **Zoom:** Team meetings
  - **Google Docs**: Documentation



User Interface of R

Critical Decisions

- **Choice of Technology Stack:** Critical decision impacting project efficiency and success.
- **User Interface Design:** Crucial decision affecting user experience and engagement.

	Impact	Likelihood
Blocker	✅	✅
Critical	✅	❌
Major	❌	✅
Minor	❌	❌

Critical Decisions (cont.)

- **Reengineering Strategies**: Formulate solutions to improve maintainability.
- **Risk-Benefit Analysis**: Assess risks and benefits of reengineering.

S.no	FileName	Lines	Lines of code	Bug	Vulnerability	Code Smell
1	AnalysisChartsHelpers.java	381	265	0	0	2
2	ColorPreferences.java	36	12	0	0	0
3	MainFrame.java	2313	1836	0	0	96
4	MainFrameHelpers.java	590	401	0	0	25
5	MainFrameSQLHelpers.java	355	204	0	0	4
6	TestMainFrame.java	28	17	0	0	1
	Total	**3703**	**2735**	**0**	**0**	**128**

Team Retrospective

1. **Increased Code Review Frequency:** Enhance code quality, catch issues early.
2. **Automated Testing Enhancements:** Boost stability, improve quality.
3. **Better Resource Allocation:** Optimize outcomes, reduce delays.
4. **Documentation and Knowledge Sharing.**

Limitations

- Time and Resource.
- Risk of Introduction of Bugs.
- Lack of Comprehensive Test.
- Legacy Code and Technical Debt.

Lessons Learned

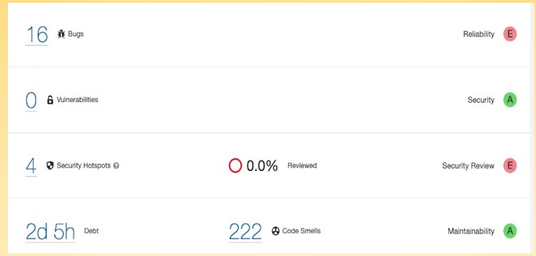
- **Collaboration**: Effective teamwork demands open, respectful communication and idea sharing.
- **Communication Skills**: Vital for project success, include regular meetings and clear expectations to prevent breakdowns.
- **Flexibility & Accountability**: Adapting to changes and unforeseen issues. Each member responsible for task completion and project success.
- **Continuous Learning**: Projects offer learning and improvement opportunities.

Maintainabilitay of the R

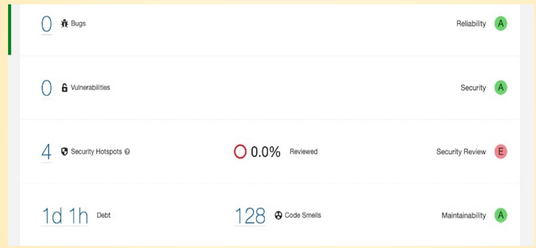
By the ISO/IEC 25010 Standard

- Modularity and Code Structure.
- Clear Documentation and Comments.
- Unit Testing and Quality Assurance.
- Consistent Coding Standards.

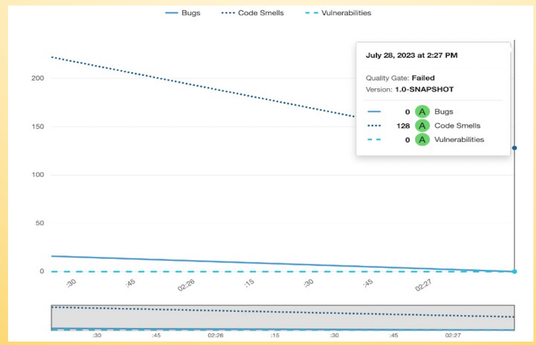
Outcomes of Refactoring



Before refactoring



After refactoring



After refactoring