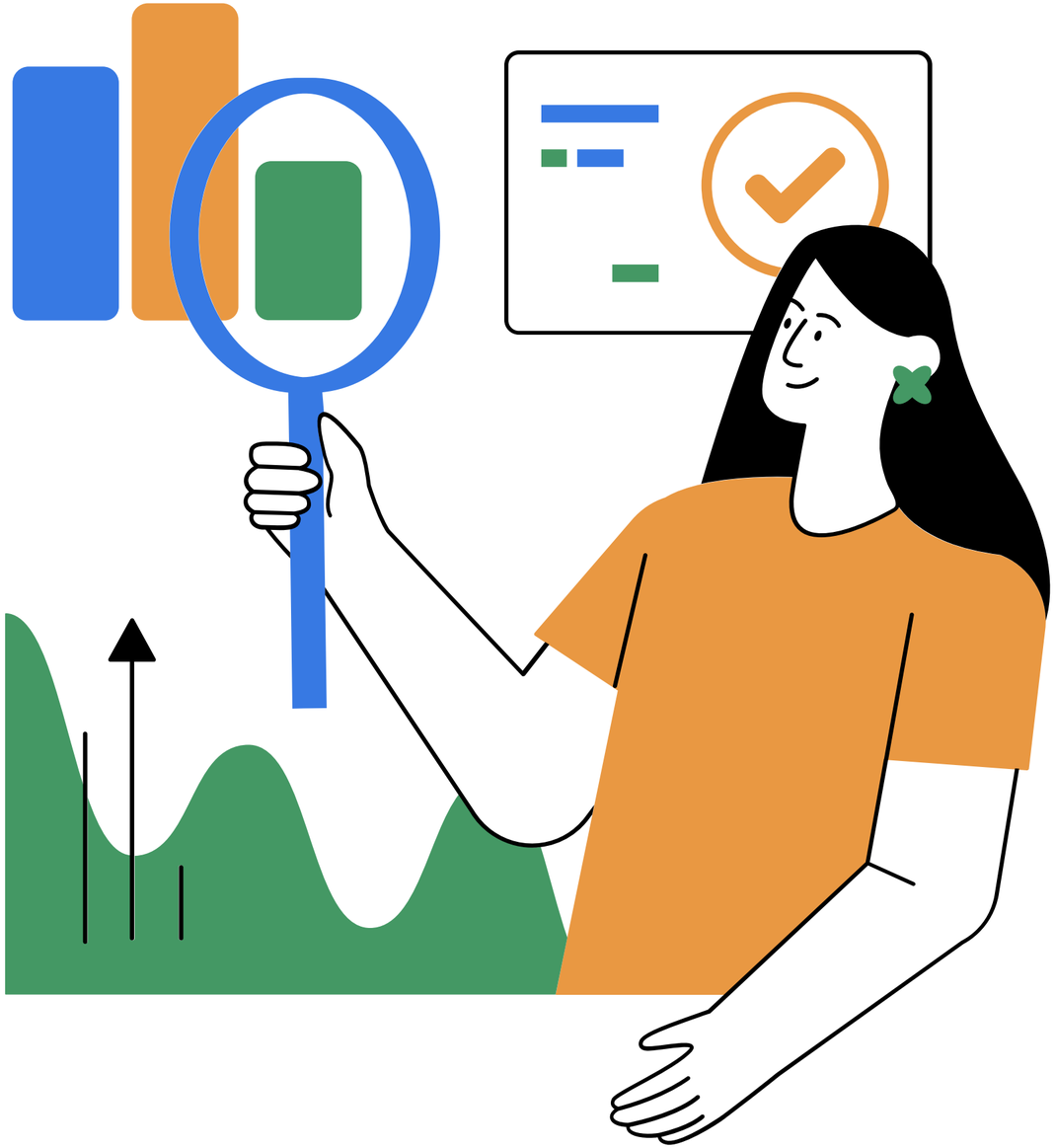
Analysis and Results Presentation

JSON to CSV Converter Project



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Introduction

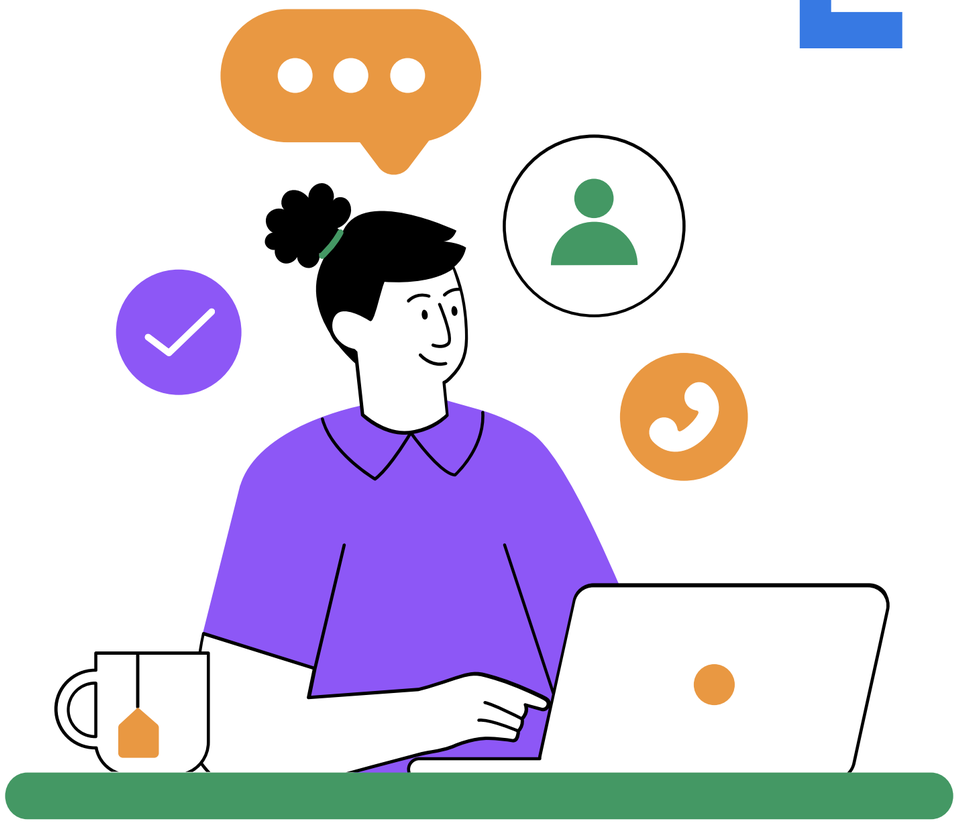
Context: Automating JSON → CSV conversion for efficiency in report generation

Methodology: Agile SCRUM with three Sprints + Final Delivery

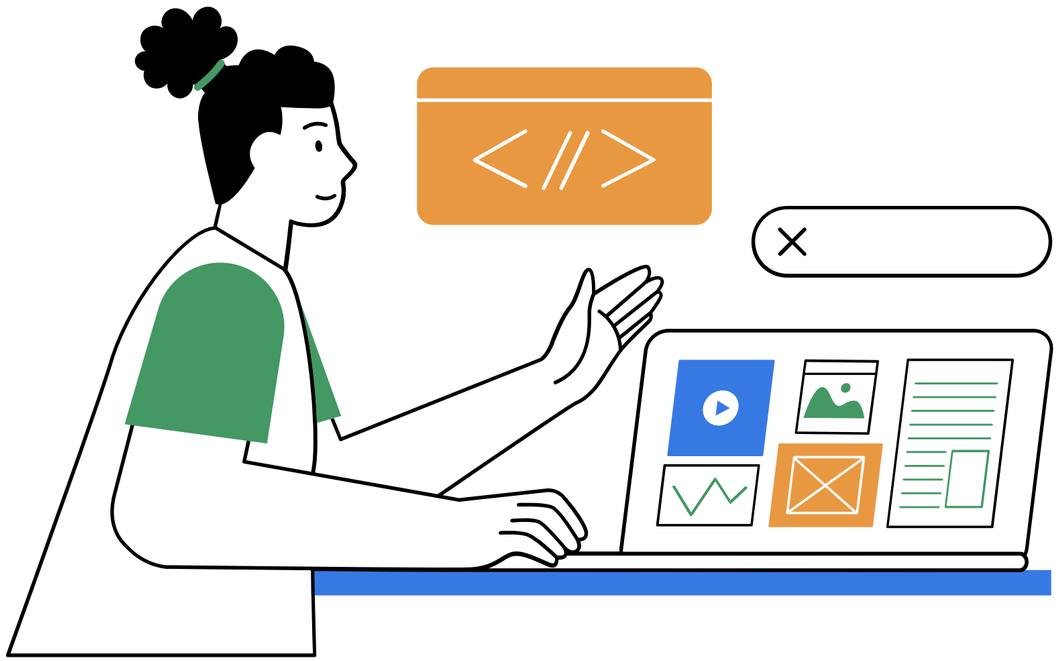
Problem Statement

- JSON is not user-friendly for administrative staff
- Manual conversion to CSV is time-consuming and error-prone

Objectives



- Automate JSON to CSV conversion
- Allow configurable parameters (file names, delimiters)
- Ensure error handling and reliability with unit tests
- Outputs compatible with Excel



Solution Design

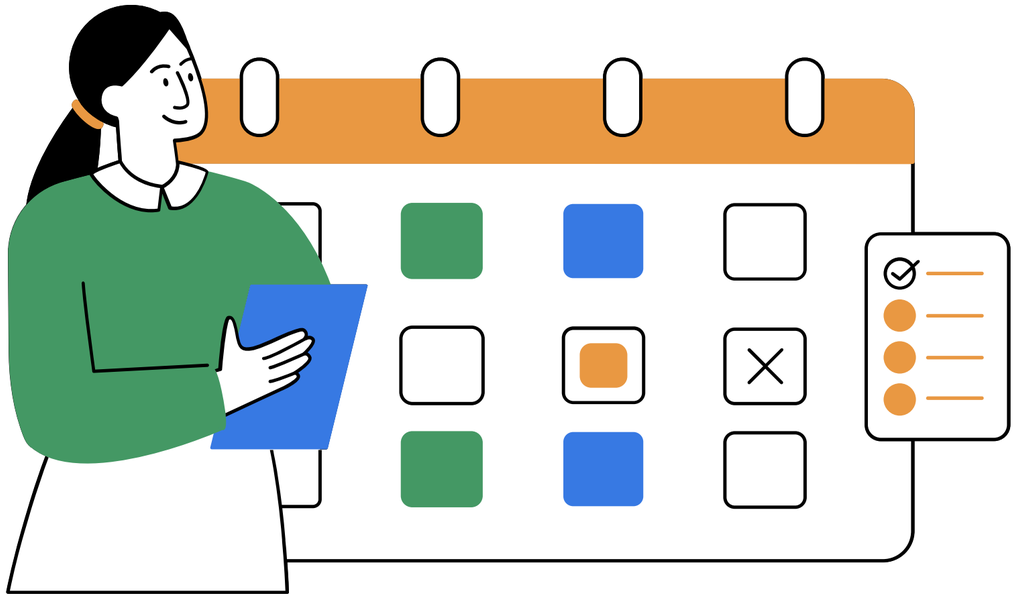
Architecture: modular Java app (JSON Reader, Data Mapper, CSV Writer)

Stack: Java 17, Jackson, OpenCSV, JUnit 5, Maven

Desktop program executable with CLI or config file

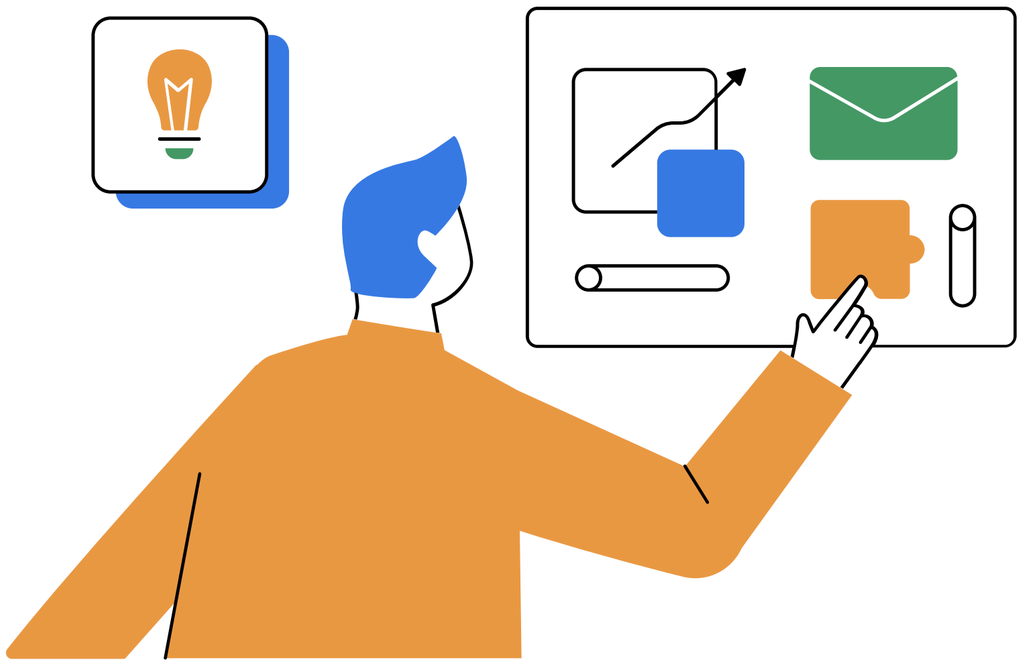
Validation: JSON structure checked before processing

Transformation Algorithm



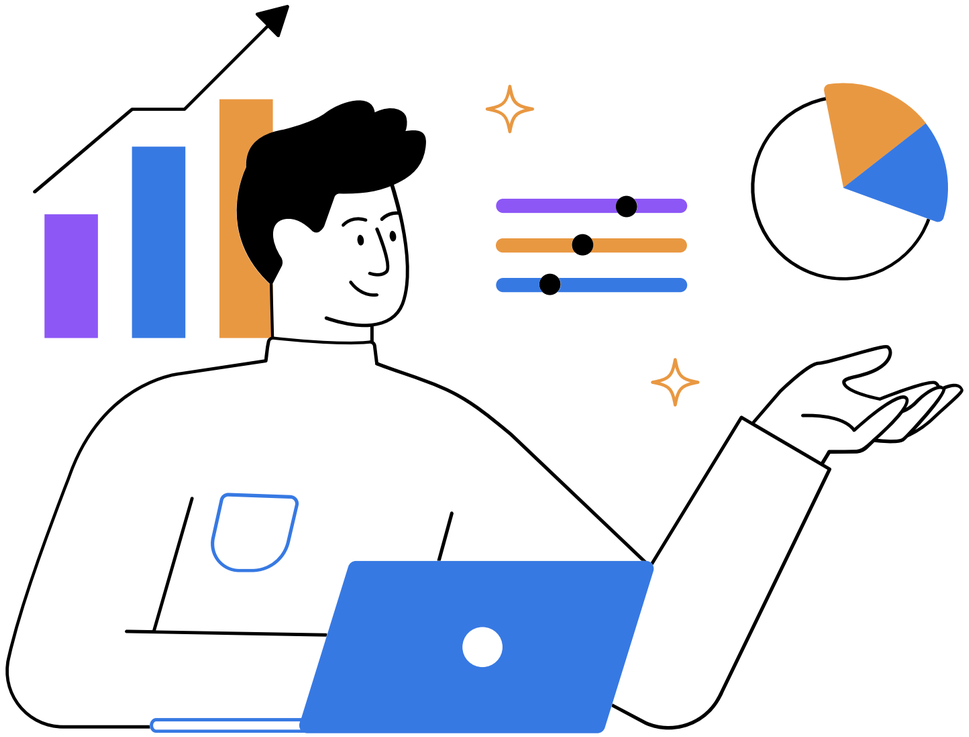
- Each JSON object → one CSV row
- Nested objects → flattened with dot notation (e.g., address.city)
- Arrays → concatenated with '|' symbol
- Missing fields → empty cells in CSV
- Headers inferred from keys automatically

Results



- Sprint 1: Documentation of SCRUM, JSON, CSV
- Sprint 2: Desktop program (JSON reading + CSV writing)
- Sprint 3: Mapping logic, CLI params, JavaDoc, validation
- Final: Working program + tests + documentation + sample data
- Benefits: faster, accurate, reusable outputs

- Solution meets user stories and backlog requirements
- Improves efficiency and reliability in generating reports
- Modular design allows future extensions (GUI, DB integration)



Conclusion

Thank You