2.6 Summary

The requirements documentation outlines the functional, non-functional requirements, domain analysis with its use cases and activity diagrams for the development of a mathematical card matching game aimed at enhancing arithmetic skills for players of varying ages and abilities. The game will feature multiple screens including a main menu, level selection menu, gameplay screen, high score list, and progress/results screen. It will incorporate mouse-based interaction and keyboard shortcuts for user interface navigation. The game will offer various modes such as single-player (with easy, medium, and hard difficulties), multiplayer, tutorial, and practice modes. Additionally, players can create their own levels with custom equations and answers. The scoring system will track players' progress and achievements, with a focus on accuracy and speed. The application will be developed in Java 19 or newer, adhere to object-oriented principles, and utilize design patterns. It will feature a GUI designed for intuitive navigation and accessibility, with data stored locally in formats like JSON or XML. The project will be managed using Confluence for documentation and Jira for task tracking, ensuring effective collaboration among team members. The team will adhere to coding conventions, maintainability, and testing standards, ensuring the project is well-structured, efficient, and reliable.

Term/Notation/Acronym	Definition
GUI	Graphical User Interface
JSON	JavaScript Object Notation
XML	Extensible Markup Language
API	Application Programming Interface
UML	Unified Modeling Language
UI	User Interface
Javadoc	Java Documentation
IDE	Integrated Development Environment
TA	Teaching Assistant