

a1c

A1c Guides

These guides support Assignment 1c. Read them as you work through the assignment.

Git Workflow

Guide	When to Read
Git Branching and Pull Requests	Before starting – A1c requires working on a dev branch and merging via PR

Object-Oriented Design

Guide	When to Read
Inheritance Hierarchies	Understanding the Item → AbstractItem → StoreItem/StoreBulkItem pattern
Sealed Types and Records	Understanding the provided ItemOrder and CartSize records
Interface Contracts	Review – implementing from interface specifications

Implementation Guides

Guide	When to Read
Implementing equals, hashCode, and toString	Implementing Object methods in your classes

Guide	When to Read
BigDecimal and BigInteger	Working with precise monetary calculations
Defensive Programming	Validating constructor parameters, fail-fast principles

Testing

Guide	When to Read
The equals and hashCode Contract	Testing your equals/hashCode implementations
Writing JUnit 5 Tests	Writing test classes for your implementations

Code Quality

Guide	When to Read
Linters and Code Quality	Keeping your code clean
Checkstyle Rules Reference	Fixing Checkstyle violations
IntelliJ Inspections Reference	Fixing IntelliJ warnings

References

This section consolidates references from all guides linked above.

Primary Texts:

- Bloch, J. (2018). *Effective Java* (3rd ed.). Addison-Wesley.
- Horstmann, C. S. (2022). *Core Java, Volume I: Fundamentals* (12th ed.). Oracle Press.
- Chacon, S., & Straub, B. (2014). *Pro Git* (2nd ed.). Apress. [Available free online](#)

Language Documentation:

- [Oracle JDK 25 Documentation](#) – Official Java SE reference
- [Oracle JDK 25: BigDecimal](#) – Precise decimal arithmetic
- [Oracle JDK 25: Record Classes](#) – Record class reference
- [JEP 409: Sealed Classes](#) – Sealed classes specification
- [JEP 395: Records](#) – Records specification

Testing Frameworks:

- [JUnit 5 User Guide](#) – Official JUnit 5 documentation

Git and GitHub:

- [GitHub Pull Requests Documentation](#) – Official GitHub PR guide
- [Git Documentation](#) – Official Git reference

Style Guides and Linting:

- [Google Java Style Guide](#) – Industry-standard style guide
- [Checkstyle Documentation](#) – Official Checkstyle documentation

Tooling:

- [JetBrains IntelliJ IDEA Documentation](#) – Official IDE reference

This page is part of TCSS 305 Programming Practicum, School of Engineering and Technology, University of Washington Tacoma.