

group-project

Sprint 1 Guides

These guides support Sprint 1. Read them as you work through the requirements.

GUI & Custom Painting

Guide	When to Read
Building Menus with JMenuBar	Requirement 2 – creating the File menu
Custom Painting with Java 2D	Requirements 4 & 5 – drawing the board and next piece

References

Primary Texts:

- Horstmann, C. S. (2022). *Core Java, Volume I: Fundamentals* (12th ed.). Oracle Press. — Chapter on Swing UI components (menus, dialogs) and Chapter 10: Custom painting, Graphics2D, and 2D shapes.
- Reges, S., & Stepp, M. (2020). *Building Java Programs* (5th ed.). Pearson. — Chapter 3g (Supplement): Graphics — Introduction to drawing with Graphics objects.
- Bloch, J. (2018). *Effective Java* (3rd ed.). Addison-Wesley. — Item 17: Minimize mutability; Item 18: Favor composition over inheritance.

Language Documentation:

- [Oracle JDK 25: JMenuBar](#) — JMenuBar class API reference
- [Oracle JDK 25: JMenu](#) — JMenu class API reference
- [Oracle JDK 25: JMenuItem](#) — JMenuItem class API reference
- [Oracle JDK 25: JOptionPane](#) — JOptionPane class API reference
- [Oracle JDK 25: Graphics2D](#) — Graphics2D class API reference
- [Oracle JDK 25: BasicStroke](#) — Stroke configuration for line rendering

- [Oracle JDK 25: Rectangle2D](#) – Rectangle shape class
- [Oracle JDK 25: Ellipse2D](#) – Ellipse shape class
- [Oracle JDK 25: Color](#) – Color class including alpha transparency

Tutorials:

- [Oracle Swing Tutorial: How to Use Menus](#) – Official menu tutorial with examples
- [Oracle Swing Tutorial: How to Make Dialogs](#) – Official dialog tutorial
- [Oracle: Performing Custom Painting](#) – Official Swing painting tutorial
- [Oracle: 2D Graphics](#) – Official Java 2D tutorial trail