

# Pre-Class Reading

Read the following articles. You **should** follow along with the first article in IntelliJ, but not the second and third articles (you can't really follow along anyway). Don't worry if you get confused, just try to keep track of the important features and what to use them for. While you likely don't have exposure to writing multithreaded and/or asynchronous applications, and you won't have exposure to debugging them, some of the important features are showcased for debugging multithreaded applications. Most of them do **not** need to be used on multithreaded applications.

## Readings

### Debugging Basics

The pictures of the icons in the text are old, but the keyboard shortcuts are still correct and the screenshots are up-to-date enough for you to follow along with a current version of IntelliJ. You will need to write the HelloWorld application before following along with the article. Find it by clicking on the "Before you start..." link.

<https://www.jetbrains.com/help/idea/debugging-your-first-java-application.html>

### Breakpoints

<https://www.jetbrains.com/help/idea/using-breakpoints.html>

### Advanced Debugging Features

The next article goes over many features, several of which you will not use frequently, if ever. However, it is important that you have exposure to them in the event you need or want to use them. The tutorial for class will use some of these features. They can be incredibly useful at times.

You should read until "Debugging long running scenarios." Reading more is considered part of the additional reading for this day.

<https://www.jetbrains.com/help/idea/tutorial-java-debugging-deep-dive.html>

Most of the skills related to debugging are developed through actually debugging programs. When and where to set breakpoints and what kinds of conditions to set are mostly intuitive skills that you develop with experience.

# Before Class

You should know

- What a breakpoint is
- Types of breakpoints
  - Line
  - Method
  - Exception
  - Field watch
- What a condition on a breakpoint does and how to set one
- IntelliJ's support for multithreaded applications

## Additional Reading

<https://www.baeldung.com/intellij-debugging-tricks> (Recommended)