

Intro to Java

Why Use Java?

- **Cross-platform:** Runs on Windows, macOS, and Linux without changes.
- **Popular:** Tons of free tutorials, videos, and documentation.
- **Big Community:** Easy to get help, with many libraries and tools available.
- **Strong IDE Support:** Tools like IntelliJ IDEA make coding faster and easier.

Things to Keep in Mind

- **Verbose:** You might write more code compared to languages like Python.
- **Steep Learning Curve:** Can feel complex for absolute beginners.

 **Tip:** Java teaches you core programming concepts clearly—great for building a strong foundation!

2. Installing Java 17 Corretto (JDK)

The **Java Development Kit (JDK)** lets you write and run Java code. We'll use **Amazon Corretto 1** for this hackathon.

Windows Instructions

1. Go to [Amazon Corretto 17 Downloads](#)
2. For Windows, pick the **MSI** installer (easiest).
3. Download and run the installer.
4. **Accept defaults and finish installation.**

You can check Java is installed:

- Press Windows key, type **cmd**.
- In Command Prompt, type:
`java -version`
- Output should show: `openjdk version "17..."`

macOS Setup (Using SDKMAN)

1. Open **Terminal** (Applications > Utilities).
2. Install SDKMAN:

- Open **Terminal** (in Applications > Utilities).

Paste and run:

```
curl -s "https://get.sdkman.io" | bash
```

-

Close and reopen the Terminal, or run:

```
source "$HOME/.sdkman/bin/sdkman-init.sh"
```

-

Step 2: Install Corretto 17

In Terminal:

```
sdk install java 17.0.11-amzn
```

-

Check install with:

```
java -version
```

- Output should show: `openjdk version "17..."`

Tip: If you run into issues, restart your computer or reach out to your team lead for help 😊.

3. Recommended IDE: IntelliJ IDEA

An **IDE** (Integrated Development Environment) is like a smart editor for code. **IntelliJ IDEA** is beginner-friendly and used by professionals.

How to install IntelliJ IDEA

Windows

1. Go to [IntelliJ IDEA website](https://www.jetbrains.com/idea/)
2. Download the **Community Edition** (free).
3. Run the downloaded `.exe` installer.
4. Click *Next* through the install steps (accept defaults).
5. Launch IntelliJ IDEA.

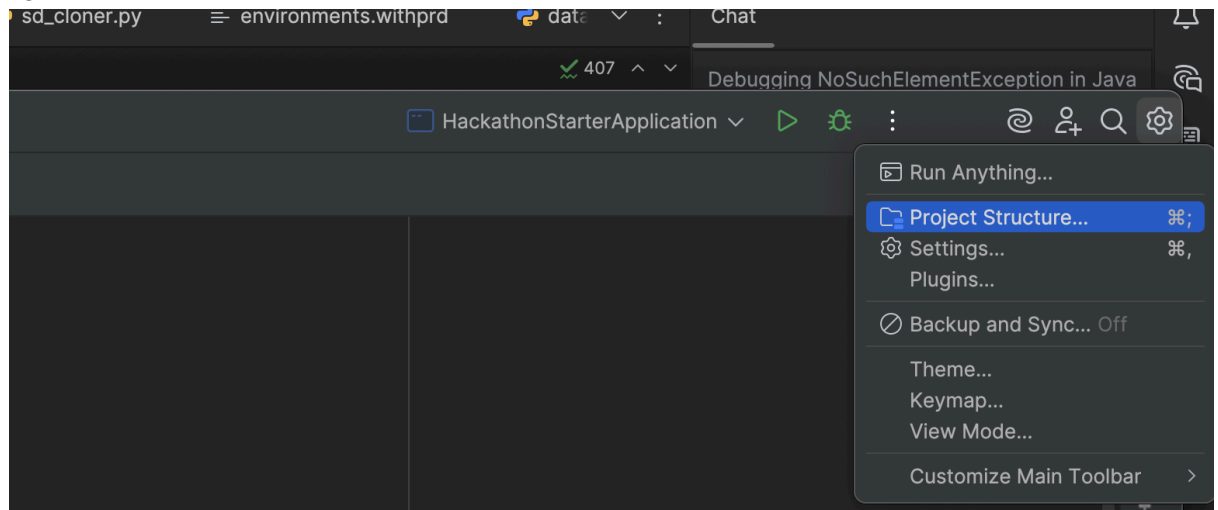
Mac

1. Go to [IntelliJ IDEA website](https://www.jetbrains.com/idea/)
2. Download the **Community Edition** (free).
3. Open the downloaded `.dmg` file.

4. Drag the **IntelliJ IDEA** icon into the **Applications** folder.
5. Launch IntelliJ IDEA from Applications.

First launch tips:

- Pick default settings.
- When it asks for a "project SDK", select "Java 17" (it should find your Corretto installation automatically).
- If it doesn't - you can look here afterwards once you have opened up your repo (top right corner of IntelliJ)



4. Java Cheatsheet

Super-basic Java concepts! Try copying/pasting these into IntelliJ.

```
// This is a comment. Comments explain code but don't run.
```

```
// Every Java program has a "class" and a "main" method:
```

```
public class HelloHackathon {  
    public static void main(String[] args) {  
        System.out.println("Hello, Hackathon!");  
    }  
}
```

```
// VARIABLES - Storing information
```

```
int number = 5;           // Whole number  
double price = 9.99;      // Decimal number  
String name = "Java";     // Text  
boolean isFun = true;     // true/false
```

```
// IF Statements - Making decisions
```

```
if (number > 4) {
    System.out.println("Number is greater than 4");
} else {
    System.out.println("Number is 4 or less");
}

// LOOPS - Repeat things
for (int i = 0; i < 5; i++) {
    System.out.println(i); // prints 0, 1, 2, 3, 4
}

// FUNCTIONS - reusable code
public static void sayHello(String who) {
    System.out.println("Hello, " + who);
}

// To use the function:
sayHello("Hackathon");

// ARRAYS - List of items
int[] numbers = {1, 2, 3};

for (int n : numbers) {
    System.out.println(n);
}
```

Quick Tips:

- Every statement ends with a ;
- `System.out.println()` prints text to the terminal
- Use `{}` to group code
- Use `//` for comments

Resources:

If stuck, some resources:

- [Java Tutorials](#)
- [IntelliJ IDEA tutorials](#)

Good luck! Don't worry about knowing everything—just copy, paste, and experiment.