

Step 1: Install Java

1. Download and install **JDK 17 or later** from Adoptium or Oracle.

Open a terminal (Command Prompt/PowerShell) and check:

```
bash
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java -version
javac -version
```

2. If it shows version numbers, Java is installed correctly.
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Step 2: Set Up VS Code

1. Install **Visual Studio Code** from here.
 2. Open VS Code → Go to **Extensions (Ctrl+Shift+X)** → Install "**Extension Pack for Java**".
 3. (Optional) Install **Code Runner** for quick execution.
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Step 3: Create Project Files

1. Create a new folder (e.g., `FileCompressorDecompressor`).
2. Inside this folder, create **4 Java files**:
 - `CompressionLogger.java`
 - `FileCompressor.java`
 - `FileDecompressor.java`
 - `MainUI.java`
3. **Paste the respective code** (as provided earlier) into these files.

Step 4: Compile the Project

1. Open a terminal in VS Code (**Ctrl + `**).
2. Navigate to your project folder (if not already there).

Compile all Java files:

```
bash
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javac *.java
```

3. This will generate **.class** files in the same folder.

Step 5: Run the Project

Run the main class:

```
bash
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java MainUI
```

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2. A **desktop window** (Swing GUI) will open.

Step 6: Use the Application

- **To Compress:** Click "**Compress Files**" → Select files → Choose where to save **.zip**.
- **To Decompress:** Click "**Decompress ZIP**" → Select a ZIP file → Choose destination folder.
- **Progress bar** shows task completion.
- **Logs** are saved in **compression_log.txt**.