

# Minecraft Modding

## Setting up an MC Modding Machine

Adapted from [Minecraft Modding with Forge](#) by Arun Gupta & Aditya Gupta



# Outline

- ❖ Downloading and Installing Tools
  - Java Development Kit
  - Minecraft Forge
  - Eclipse
- ❖ Setting Up Forge in Eclipse
- ❖ Setting Up a Forge Workspace

# Downloading & Installing Tools

# Get Latest Java

<http://bit.ly/TEA7iC>

Download the correct Java 8 for your machine

Once downloaded, open the zip to complete the installation

- ❖ Check the correct java version
  - `$ java -version`
  - Java version “1.8.0\_131”

# Get Mod-Building Tool: Minecraft Forge

<http://files.minecraftforge.net/>

The mods in the O'Reilly book originally work with Forge 1.8

- ❖ Under the drop-down menu, select 1.8.9
- ❖ Under “Download Latest” click the Mdk link
- ❖ WAIT ~5 SECONDS, then click Skip Ad in the upper-right corner to download the ZIP file

# Get Eclipse IDE

<http://www.eclipse.org/downloads/>

Download the correct Eclipse for your machine (should automatically do this for you)

Eclipse IDE for Java Developers

- ❖ Eclipse is an *integrated development environment (IDE)*
  - Any IDE is a development tool used to edit files, package and run files, and help you find and fix the errors found within those files.
  - You will use Eclipse to edit files, make new ones, and run the game to test them.

# Setting Up Forge in Eclipse

# Before Creating Mods

Type these series of commands below in your Command Prompt or Terminal window:

```
$ cd Desktop
```

```
$ mkdir forge
```

```
$ cd forge
```



# Setting Up Forge in Eclipse CONTINUED

Now, move (or extract) the downloaded forge file into this newly created directory.

Change to that directory by using the `cd forge` command (in command prompt or terminal).

You can check the contents of the directory you are currently in:

- ❖ On Windows: `$ dir`
- ❖ On Mac: `$ ls`

```
[techem-mb-4:forge te-admin$ ls  
forge-1.8.9-11.15.1.1902-1.8.9-mdk  
[techem-mb-4:forge te-admin$ cd forge-1.8.9-11.15.1.1902-1.8.9-mdk/  
[techem-mb-4:forge-1.8.9-11.15.1.1902-1.8.9-mdk te-admin$ ls  
CREDITS-fml.txt  
LICENSE-fml.txt  
MinecraftForge-Credits.txt  
MinecraftForge-License.txt  
Paulscode IBXM Library License.txt  
Paulscode SoundSystem CodecIBXM License.txt  
README.txt  
bin  
build  
build.gradle  
eclipse  
forge-1.8.9-11.15.1.1902-1.8.9-changelog.txt  
forge-1.8.9-11.15.1.1902-1.8.9-mdk_Client.launch  
forge-1.8.9-11.15.1.1902-1.8.9-mdk_Server.launch  
gradle  
gradlew  
gradlew.bat  
run  
src  
techem-mb-4:forge-1.8.9-11.15.1.1902-1.8.9-mdk te-admin$
```

# Setting Up a Forge Workspace

# Command to Set Up Forge

- ❖ On Windows: `gradlew setupDecompWorkspace eclipse`
- ❖ On Mac: `./gradlew setupDecompWorkspace eclipse`

The above command will download the required files on your computer and prepare the directory for modding.

The length of this process will depend on your computer's speed and internet connection.

If all goes well, you should see:

BUILD SUCCESSFUL

If not, open the gradlew.bat file in Notepad ++ → `DEFAULT_JVM_OPTS = -Xmx1024m`

# Select a Directory as Workspace

- ❖ Install Eclipse (by opening the Eclipse file you downloaded earlier)
- ❖ Launch Eclipse
- ❖ Under Workspace launcher:
  - Click Browse... navigate to the forge directory you just made. Select the eclipse folder inside by clicking it once, click Open, then Click OK.

Project details are stored in a workspace. This is so you can work on your mods in one place.

Package Explorer

- MDKExample
  - src/main/java
  - src/main/resources
  - JRE System Library [Java SE 8 [1.8.0
  - Referenced Libraries
  - build
  - eclipse
  - gradle
  - run
  - src
    - build.gradle
    - CREDITS-fml.txt
    - forge-1.8.9-11.15.1.1902-1.8.9-ch
    - forge-1.8.9-11.15.1.1902-1.8.9-md
    - forge-1.8.9-11.15.1.1902-1.8.9-md
    - gradlew
    - gradlew.bat
    - LICENSE-fml.txt
    - MinecraftForge-Credits.txt
    - MinecraftForge-License.txt
    - Paulscode IBXM Library License.txt
    - Paulscode SoundSystem CodecIBXM
    - README.txt

## BIG WHITE WINDOW IN THE MIDDLE

Where your project files are opened and ready to be edited

Outline

An outline is not available.

## PACKAGE EXPLORER

Where your forge project structure is shown

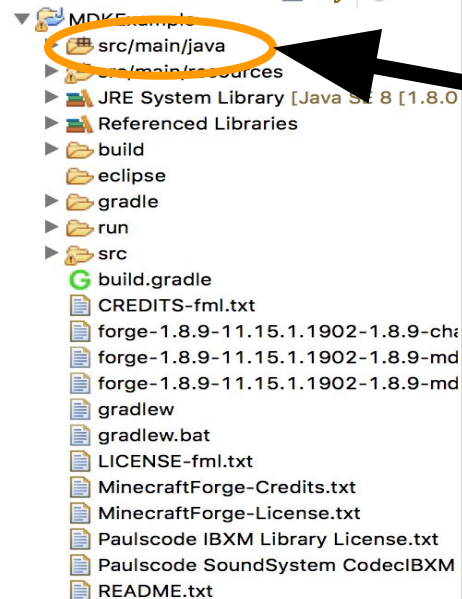
Problems @ Javadoc Declaration Console

No consoles to display at this time.

## THE STATUS WINDOW



Package Explorer



Click the arrow next to the  
`src/main/java`

- This expands the folder where all the Java source files are stored

Double-Click the  
`ExampleMod.java` source file

- This shows it in the middle part of the IDE
- You can view and make changes to it there

Outline

An outline is not available.

Problems @ Javadoc Declaration Console

No consoles to display at this time.

# Key Java Concepts



# Each Class belongs to a Package

```
package com.example.exemplemod;
```

```
import net.minecraft.init.Blocks;
```

```
import net.minecraftforge.fml.common.Mod;
```

```
import net.minecraftforge.fml.common.Mod.EventHandler;
```

```
import net.minecraftforge.fml.common.event.FMLInitializationEvent;
```

For the classes to be used, they  
need to be imported

```
@Mod(modid = ExampleMod.MODID, version = ExampleMod.VERSION)
public class ExampleMod
{
    public static final String MODID = "examplemod";
    public static final String VERSION = "1.0";

    @EventHandler
    public void init(FMLInitializationEvent event)
    {
        // some example code
        System.out.println("DIRT BLOCK >> "+Blocks.dirt.getUnlocalizedName());
    }
}
```

# Write our first mod in Java

[https://github.com/joetechem/minecraft-with-modding-camp/blob/master/lessons\\_and\\_materials/in\\_java/block\\_break\\_message\\_slides.pdf](https://github.com/joetechem/minecraft-with-modding-camp/blob/master/lessons_and_materials/in_java/block_break_message_slides.pdf)

[https://docs.google.com/presentation/d/1S0wKwfEdzJea6Poj6PsgklrjzcoLmeOGJqqrjXKN\\_c0/edit](https://docs.google.com/presentation/d/1S0wKwfEdzJea6Poj6PsgklrjzcoLmeOGJqqrjXKN_c0/edit)