

1. Создание пакетов, добавление в них POJO и Main класса:

```
MINGW64:/d/Java-Web-Development/jwd-logging/src/com/epam/jwd/model
PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging
$ mkdir src

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging
$ cd src

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src
$ mkdir -p com/epam/jwd/app

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src
$ mkdir -p com/epam/jwd/model

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src
$ cd com/epam/jwd/model

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/model
$ touch Book.java

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/model
$ vim Book.java

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/model
$ |
```

```
package com.epam.jwd.model;

public class Book {

    private String title;
    private String author;
    private int publicationYear;

    public Book(String title, String author, int publicationYear) {
        this.title = title;
        this.author = author;
        this.publicationYear = publicationYear;
    }

    public Book() {
        title = "default";
        author = "default";
        publicationYear = 0;
    }

    public String getTitle() {
        return title;
    }

    public void setTitle(String title) {
        this.title = title;
    }

    public String getAuthor() {
        return author;
    }

    public void setAuthor(String author) {
        this.author = author;
    }

    public int getPublicationYear() {
        return publicationYear;
    }

    public void setPublicationYear(int publicationYear) {
        this.publicationYear = publicationYear;
    }

    @Override
    public String toString() {
        return title + " " + author + " " + publicationYear;
    }
}

Book.java [+] (unix) (14:13 20/11/2020) 50,0-1 A11
```

```
MINGW64:/d/Java-Web-Development/jwd-logging/src/com/epam/jwd/app
PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src
$ cd com/epam/jwd/model

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/model
$ touch Book.java

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/model
$ vim Book.java

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/model
$ cd ..

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd
$ cd app

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/app
$ touch Main.java

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/app
$ vim Main.java

PлPёCTPёP»P»@MSI MINGW64 /d/Java-Web-Development/jwd-logging/src/com/epam/jwd/app
$
```

```
package com.epam.jwd.app;

import com.epam.jwd.model.Book;
import org.apache.logging.log4j.LogManager;
import org.apache.logging.log4j.Logger;

public class Main {

    private static final Logger LOGGER = LogManager.getLogger();

    public static void main(String[] args) {

        LOGGER.info("Program started");

        Book[] bookshelf = new Book[5];

        bookshelf[0] = new Book("Code complete", "Macconne11", 1993);
        bookshelf[1] = new Book("Head First Java", "Sierra, Bates", 2003);
        bookshelf[2] = new Book("Java programming techniques", "Glinov", 2013);
        bookshelf[3] = new Book("Murder on the Orient Express", "Christie", 2017);
        bookshelf[4] = new Book("Fahrenheit 451", "Bradbury", 2015);

        for (Book book: bookshelf) {
            LOGGER.debug(book);
        }

        LOGGER.info("Program finished");
    }
}

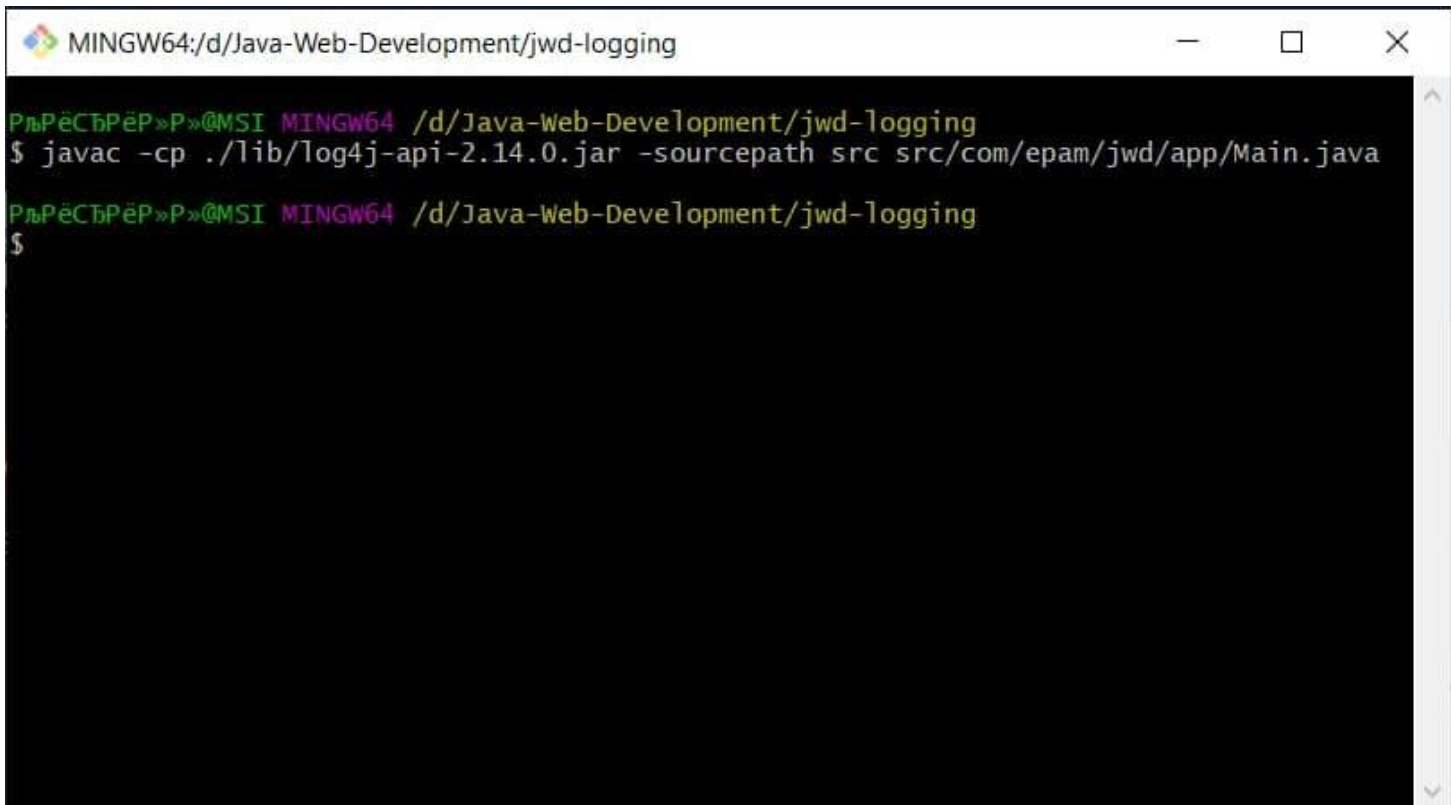
Main.java [dos] (12:52 21/11/2020) 29,1 All
```

2. Добавление конфигурационного файла:

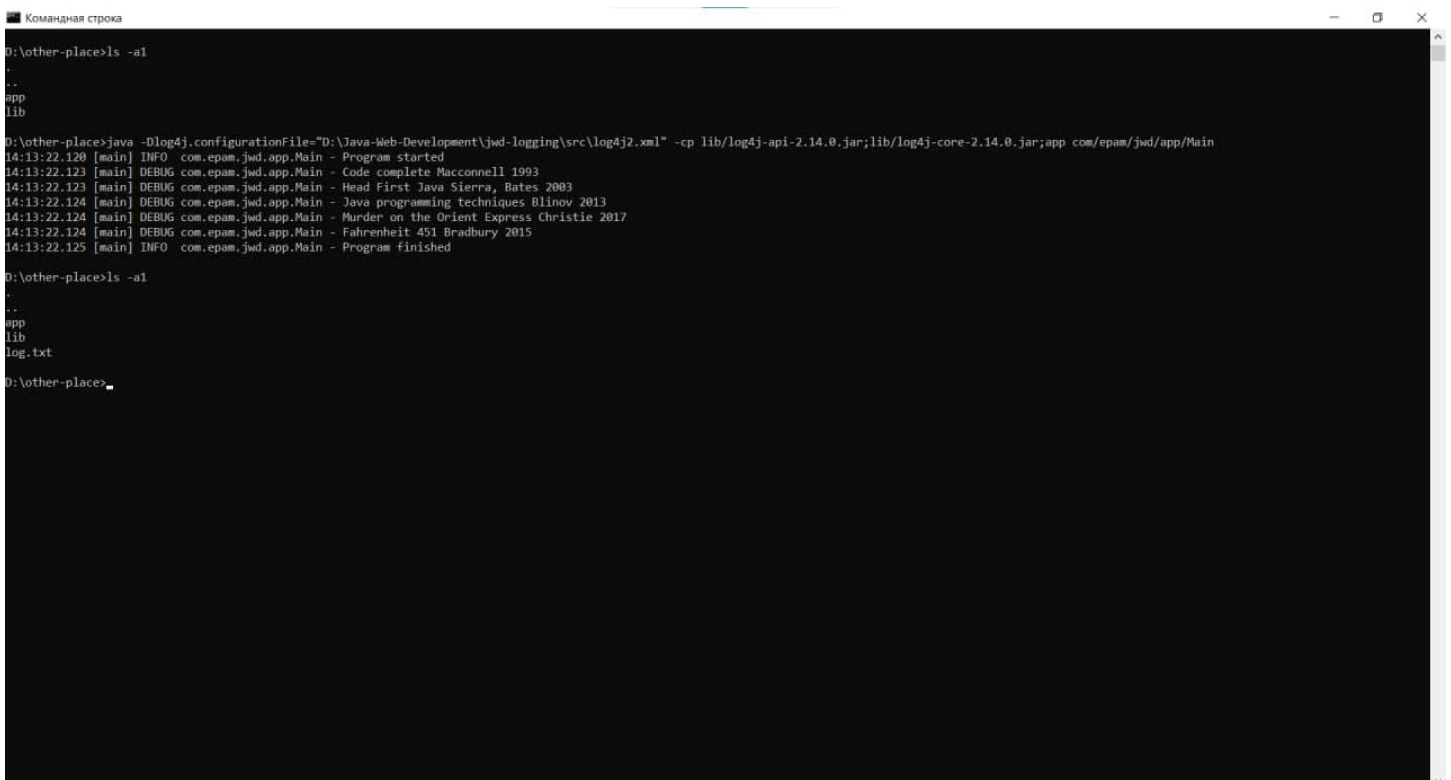
```
MINGW64/d/java-Web-Development-fjwd-logging/src
<?xml version="1.0" encoding="UTF-8" ?>
<Configuration status="Info">
  <Appenders>
    <Console name="Console" target="SYSTEM_OUT">
      <PatternLayout pattern="%d{HH:mm:ss.SSS} [%t] %-5level %logger{36} - %msg%n"/>
    </Console>
    <File name="TxtFile" fileName="log.txt" append="false">
      <PatternLayout pattern="%d{HH:mm:ss.SSS} [%t] %-5level %logger{36} - %msg%n"/>
    </File>
  </Appenders>
  <Loggers>
    <Logger name="com.epam.fjwd.app" level="debug">
      <AppenderRef ref="TxtFile"/>
    </Logger>
    <Root level="trace">
      <AppenderRef ref="Console"/>
    </Root>
  </Loggers>
</Configuration>
```

log4j2.xml [dos] (00:43 20/11/2020) 1.1 All

3. Компиляция и запуск программы:



```
MINGW64:/d/Java-Web-Development/jwd-logging
РЪРѢСЪРѢР»Р»@MSI MINGW64 /d/Java-Web-Development/jwd-logging
$ javac -cp ./lib/log4j-api-2.14.0.jar -sourcepath src src/com/epam/jwd/app/Main.java
РЪРѢСЪРѢР»Р»@MSI MINGW64 /d/Java-Web-Development/jwd-logging
$
```



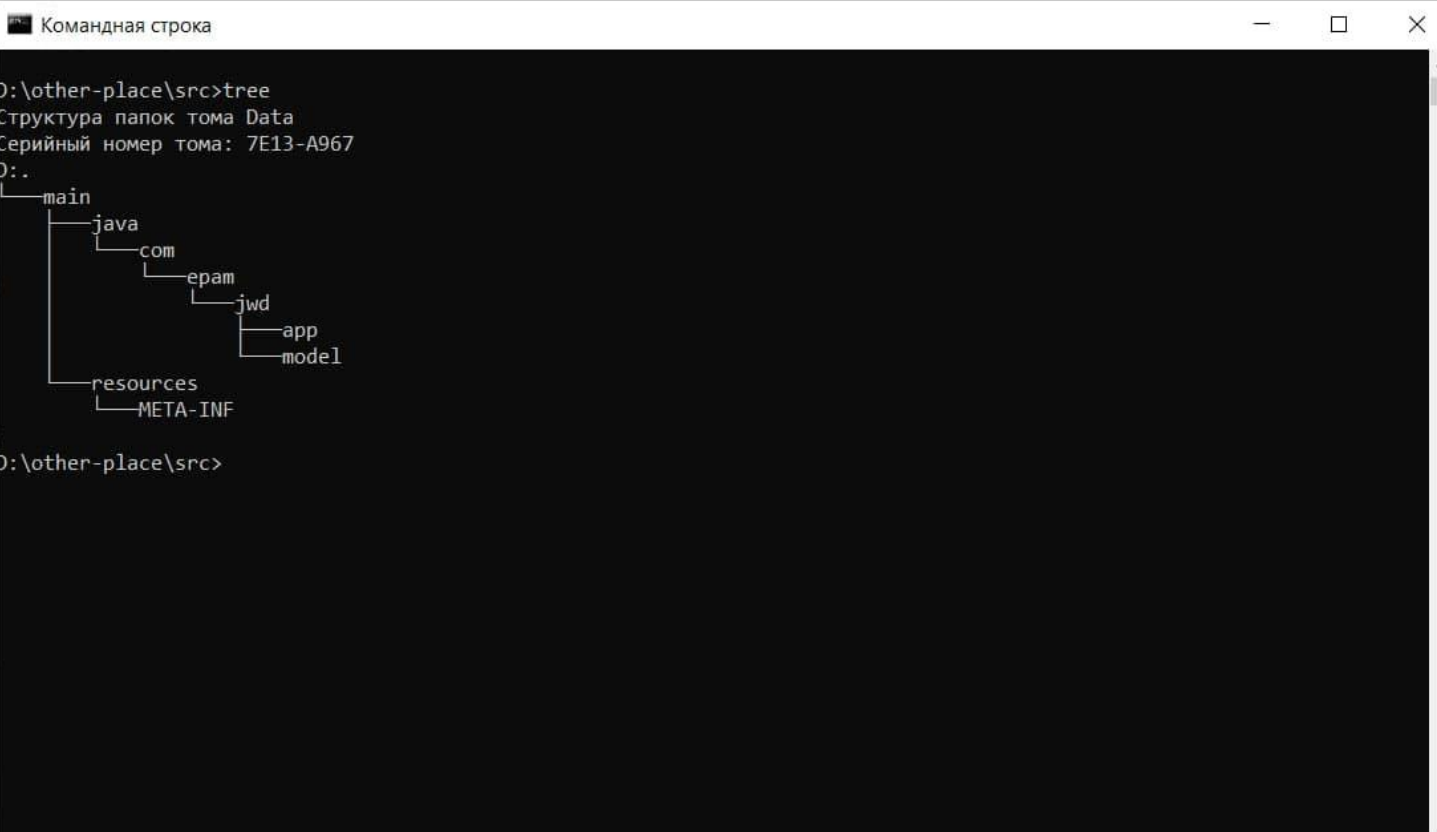
```
Командная строка
D:\other-place>ls -al
.
..
app
lib

D:\other-place>java -Dlog4j.configurationFile="D:\Java-Web-Development\jwd-logging\src\log4j2.xml" -cp lib/log4j-api-2.14.0.jar;lib/log4j-core-2.14.0.jar;app com/epam/jwd/app/Main
14:13:22.120 [main] INFO com.epam.jwd.app.Main - Program started
14:13:22.123 [main] DEBUG com.epam.jwd.app.Main - Code complete Macconnell 1993
14:13:22.123 [main] DEBUG com.epam.jwd.app.Main - Head First Java Sierra, Bates 2003
14:13:22.124 [main] DEBUG com.epam.jwd.app.Main - Java programming techniques Blinov 2013
14:13:22.124 [main] DEBUG com.epam.jwd.app.Main - Murder on the Orient Express Christie 2017
14:13:22.124 [main] DEBUG com.epam.jwd.app.Main - Fahrenheit 451 Bradbury 2015
14:13:22.125 [main] INFO com.epam.jwd.app.Main - Program finished

D:\other-place>ls -al
.
..
app
lib
log.txt

D:\other-place>
```

4. Компиляция приложения в “fat jar”:



```
Командная строка
D:\other-place\src>tree
Структура папок тома Data
Серийный номер тома: 7E13-A967
D:..
├── main
│   ├── java
│   │   ├── com
│   │   │   ├── epam
│   │   │   │   ├── jwd
│   │   │   │   │   ├── app
│   │   │   │   │   └── model
│   │   └── resources
│   │       └── META-INF
└──
```

Командная строка - vim MANIFEST.MF

```
Manifest-Version: 1.0
Class-Path: .
Main-Class: com.epam.jwd.app.Main
```

MANIFEST.MF [dos] (14:59 21/11/2020) 3,33 All


```
Командная строка

D:\other-place>cp lib/log4j-api-2.14.0.jar ./out/

D:\other-place>cd ./out

D:\other-place\out>tar xf log4j-api-2.14.0.jar

D:\other-place\out>rm log4j-api-2.14.0.jar

D:\other-place\out>cd ..

D:\other-place>cp lib/log4j-core-2.14.0.jar ./out/

D:\other-place>cd ./out

D:\other-place\out>tar xf log4j-core-2.14.0.jar

D:\other-place\out>rm log4j-core-2.14.0.jar

D:\other-place\out>
```

```
Командная строка

D:\other-place>jar cvfm Fat.jar ./src/main/resources/META-INF/MANIFEST.MF -C ./out/ .
added manifest
adding: Log4j-charsets.properties(in = 1639) (out= 825)(deflated 49%)
adding: Log4j-config.xsd(in = 7965) (out= 1344)(deflated 83%)
adding: Log4j-events.dtd(in = 2799) (out= 1089)(deflated 61%)
adding: Log4j-events.xsd(in = 4608) (out= 1129)(deflated 75%)
adding: Log4j-levels.xsd(in = 1541) (out= 703)(deflated 54%)
ignoring entry META-INF/
adding: META-INF/DEPENDENCIES(in = 6158) (out= 1441)(deflated 76%)
adding: META-INF/LICENSE(in = 11366) (out= 3958)(deflated 65%)
ignoring entry META-INF/MANIFEST.MF
adding: META-INF/maven/(in = 0) (out= 0)(stored 0%)
adding: META-INF/maven/org.apache.logging.log4j/(in = 0) (out= 0)(stored 0%)
adding: META-INF/maven/org.apache.logging.log4j/log4j-api/(in = 0) (out= 0)(stored 0%)
adding: META-INF/maven/org.apache.logging.log4j/log4j-api/pom.properties(in = 100) (out= 91)(deflated 9%)
adding: META-INF/maven/org.apache.logging.log4j/log4j-api/pom.xml(in = 14045) (out= 2994)(deflated 78%)
adding: META-INF/maven/org.apache.logging.log4j/log4j-core/(in = 0) (out= 0)(stored 0%)
adding: META-INF/maven/org.apache.logging.log4j/log4j-core/pom.properties(in = 101) (out= 92)(deflated 8%)
adding: META-INF/maven/org.apache.logging.log4j/log4j-core/pom.xml(in = 23342) (out= 4352)(deflated 81%)
adding: META-INF/NOTICE(in = 217) (out= 155)(deflated 28%)
adding: META-INF/org/(in = 0) (out= 0)(stored 0%)
adding: META-INF/org/apache/(in = 0) (out= 0)(stored 0%)
adding: META-INF/org/apache/logging/(in = 0) (out= 0)(stored 0%)
adding: META-INF/org/apache/logging/log4j/(in = 0) (out= 0)(stored 0%)
adding: META-INF/org/apache/logging/log4j/core/(in = 0) (out= 0)(stored 0%)
adding: META-INF/org/apache/logging/log4j/core/config/(in = 0) (out= 0)(stored 0%)
adding: META-INF/org/apache/logging/log4j/core/config/plugins/(in = 0) (out= 0)(stored 0%)
adding: META-INF/org/apache/logging/log4j/core/config/plugins/Log4j2Plugins.dat(in = 20388) (out= 4022)(deflated 80%)
adding: META-INF/services/(in = 0) (out= 0)(stored 0%)
adding: META-INF/services/javax.annotation.processing.Processor(in = 855) (out= 493)(deflated 42%)
```