Text2code manual

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1 Pre-Requisites

This program has been designed to run on any platform where the Java virtual machine is installed. To install JDK 8 Java development kit version 8 from Oracle which includes JVM please visit the Oracle website.[1] The system is tested on the hardware with i7-6700HQ CPU @ 2.60 GHz with 8 GB RAM. Minimum recommended RAM is 512MB.

2 Dependencies

The following dependencies are not included in the project and will need to be installed separately on the system:

- Java 8 from Oracle[2]
- Eclipse IDE[3]

The following dependencies referenced in the project:

- Eclipse jdt core[4]
- Java Parser core[5]
- Guava[6]

3 Running the Project System

Windows platform. The software system can be launched on the Windows platform from the 'code2text.bat' file or from the command line launching the 'code2text.jar' file.

Launching from '.bat' file.

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[1]`https://www.oracle.com/technetwork/java/javase/downloads/`
`jdk8-downloads-2133151.html`
[2]`https://www.oracle.com/technetwork/java/javase/downloads/`
[3]`https://www.eclipse.org/downloads/`
[4]`http://download.eclipse.org/eclipse/updates/3.8/compositeArtifacts.jar`
[5]`https://github.com/javaparser/javaparser`
[6]`https://github.com/google/guava/wiki/Release23`

1. To execute the system processing itself source code double click the 'code2text.bat' in the explorer window with the project folder open (Figure 1).
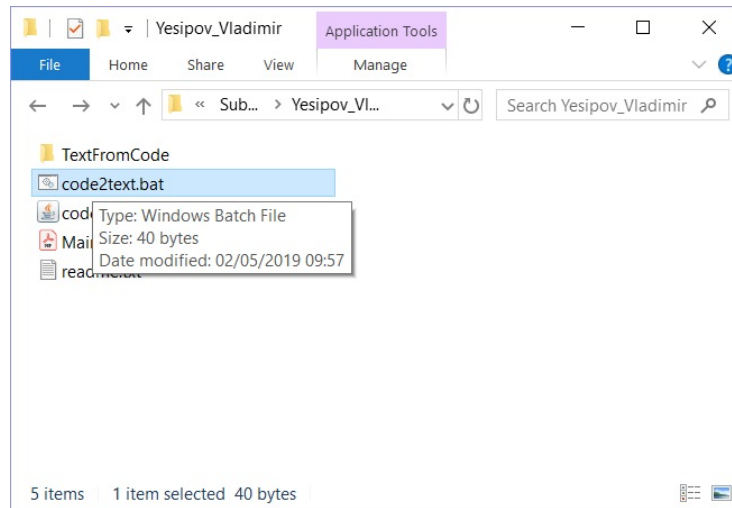

Figure 1: The 'code2text.bat' in the explorer window.

2. To execute the system on a different project source code folder you need to change the argument defined in a '.bat' file on the path to the desired project folder.

```
java -jar code2text.jar .\TextFromCode
where the <.\TextFromCode> should be changed
with the path to the desirable source code project folder.
Example:
<C:\Some Folder\Project Folder>
```

The generated text report file 'nlgtext.txt' is generated in the main project folder.

Launching from command prompt or 'PowerShell'

1. Open command prompt or 'PowerShell' window in a project folder (Figure 2).
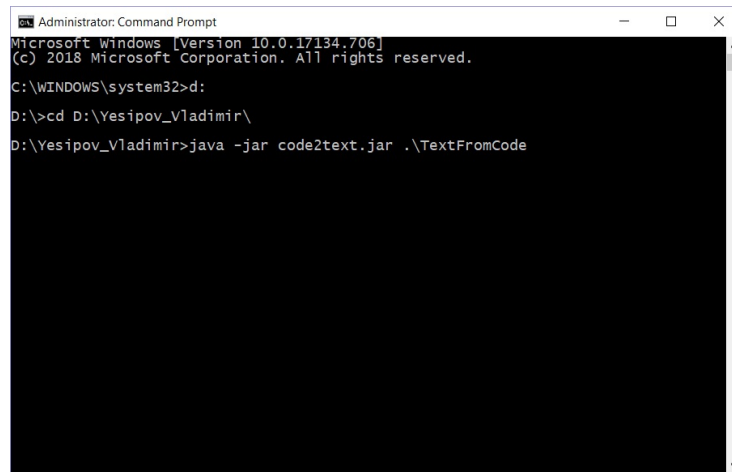
Figure 2: Launching the system from command prompt.

2. Launch the system on the project of your choice with the command:

```
java -jar code2text.jar C:\Some Folder\Project Folder
where the <C:\Some Folder\Project Folder> should be replaced
with the path to the desirable source code project folder.
```

The generated text report file 'nlgtext.txt' is generated in the main project folder.

Linux platform.

1. Open terminal window in a project folder.

2. Launch the system on the project of your choice with the command:

```
java -jar code2text.jar "C:\Some Folder\Project Folder"
where the <C:\Some Folder\Project Folder> should be replaced
with the path to the desirable source code project folder.
```

The generated text report file 'nlgtext.txt' is generated in the main project folder.

Mac Os platform. Should be able to run with the "Jar launcher" if the JDK for Mac installed. The project source code folder should be passed as an argument. Not tested as I have no access to the hardware with Mac Os. The generated text report file 'nlgtext.txt' is generated in the main project folder.

4   Installation Instructions

For installation on a Windows machine assuming that the external dependencies have been installed. Navigate to the download directory cd /foo/bar Extract the files from the archive file

```
Vladimir_Yesipov.zip
```

Run the .jar file using instructions above in section 3. For installation on a Linux machine assuming that the external dependencies have been installed. Navigate to the download directory cd /foo/bar Extract the files

```
Vladimir_Yesipov.zip
```

Run the .jar file using instructions above in section 3. The generated text report file 'nlgtext.txt' is generated in the main project folder.

5   Installation and running in Eclipse IDE

```
To run the application inside Eclipse:
Import the project into Eclipse
File->Import->"Existing Project into Workspace"
->Next
Browse to the TextFromCode directory, click ok.
Tick the Search for nested projects
Click finish.
Then Run.
```

The generated text report file 'nlgtext.txt' is generated in the main project folder.

6   Compiling from Eclipse IDE

```
To create a new runnable JAR file in the workbench:
1. From the menu bar's File menu, select Export.
2. Expand the Java node and select Runnable JAR file. Click Next.
3. In the  Opens the Runnable JAR export wizard Runnable JAR File Specification page, select
4. In the Export destination field, either type or click Browse to select a location for the
5. Select Include libraries in a jar file.
Run jar file from the command line or from bat file (Explained above).
```

The generated text report file 'nlgtext.txt' is generated in the main project folder.

7   Compilation Instruction

```
Open Eclipse.
Project->Untick build automatically.
Make sure that Eclipse knows there is Java 8 installed
Window -> Preferences -> Java -> Installed JREs
Click search
Select lib contained in /usr click OK
Eclipse will then search for Java Runtime Environments.
Tick java-8-oracle
Import the project into Eclipse:
File->Import->"Existing Projects into Workspace"
Browse to the TextFromCode directory, click ok.
In the options tick search for nested projects.
Click Finish.
Add User Libraries to Eclipse:
Windows->Preferences
Java->Build Path->User Libraries->Import
Browse to the file called libs.userlibraries in the TextFromCode folder, hit ok.
Tick all the libraries inside.
Hit OK.
This should allow you to compile the Project from Eclipse
To run the application inside Eclipse:
Import the project into Eclipse
File->Import->"Existing Project into Workspace"
->Next
Browse to the TextFromCode directory, click ok.
Tick the Search for nested projects
Click finish.
Then Run.
```

The generated text report file 'nlgtext.txt' is generated in the main project folder.

8   Files

The list of the files from software zip file:

- **"code2text.jar"** - This Java jar file is located at the main folder. This file is a runnable jar file for the project system. This file to run requires a source code directory to be pointed as an argument.

- **"code2text.bat"** - This file is located at the main folder. This file is made to run the project system from an explorer window.

- **"readme.txt"** - This file is located at the main folder. This file summarises the content of the software zip file.

- **"TextFromCode directory"** - The directory contains the Java project source code files.

- **"/src/com/textfromcode/DataModelObj.java"** - The Java class file to generate data objects from the information parsed by JavaParser.

- **"/src/com/textfromcode/DirExplorer.java"** - The Java class file to find all of the java source code files from pointed directories and sub-directories.

- **"/src/com/textfromcode/NodeIterator.java"** - The Java class file to iterate over the different 'Nodes' created by the JavaParser to parse the source code.

- **"/src/com/textfromcode/package-info.java"** - The Java file contains the information about the package automatically generated by Eclipse IDE.

- **"/src/com/textfromcode/TFCmain.java"** - The Java main file contains the parser implementation, natural language generator and flowchart generator code. Most of the flowchart generator code is commented out because the implementation of this part is not finished.