

# Table of contents:

## Items in the Folder

### System Requirements

Dependencies

### Instructions for Running the Server

### Instructions for using the CLI

CLI Examples

## Items in the Folder:

- **file-server-1.0.0.jar**: the server jar, written in SpringBoot framework.
- **cli.py**: the CLI file, written in Python3.
- **woven folder**: the source code of the file-server
- **README.pdf**: this file

## System Requirements:

The server (file-server-1.0.0.jar) and command line interface (cli.py) are compatible with both **Linux-based** and **Windows** systems.

The Spring-Boot framework was utilized to develop the server, which is written in Java, while the CLI was built with `argsparse` in Python.

## Dependencies:

The following softwares must be installed on the machine prior to running the server and command line interface:

1. Java 8:

Link for installation instructions:

<https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html>

2. Python3:

Link for installation instructions: <https://www.python.org/downloads/>

Please ensure that both Java 8 and Python 3 are installed on your machine before attempting to run the server and CLI.

You can check the version of both software to ensure both of them are installed.

## Instructions for Running the Server:

1. Locate the jar file (file-server-1.0.0.jar) and move it to the desired location for running the server.
2. Open a terminal/command prompt window and navigate to the directory where the jar file is located.
3. Execute the following command to launch the server: `java -jar file-server-1.0.0.jar`
4. Upon successful launch, you should observe the following message displayed in the terminal/command prompt:

```

  ____  __
 / ___/  / /_  __
/ /   / __/ / / /
/ /   / /_ / /_/ /
/_/   /___/_____/

:: Spring Boot ::      (v2.7.8)

2023-02-03 16:29:28.584 INFO 7798 --- [main] com.woven.file.server.Application : Starting Application using Java 1.8.0_282b08-internal on SNL0100 with PID 7798
2023-02-03 16:29:28.587 INFO 7798 --- [main] com.woven.file.server.Application : No active profile set, falling back to default profile: 'default'
2023-02-03 16:29:29.229 INFO 7798 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8080 (http)
2023-02-03 16:29:29.320 INFO 7798 --- [main] org.apache.catalina.core.StandardService : Starting service [Tomcat]
2023-02-03 16:29:29.328 INFO 7798 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.71]
2023-02-03 16:29:29.377 INFO 7798 --- [main] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2023-02-03 16:29:29.377 INFO 7798 --- [main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 749 ms
2023-02-03 16:29:29.639 INFO 7798 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) with context path ''
2023-02-03 16:29:29.647 INFO 7798 --- [main] com.woven.file.server.Application : Started Application in 1.429 seconds (JVM running for 1.771)
2023-02-03 16:29:29.848 INFO 7798 --- [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
2023-02-03 16:29:29.848 INFO 7798 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2023-02-03 16:29:29.849 INFO 7798 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 1 ms

```

This indicates that the server is up and running and ready for use.

## Instructions for using the CLI

Depending on the python installation and machine, you can run the command with "python" or "python3". The "python" will be used in this document.

Before using the CLI, please also install the `requests` dependencies:

```
pip install requests
```

To communicate with the server, run the CLI by executing `"python cli.py {command}"`. There are three available commands, each with its own flags.

You can also use `"python cli.py -h"` to see the description on the console

fs-store	Description	<p>To store a file into the file server.</p> <p>Does not support uploading multi-files at the same time.</p> <p>This command will save the file in the same directory as the file-server-1.0.0.jar (As the problem description states don't have to create directories).</p> <p>The uploaded file size can not be over 1GB.</p>	
	Flag	Flag description	
	--name (-n)	Name of the file, a string.	<b>Required</b>
	--replace (-r)	Replace existing file. When this flag appears it means to replace the existing file.	Not Required
	--file-path (-f)	The path to the file to be uploaded.	<b>Required</b>
	--server-url (-u)	The url of the server. Default value is http://localhost:8080	Not Required
fs-delete	Description	<p>To delete file(s) from the file server.</p> <p>Only support deleting a file at a time.</p>	
	Flag	Flag description	
	--name (-n)	Name of the file, a string.	<b>Required</b>
	--server-url (-u)	The url of the server. Default value is http://localhost:8080	Not Required
fs-list	Description	List the file names	
	Flag	Flag description	
	--server-url (-u)	The url of the server. Default value is http://localhost:8080	Not Required

## CLI Examples:

- To store a file to the file server

**linux-based:**

```
python cli.py fs-store -f ~/Desktop/file.txt -n file.txt
```

**Windows:**

```
python cli.py fs-store -f C:\Path\To\file.txt -n file.txt
```

potential error when uploading a file:

- "File name already exists".
- "File size is bigger than 1GB".
- "Disk space is not enough".
- "The file cannot be found" (on the CLI side)

In the Windows system, please be aware of the file extension.

- If the file name exists, to replace the existing file

```
python cli.py fs-store -r -f ~/Desktop/file.txt -n file.txt
```

- If your server is running on other machine

```
python cli.py fs-store -u http://otherdomain.com:8080 -f ./file.txt  
-n file.txt
```

- Delete a file

```
python cli.py fs-delete -n file.txt
```

potential error when deleting a file:

- "File not found".

- List file names in the directory

```
python3 cli.py fs-list
```