

# Deployment Guide



## Introduction

This document specifies the installation of the relevant softwares (Java JDK, Maven, Brew, Chrome) to run the Aramco Energy Trading Data Application which scrapes, processes and visualizes the Import/Export data of Products in India and Indonesia from 2017 onwards.

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## Windows

Step-by-step reference for Step 1 (Java) & Step 2 (Maven): <https://youtu.be/9A425SE59SQ>

### **1. Java**

- a. Go to <https://www.oracle.com/java/technologies/downloads/>.
- b. Under “Java SE Development Kit 17.0.1 downloads”, select your Operating System (Linux/macOS/Windows).
- c. Click on the x64 installer and run the program when downloaded.
- d. Approve the permission for the program to make changes to your device.
- e. Follow the instructions in the installation
- f. Optionally, to access the tutorials, API Documentation, developer guides, release notes to get started with JDK, go to <https://docs.oracle.com/en/java/javase/17/index.html>
- g. To confirm the installation, go to OS (C:) > Program Files > Java > jdk-17.0.1. This folder should contain all the files required to run Java applications.
- h. Enter the bin folder in jdk-17.0.1 and click on the folder icon at the extreme left of the directory bar

 > This PC > OS (C:) > Program Files > Java > jdk-17.0.1 > bin

- i. Copy the bin path which should look something like this: "C:\Program Files\Java\jdk-17.0.1\bin"
- j. In your Window search bar, search for "Edit the system environment variables" and open it up
- k. Click on "Environment Variables"
- l. At the bottom half of the pop-up, click on Path under System Variables and then click "Edit"
- m. Click on "New" at the top right corner and then paste the bin path which was copied in step (i)
- n. Click "OK" for all pop-ups
- o. To confirm the installation once again, type "cmd" in Windows search bar and open up the Command Prompt
- p. Type "java -version" and the version of java installed will be printed like this:


```
java version "17.0.1" 2021-10-19 LTS
Java(TM) SE Runtime Environment (build 17.0.1+12-LTS-39)
Java HotSpot(TM) 64-Bit Server VM (build 17.0.1+12-LTS-39, mixed mode, sharing)
```

(Do not worry if the exact numbers are different because different version may have been released at the time of your installation)

- q. Congratulations, you have successfully installed Java!

## 2. Maven

- a. Go to <https://maven.apache.org/download.cgi>
- b. Download the Binary zip archive
- c. Go to your Downloads folder
- d. Right click the apache maven zip file and extract all
- e. After extraction, copy the **INNER** Apache Maven folder (apache-maven-x.x.x, NOT apache-maven-x.x.x-bin) and paste into OS (C:)
- f. If permission is required, click "Continue"
- g. Open the apache-maven folder (apache-maven-x.x.x) and click on the folder icon on the top left of the directory bar

 > This PC > OS (C:) > Program Files > apache-maven-3.8.3

- h. Copy the link which should look something like this: "C:\Program Files\apache-maven-3.8.3"
- i. In your Window search bar, search for "Edit the system environment variables" and open it up
- j. Click on "Environment Variables"
- k. At the upper half of the pop-up, click "New"
- l. In the pop-up, key in "**MAVEN\_HOME**" for the Variable Name and paste the path copied in step (h)
- m. At the upper half of the pop-up, click "New" once again
- n. In the pop-up, this time key in "**M2\_HOME**" for the Variable Name and paste the path copied in step (h)
- o. At the bottom half of the pop-up, click on Path under System Variables and then click "Edit"

- p. Click on “New” at the top right corner and then paste the path which was copied in step (h) and **add in “/bin” at the end of the path**. It should look something like this: “C:\Program Files\apache-maven-3.8.3”
- q. Click “OK” for all pop-ups
- r. To confirm the installation once again, type “cmd” in Windows search bar and open up the Command Prompt
- s. Type “mvn -version” and the version of maven installed will be printed like this:

```
Apache Maven 3.8.2 (ea98e05a04480131370aa0c110b8c54cf726c06f)
Maven home: C:\Program Files\apache-maven-3.8.2-bin\apache-maven-3.8.2
Java version: 15.0.1, vendor: Oracle Corporation, runtime: C:\Program Files\jdk-15.0.1
Default locale: en_US, platform encoding: Cp1252
OS name: "windows 10", version: "10.0", arch: "amd64", family: "windows"
```

(Do not worry if the exact numbers are different because different version may have been released at the time of your installation)

- t. Congratulations, you have successfully installed Maven!

### 3. Chrome

- a. Go to [https://www.google.com/intl/en\\_us/chrome/](https://www.google.com/intl/en_us/chrome/)
- b. Click on Download Chrome
- c. If prompted, click Run or Save
- d. If saved, run the downloaded Chrome Setup
- e. When installation is complete, Chrome browser will open automatically
- f. Congratulations, you have successfully installed Chrome!

## MAC

### 1. Homebrew

- a. Go to <https://brew.sh>
- b. Copy the code under “Install Homebrew”



(It should look something like the above)

- c. Open terminal on your mac, paste and run the code
- d. It will then start to install Homebrew on your mac operating system
- e. You may be required to enter your mac operating system password to allow installation on your computer
- f. Congratulations, you have successfully installed Homebrew!

### 2. Java

- a. Open terminal and run the following command  
`$ brew tap adoptopenjdk/openjdk`
- b. Then run the following command  
`$ brew install --cask adoptopenjdk16`
- c. You may be required to enter your mac operating system password to allow installation on your computer

- d. The programme will run and install Java automatically on your mac operating system
- e. To set Java\_home Environment:  
Check if shell is bash or zsh

```
$ echo $SHELL
```

For bash shell, type the following command:

```
$ open ~/.bash_profile
```

For zsh shell, type the following command:

```
$ open ~/.zshenv
```

At the end of the .bash\_profile/.zshenv file, add the following code:

```
$ export JAVA_HOME=$(/usr/libexec/java_home)
```

Once added, save the file. Then refresh the .bash\_profile/.zshenv file in the terminal by entering the following command:

```
$ source ~/.bash_profile (for bash shell) OR
```

```
$ source ~/.zshenv (for zsh shell)
```

To check the Java\_home environment has been configured, type the following command to the terminal:

```
$ echo $JAVA_HOME
```

(Do not worry if the exact numbers are different because different version may have been released at the time of your installation)

- f. Congratulations, you have successfully installed Java!

### 3. Maven

- a. Open terminal and run the following command to install Maven  

```
$ brew install maven
```
- b. The programme will run and install Maven automatically on your Mac operating system
- c. Congratulations, you have successfully installed Maven!

### 4. Chrome

- a. Open terminal and run the following command to install the Google Chrome  

```
$ brew install --cask google-chrome
```
- b. The programme will run and install Google Chrome automatically on your Mac operating system
- c. Congratulations, you have successfully installed Google Chrome!

### 5. MongoDB

- a. Open terminal and run the following command to install Xcode  

```
$ xcode-select --install
```
- b. Then, run the following command to download official Homebrew formula for MongoDB  

```
$ brew tap mongodb/brew
```
- c. To install MongoDB, run the following command in terminal  

```
$ brew install mongodb-community@5.0
```
- d. Congratulations, you have successfully installed MongoDB!

## Run Application

1. Navigate to windows/mac folder depending on your os from the project folder root
2. Click on 'UpdateOilData' file to run the scrapers
3. After 'UpdateOilData' file has finished running, click on 'RunFrontendApp' file
4. After 'RunFrontendApp' file has finished running, enter the link <http://localhost:8080/india/monthly> on your chrome browser to view the application

You may wish to run the 'UpdateOilData' file as often as you like to update the datasets