Stock Price Monitor Installation Instructions

Database Configuration:

Database – MYSQL 5.*.*

Step 1 – Create database 'stockmonitor'

Command –

create database stockmonitor;

Step 2 – Add a user 'spm' and grant permissions to the 'stockmonitor' database

Command –

GRANT ALL PRIVILEGES ON stockmonitor. To 'spm'@'localhost' IDENTIFIED BY 'password';*

Step 3 – Create Tables

Company Table

Command –

create table company (symbol varchar(255) primary key, created datetime not null, name varchar(255) not null);

Stock_History Table

Command –

create table stock_history (symbol varchar(255), time datetime, primary key (symbol,time) , stock_price double not null, FOREIGN KEY (symbol) REFERENCES company (symbol) ON DELETE CASCADE);

Application Installation

Maven Tomcat Integration

Tomcat Authentication

Tomcat version 7 or 8

The below configuration will work for both Tomcat 7 and 8

Add a user with **roles manager-gui** and **manager-script**.

```
%TOMCAT7_PATH%/conf/tomcat-users.xml

<?xml version='1.0' encoding='utf-8'?>
<tomcat-users>

    <role rolename="manager-gui"/>
    <role rolename="manager-script"/>
    <user username="admin" password="password" roles="manager-gui,manager-script" />

</tomcat-users>
```

Maven Authentication
Maven version – 3.*

Add above Tomcat's user in the Maven setting file, later Maven will use this user to login Tomcat server.

```
%MAVEN_PATH%/conf/settings.xml

<?xml version="1.0" encoding="UTF-8"?>
<settings ...>
    <servers>

        <server>
            <id>TomcatServer</id>
            <username>admin</username>
            <password>password</password>
        </server>

    </servers>
</settings>
```

Build and Deploy

Using maven

Download source code –

Command - git clone https://github.com/suprajkolluri/StockPriceMonitor.git

Deploying Stock Price Monitor Web

cd StockPriceMonitor/StockPriceMonitorWeb

mvn clean package tomcat7:run-war -Denv=dev

The above command will automatically build the war and deploy it on Tomcat.

Note – The application will run every 5 minutes only from 9 am to 4 pm every week day since the stock markets are open only during these timings

Also the application will be deployed at /StockPriceMonitor.

Example end point - http://localhost:8080/StockPriceMonitor/rest/companies/

Deploying Stock Price Monitor Web

cd StockPriceMonitor /StockPriceMonitorBatch

mvn clean package exec:java -Denv=dev

The above command will start the batch job and start a task every 5 minutes that will insert stock information into the Database.
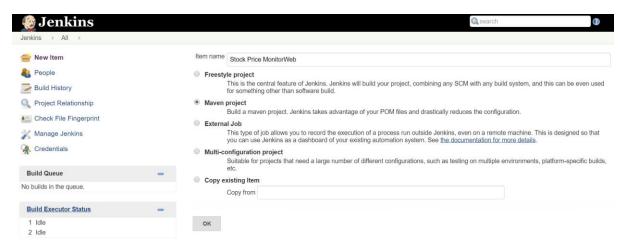
Using Jenkins CI (Optional)

Download jenkins.war from https://jenkins.io/

Deploy Jenkins on tomcat and start the server (Make sure this is the same server used for deploying the Stock Monitor Web Application).

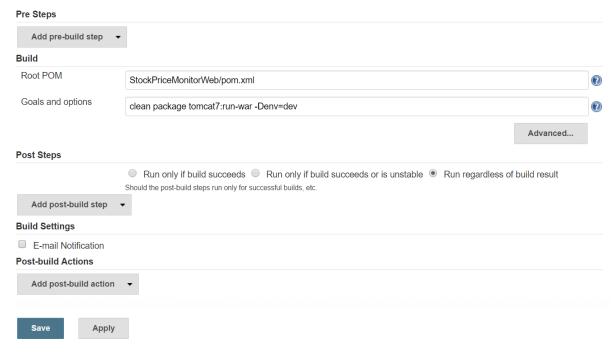**Create a Poll SCM job for Stock Price Monitor Web**

This job will poll the github URL every minute and whenever a change is committed to the master branch, the job will automatically build and deploy the application to Tomcat

Click on 'New Item'

Click 'OK' and fill the following information

Maven project name	Stock Price Monitor Web

Description

[Plain text] Preview

☐ Discard Old Builds   ❓

☐ This build is parameterized   ❓

☐ Disable Build (No new builds will be executed until the project is re-enabled.)   ❓

☐ Execute concurrent builds if necessary   ❓

Advanced Project Options

[Advanced...]

Source Code Management

○ None
○ CVS
○ CVS Projectset
● Git

Repositories

Repository URL	https://github.com/suprajkolluri/StockPriceMonitor	❓
Credentials	- none - ▼ 🔑 Add	

Branches to build

Branch Specifier (blank for 'any')	*/master	❓

[Add Branch]   [Delete Branch]

Repository browser   (Auto)   ▼   ❓

Additional Behaviours   [Add ▼]

○ Subversion

Build Triggers

☐ Build whenever a SNAPSHOT dependency is built   ❓

☐ Build after other projects are built   ❓

☐ Build periodically   ❓

☑ Poll SCM   ❓

Schedule

```
* * * * *
```
❓

Pre Steps

Add pre-build step ▼

Build

Root POM   StockPriceMonitorWeb/pom.xml ②

Goals and options   clean package tomcat7:run-war -Denv=dev ②

Advanced...

Post Steps

○ Run only if build succeeds ○ Run only if build succeeds or is unstable ● Run regardless of build result
Should the post-build steps run only for successful builds, etc.

Add post-build step ▼

Build Settings

☐ E-mail Notification

Post-build Actions

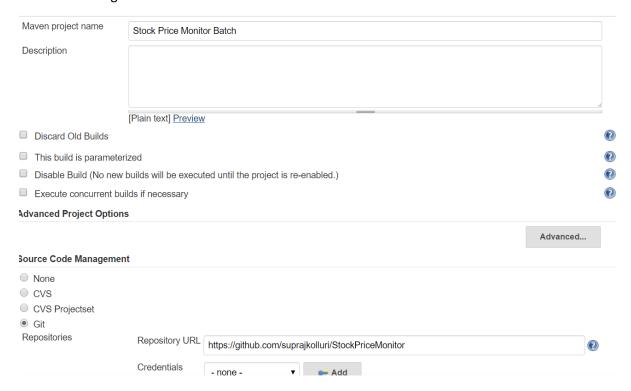Add post-build action ▼

Save   Apply

Click on 'Save'

Create a Poll SCM job for Stock Price Monitor Batch

This job will poll the github every minute and if a change is committed on master the job will automatically build the project and start the Batch Job Task

Fill the following information

Maven project name   Stock Price Monitor Batch

Description

[Plain text] Preview

☐ Discard Old Builds ②

☐ This build is parameterized ②

☐ Disable Build (No new builds will be executed until the project is re-enabled.) ②

☐ Execute concurrent builds if necessary ②

Advanced Project Options

Advanced...

Source Code Management

○ None
○ CVS
○ CVS Projectset
● Git
Repositories

Repository URL   https://github.com/suprajkolluri/StockPriceMonitor ②

Credentials   - none - ▼   🔷 Add

Branches to build   Branch Specifier (blank for 'any')   */master

Add Branch   Delete Branch

Repository browser   (Auto)

Additional Behaviours   Add

◯ Subversion

Build Triggers

☐ Build whenever a SNAPSHOT dependency is built

☐ Build after other projects are built

☐ Build periodically

☑ Poll SCM

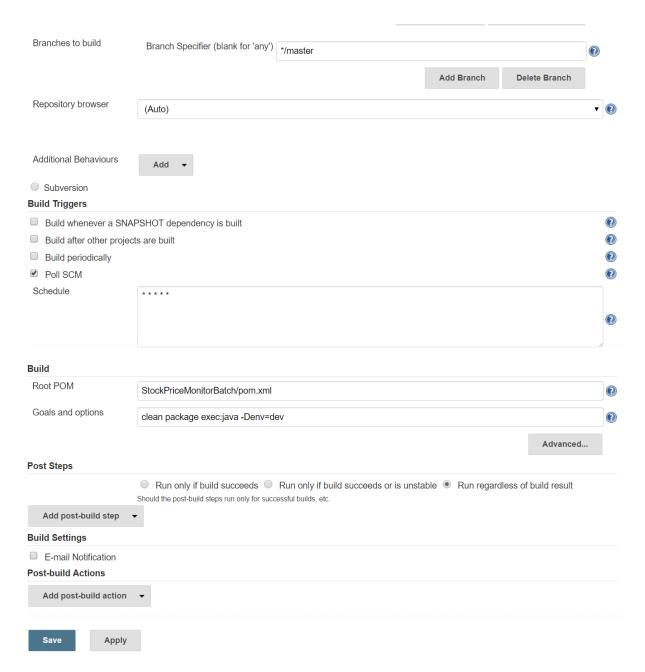Schedule   * * * * *

Build

Root POM   StockPriceMonitorBatch/pom.xml

Goals and options   clean package exec:java -Denv=dev

Advanced...

Post Steps

◯ Run only if build succeeds   ◯ Run only if build succeeds or is unstable   ⦿ Run regardless of build result
Should the post-build steps run only for successful builds, etc.

Add post-build step

Build Settings

☐ E-mail Notification

Post-build Actions

Add post-build action

Save   Apply

Click 'Save'

Now we have 2 jenkins poll SCM jobs which will be built and deployed automatically on every commit to the master branch on GIT