**SET UP FOR PARALLEL EXECUTION USING JUNIT IN CUCMBER**

1. Add the **Surefire plugin configuration** to the build section to the POM

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-surefire-plugin</artifactId>

<version>2.22.0</version>

<configuration>

<parallel>methods</parallel>

<useUnlimitedThreads>true</useUnlimitedThreads>

</configuration>

</plugin>

* **2.** To execute using a Maven **Failsafe plugin include the below configuration** in the build section to the POM. Rename the runner class to RunCucumberIT. You can find further details [here](https://cucumber.io/docs/community/not-cucumber/#maven-execution-plugin).
* <plugin>
* <groupId>org.apache.maven.plugins</groupId>
* <artifactId>maven-failsafe-plugin</artifactId>
* <version>2.22.0</version>
* <executions>
* <execution>
* <goals>
* <goal>integration-test</goal>
* <goal>verify</goal>
* </goals>
* <configuration>
* <parallel>methods</parallel>
* <useUnlimitedThreads>true</useUnlimitedThreads>
* </configuration>
* </execution>
* </executions>
* </plugin>
* To set the thread count to a **specific number** instead of useUnlimitedThreads use the below setting.
* <configuration>
* <parallel>methods</parallel>
* <threadCount>4</threadCount>
* </configuration>

**Timeline Formatter**

For a **visual representation** of threads, add the **timeline report** using the plugin option of CucumberOptions annotation on a JUnit or TestNG runner.

@CucumberOptions(plugin= {"timeline:<report folder>"})

**Then in Command Prompt change the directory to the directory of the Main Project. Then Execute mvn verify.**

**SET UP FOR PARALLEL EXECUTION USING SPARK REPORT &PDF REPORT**

1. **Create extent.properties file under the src/test/resources with the following details**

extent.reporter.spark.start=true

extent.reporter.spark.out=test-output/SparkReport/LMSSpark.html

extent.reporter.spark.config=src/test/resources/extent-config.xml

extent.reporter.spark.out=test-output/SparkReport

screenshot.dir=test-output/Screenshots

screenshot.rel.path=../

extent.reporter.pdf.start=true

extent.reporter.pdf.out=test-output/PDFReport/LMSExtentPDF.pdf

extent.reporter.spark.vieworder=dashboard,test,category,exception,author,device

systeminfo.os=Window

1. **Create extent-config.xml under the src/test/resources with the following details**

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

<extentreports>

<configuration>

<!-- report theme --> <!-- standard, dark -->

<theme>standard</theme>

<!-- document encoding --> <!-- defaults to UTF-8 -->

<encoding>UTF-8</encoding>

<!-- protocol for script and stylesheets --> <!-- defaults to https -->

<protocol>https</protocol>

<!-- title of the document -->

<documentTitle>LMS\_API - Cucumber Framework</documentTitle>

<!-- report name - displayed at top-nav -->

<reportName>LMS\_API - Cucumber Report</reportName>

<!-- global date format override --> <!-- defaults to yyyy-MM-dd -->

<dateFormat>yyyy-MM-dd</dateFormat>

<!-- global time format override --> <!-- defaults to HH:mm:ss -->

<timeFormat>HH:mm:ss</timeFormat>

<!-- custom javascript -->

<scripts>

<![CDATA[

$(document).ready(function() {

});

]]>

</scripts>

<!-- custom styles -->

<styles>

<![CDATA[

]]>

</styles>

</configuration>

</extentreports>

1. **In the runner file add the following lines in the plugin section**

plugin = {"pretty","com.aventstack.extentreports.cucumber.adapter.ExtentCucumberAdapter:"}