

3. Second plugin is **maven-surefire-plugin**

this plugin executes tests in parallel. in this plugin configuration, we indicate which runner files we want to run. we can also indicate how many simultaneous tests we want to run.

```
<include>**/runners/*TestRunner*.java</include>. → plugin will run these files  
<threadCount>10</threadCount> → this shows how many browsers we want to have in at the same time.  
<parallel>classes</parallel> → this line tells that cukes runner classes must run in parallel
```

We created cukes runner files based on how many tests we want to run and how we want to break down tests.
Each cukes runner will point to certain set up scenarios/feature files

How to run?

- we can execute tests in parallel in our framework only by running tests as a maven command
- **mvn verify** → this will run the tests and generate reports
- **mvn clean verify** → it will first delete the target folder, then runs tests, then generate reports

Benefits of parallelization:

- cuts down on the execution time. UI tests usually take a long time, especially in regression testing.

Challenges of parallelization?

- hard to implement --> not easy to do.
- load --> if we open too many instances in the same machine, it can overload the machine. it will result in tests running slow, and it increases the fail rate.
- this can addressed by running tests in different machines using GRID.
- certain tests cases did not work in parallel in my project.