**What this project dose??**

This project demonstrates basic structure and flow of Strutrs2 application created using maven.

It accepts two numbers along with numeric operation that has to perform on these numbers through index.jsp page and as per inputs it performs the operation and displays the result through sussecc.jsp page. During this operation it also achieves interceptor functionality, exception handling, field validation and logging.

Functionalities in this project in details are as follows :

1. Strutrs2 interceptor functionality.

Here we have created user defined interceptor viz. com.javaLive.interceptors.SimpleInterceptor.java it simply adds comments to console and to log file before and after completion of user request. Along with user defined interceptors we have Struts in built interceptors viz. default stack, logger, timer etc.

Please carefully go through all these interceptor mapping in struts.xml file and their working.

2. Strutrs2 exception handling.

Struts handle exception in two ways:

a) Business level exception handled with result tag in struts.xml file having corresponding .jsp page

b) Java exception handle again in two ways

i) Application level mapping with <global-exception-mappings> tag in struts.xml file which in common to all application.

ii) Page level mapping with <exception-mapping sub-tag under <action> tag

In order to study these functionalities, please carefully go through struts.xml file

3. Strutrs2 field validation functionality.

Validation works in two ways

i) declare these fields in respective action class with access specifier private and define getter and setter for them.(We define num1, num2 and result in class NumericAction.java)

ii) define validate method in above action class under it handle the validation with method addFieldError(). Study com.javaLive.action.NumericAction.java class's fields and validate method for more details.

4. Logging in Struts2

We have used SLF4J and Log4J logging frameworks in this project.

Study log4j.properties file in resources folder to get the configuration of logging.

We have logged message from SimpleInterceptor to log file along with inbuilt messages from inbuilt interceptor viz. logger, timer etc.

Also go through following line in log4j.properties file

log4j.appender.Appender2.File=${catalina.home}/logs/StrutsNumericActionWithExceptionHandlling.log

Above is very important property which stores log file in log folder of underlying Tomcat server's log folder.

As we have mention the location accordingly. This is also very useful in production environment.

**How to create this project??**

a) This is maven web project.

(Please refer 'CreateMavenWebProjectWithEclipse.docx' file to get idea about creating such project.)

b) Add require maven dependencies

c) Create and place packages and files in the respective locations and shown. Pay special attention to jsp folder in src/main/webapp folder, **struts.xml file in src/main/resources(\*\*this is strurs2 configuration file), com.javaLive.action.NumericAction.java( this is struts controller file), com.javaLive.interceptors.** **SimpleInterceptor.java(which is struts interceptor file).**

**d)Please pay special attention to web.xml file where struts2 functionality is achieved through filter tag. This is the entry point of whole application.**

**e) Study struts.xml file very well where actions and interceptors are mapped.**

f) log4j.xml file under src/main/resorces