Exception Handling in Servlet and JSP -----Status code 500 404 Exception description !!! EXCEPTION should be presented to the USER in a USER FRIENDLY WAY Servlets and in JSPs ----two ways to handle the exception...Servlet and JSP We can write separate classes to PRESENT Exceptions if we are going to give exception name in web.xml mapping then write a block of exception-type WEB APPLICATION problems -----or if we are going to give error code in web.xml then Are expressed in two ways ---write error-code block 2. Exception classes in Java --- SQLException , NumberFormatException We can CONFIGURE our application = WEB CONTEXT <web-app> }}}}}}}}thistifithis represents ONE context </web-app> http://localhost:8080/ExceptionHandlingExample/Servlet1?V1=33 JSP We have already used the PAGE DIRECTIVE For import !!! We can use It also for ERROR PAGE HW ---0 --- Try the ExceptionHandling example given in class !! 1. Exception Handling using ONLY JSP error Page Write a JSP that accepts a number from user and shows its SQUARE value Enter a num: tf (type=text) Show---button----submit---- action is same page SQUARE = pick the value from tf, parse Int and show the SQUARE If there is a non number then exception is thrown!!! In the PAGE directive add errorPage=error.jsp isErrorPage="false"

Then write error.jsp (page directive isErrorPage="true")--- print the problem in a user

```
friendly way
      Also print the IMPLICIT object exception !!!
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2. Exception Handling using Error codes!!
          In the web.xml add for 404 and 500
           <error-page>
                  <error-code>404</error-code>
                  <location>/ehandler1</location>
           </error-page>
           <error-page>
                  <error-code>500</error-code>
                  <location>/ehandler2</location>
           </error-page>
```

Write 2 servlets with url pattern as ehandler1 and ehandler2 respectively

In those servlets print the error codes and explain the problem in user friendly way

Write a servlet TestServlet

Accept a string from user in url directly Show the string in uppercase

If the user does not give the string then 500 handler should be invoked

Give a wrong servlet name in the URL, then the 400 handler should be invoked

WE CAN FORWARD THE EXCEPTIONS OR ERRORS to our own PAGES /Servlets instead of letting the browser show the exceptions

EL ==== Expression Language in JSP

```
There are SCOPES for variables in JSP ------
                                                                   pageContext.setAttribute(key, value);
                   page = VARIABLE is alive only for that page
                   request = VARIABLE is alive as long as request is alive request.setAttribute(key, value);
<%pageContext.getAttribute("key")%>;
                  Browser ------REQ1----->first.jsp -----forward REQ1 ---->error.jsp
<%application.getAttribute("key")%>;
                                                                                       sessionsetAttribute(key, value);
                   session = Variable is alive till session is going on and it is not invalidated!!!
                        MULTIPLE requests between Login and Logout
                   application (ServletContext) = Variable is alive till the WEB Context is not Undeployed !!!
                                                                                       application.setAttribute(key, value);
```

HW ---- try out the ex1.jsp and ex2.jsp as discussed in class !!!

To view variable values another syntax is available -----EL syntax

below is shortcut method to retrive attribute that is its option only fot get attribute set attribute can only done in above way EL = purpose is to give easy access of different scope variables in a short hand syntax

\${ property name } === for seeing request level variable

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${ pageScope.propertyName }
      ${ applicationScope.propertyName }
      ${ sessionScope.propertyName }
JSTL = Java Standard Tag Library
                                                   add jstl jar file to build path and lib folder
TAGS ?? <b> <input> ......HTML
            HTML tags are processed by browser (client side)
CUSTOM Tags that are predefined for JSP also !!!!
            JSP custom tags are processed by JSP compiler on server side
            All the JSTL tags are available in jstl1.2.jar file --- add this to our
                  Build path
                  Web-Inf
                        Lib
                          jstl1.2.jar
HW ---
Create a JSP that accepts a name in the textfield
      Add button --- submit --- same jsp ---- add the name to an arraylist using scriplet
      Print all the names using EL and JSTL foreach tag
            If (JSTL if ) the length of the name is less than 5 print that name in uppercase
                  Print other names in lowercase
Hibernate -----
      ORM = Object Relational Mapping !!!!!
      Java Programmer NEED not deal with tables and SQLs
                      is DECOUPLED from tables and SQLs
                      works with Java objects
                                    ORM
                                    SQLs
                                    TABLES
```

Java Programmer	ORM
Class	Table
Property of class	Table column
Instance of class	INSERT row in table
Change the property of the object	Update row in table

Remove/delete API	Delete row in table
findAll	Select queries

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