

# JSP Version of the Quiz Servlet Lab

PURPOSE of this Lab:

- Solidify concepts of JSP
- Some hands-on practice with basic JSP functionality in order to make the JSP concepts concrete and memorable
- Gives experience with Model 2 web architecture
  - I.e., have a servlet that dispenses views to various jsp pages
  - Have a business model written in POJOs, separate from the controller servlet

ACTIVITIES of this Lab:

1. Rewrite the Intro to Servlets Quiz Lab using JSP. Your servlet must not have any *out.print* statements!
2. Add a hint button that will give the user a brief hint about the sequence. For an example of how your program should behave see <http://argon.cs.mum.edu/JSPintroQuizLab>
3. Add an input text field at the top of the form for the user to enter their age. Your servlet should convert and validate the value they enter. It should be converted to an integer. If it cannot be converted, then you should catch the exception. In the exception handler you should send back the page with a message that this field is required, and they must enter an integer. You should also validate that the number is between 4 and 100. Otherwise, send back the page with a message instructing that the number must be within this range. Your Servlet should insert the number into the field with each response, so the user does not have to enter it more than once.
4. Extend the functionality of your program to allow the user only three tries at each question. If the question is answered correctly on the first try, the score is increased by 10 points and the next question is displayed. If it is answered correctly on the second try, the score is incremented by 5 points and the next question is displayed. If it is answered correctly on the third try the score is incremented by 2 points and the next question is displayed. Otherwise, give the user the answer and display the next question. When the user has seen all questions, display a page informing him/her that the quiz is over and display the final grade in **red**. The final grade is computed as follows from the score:

1. A if score is between 45 and 50 inclusive
2. B if score is between 35 and 44 inclusive
3. C if score is between 25 and 34 inclusive
4. NC if the score is less than 25