This assignment was locked May 1 at 11:59pm.

You have your choice. If you want to learn web-based programming, install Jakarta tomcat and write a JSP page to display a webpage with a form that implements a web calculator for wire resistance.

You will need a dropdown list (SELECT in HTML, see: [https://www.w3schools.com/tags/tag\_select.asp (Links to an external site.)](https://www.w3schools.com/tags/tag_select.asp)) which will give you the resistivity of the material.

You will also need fields for length of the wire and cross-sectional area of the wire.

resistance = resitivity \* L / A

When the submit button is pressed, compute the answer. I recommend output to the same form so the user can just select different results and click again.

If you do not wish to tackle a new subject, build exactly the same thing in Swing. You will need a JList:  
String[] mat = {"copper", "tungsten", "aluminum"};  
JList material = new JList(mat);

In order to determine the resistivity, create a hash table where the key is the material name, and the value is the corresponding number.  
  
HashMap<String, Double> resistivityByName;

once you create the hash map, you will be able to get the number  
  
double resistivity = resistivityByName.get("copper");

Again when the user clicks the calculator should display the resistance of the wire.

The file will obviously depend on whether you write java code or jsp

