

GWT Exercises: GWT-RPC

Make a new Google Web Application Project called “ExercisesGwtRpc” (or some such -- my solution set is called GwtRpcExercises). Even though you are now going to do some server-side coding, you can still delete the classes out of the .server package and delete the shared package altogether. Don’t forget to edit/erase the web.xml entries that refer to the GWT-RPC classes that you deleted.

1. Designate 3 areas in your host HTML page. In each area, have a div with id: “get-richest”, “get-poorest”, and “redistribute” respectively.
2. Create Customer class (under .client) that has integer id, first name, last name, and double balance. Create setters and getters for that class. Don’t forget to have it implement Serializable and to have a zero-arg constructor defined.
3. Create a BankService with 3 methods: Customer getRichestCustomer(), Customer getPoorestCustomer, and List<Customer> redistribute(int custId1, int custId2). In the server-side implementation, create a static list of customers as your “persistent” data to draw from. Implement the methods. The redistribute method should find the customers with the given IDs, find the average of their balance and set both customer balances to the average. Then, return those 2 “lucky” customers as your return List<Customer>.
4. On the client, for the “get-richest”, have a button that once clicked, shows you the information of the richest customer (highest balance) in an HTML region next to the button. You can write a quick toString method on the Customer object for that. Once you get an instance of the richest customer from the server, store it in an instance variable for later use.
5. On the client, for the “get-poorest”, do the same thing you did in #4 for the poorest. Once you get an instance of the poorest customer from the server, store it in an instance variable for later.
6. In the redistribute region, put a button called “Redistribute” and an HTML area next to the button, similar to other 2 regions. When the user clicks on the button, grab the IDs of the previously stored richest and poorest customers and call the server “redistribute” method on them. The return will be a List of both customers with a “new” balance. Display the information about those 2 lucky guys in the HTML area next to the button.
7. Bonus I. Validate that user first clicked “Get Richest” AND “Get Poorest”, so you don’t get NullPointerExceptions when you click the “Redistribute” button.
8. Bonus II. Keep continuously clicking “Get Richest”, “Get Poorest”, “Redistribute” to see what happens!