Dynamic Calculator

We first have to start the webserver which listens to the client on port 23657. A dynamic calculator with UI is the client in our case. When we start the dynamic calculator, It presents us with a user interface with three editable fields.
1. First Operant
2. Second Operant
3. Operator symbol

The dynamic calculator starts with initializing the loading operation class by establishing a connection to the server. The host and port number are loaded from the configuration file. The relevant error message is shown if there is an error while connecting with the server. The default value for the operand is loaded with "0" and operator with "+".

Once we enter values for operand and operator then, the following process occurs.
1. First, In the dynamic calculator, the value for the operand and operator field is checked. If the operand is not a number, then an error message is shown to correct the input format. Similarly, If we enter a wrong operator other than +, -, * and /, It will show us an error about the result not being implemented.
2. The operator loader will load the class associated with the operation string. If the operator class is not in the cache then It will request the server. Server will send the operation class file to it. The find class function loads the class associated with the name and returns the class. The object of the operator class is created and the operands are passed to the calculation function. Once the operation is done it is saved in the cache.
3. The operation object is loaded based on the value of the operation. If the operation classes are already located in the cache, the operation is loaded from the cache. For example: Suppose we perform an addition operation. If we again perform another addition operation with different operands then, the operation object will be loaded from the cache.
4. The mathematical operation for the operand is calculated by using the operation object.
5. The Addition, Division, Multiplication and Subtraction Operation object performs the respective mathematical calculation.
6. The result is displayed in the GUI.