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<https://hackumass-iv.devpost.com/submissions>

<https://www.cs.cmu.edu/~112/gallery.html>

<http://codegolf.stackexchange.com/questions/8728/balance-chemical-equations>

Project Description:

Tasks:

Parse input - Justin

Balance equation - Shania

Find database with common chemical reactions:

<http://webbook.nist.gov/chemistry/form-ser.html> - Database of Molecules

<http://webbook.nist.gov/chemistry/reac-ser.html> - Database of reactions, outputs formula images w/ mouseover text

<http://www.chemspider.com/> - good website for chemical structures

<http://www.rhea-db.org/> - hard to use

<http://kinetics.nist.gov/kinetics/index.jsp> - Impossible to use

Input:

Full Reaction

Reactants/Products

Single Molecule (shows formation/decomposition)

Single Element?

Output:

What it is:

* Finds the type of reaction
  + Redox, double replacement, etc.
  + Balanced equation
  + Different forms of reaction of they exist (for aqueous solutions and multi-part reactions)
* Visualization

What’s involved in the reaction:

* molecules, ions, elements in reaction
* Properties of components of the reaction: soluble, insoluble, activity series, pH, heat of formation, entropy of formation, etc.

How to solve for “x” in equation:

* Stoichiometric Equation for reaction
* Solubility constants and equations for aqueous solutions
* General solubility of each

Select application of the chemical reaction:

-want to balance

-stoichiometry

-visualization