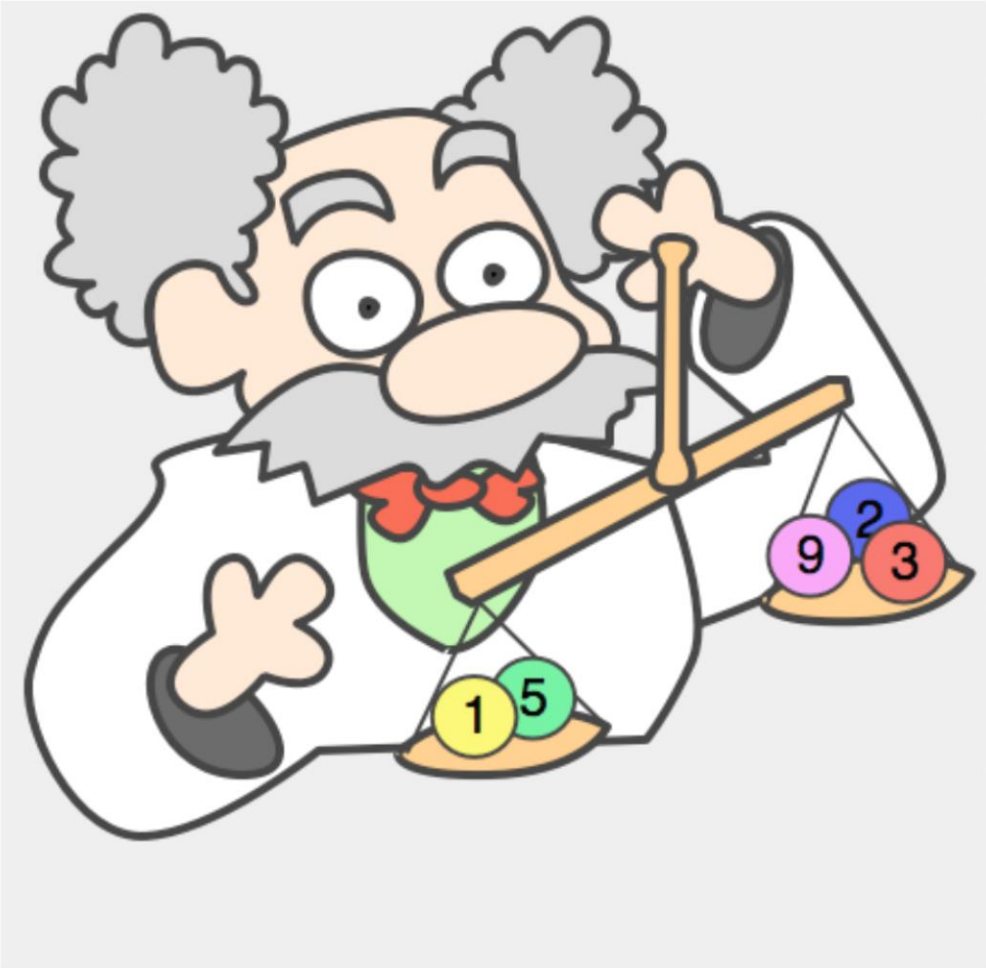


Intelligent Tutoring System

COSC420 ASSIGNMENT-3REPORT

Mihir Dhanani | Tutor based on Aspire | June 4, 2014

Tutoring System developed using Aspire.

The Tutor created is balancing chemical equation.

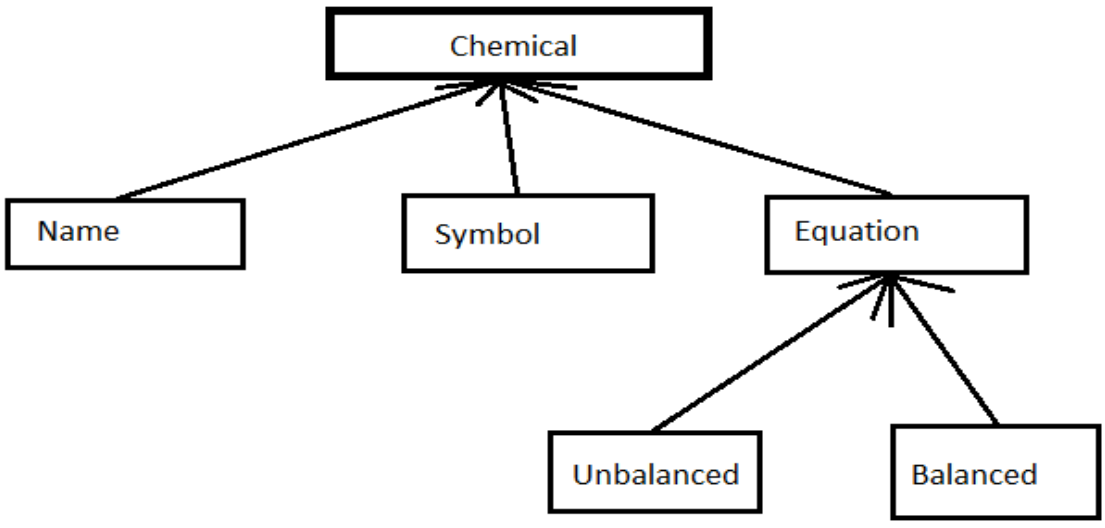
The steps involved in developing a tutor are

- Modelling the domain structure
- Developing the ontology
- Defining the structure of problems and solutions
- Adding problems and solutions
- Designing the student interface
- Generating syntax constraints
- Generating semantic constraints
- Deploying the created tutor

The domain type is procedural and has two steps.

1. Input the Left and Right side of the equation.
2. Balance the output of the atoms.

The Domain Ontology for the tutor is



The approach to develop the system was to have procedural type so it's simpler in that manner.

The Chemical in the ontology has the attribute of left and right, which is used for dividing the equation in two.

The user is asked to write the equation for this left and right and then directed to the next page for writing their output which is then matched to the solution provided. Feedback and hints are provided based on the inputs as required.

The learning factor in this is that we could develop tutoring systems and understand the steps involved for each stage involved in order to make a tutor, which in turn is required to develop a more complex tutor.

Aspire Generates semantics and syntax constraints based on the structure designed, which is very efficient.

It provides feedback based on the constraints created.

The main outcome of this is that tutoring systems can be created quick and easy because of authoring tools like aspire.