CAS 741: Problem Statement
Mass-Mass Stoichiometry Problem

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Table 1: Revision History

Date	Developer(s)	Change
16/09/2019	Deemah Alomair	Describing the problem statement
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Chemical Stoichiometry is an important aspect of chemistry. It describes the relationship between chemical reactants and products in any chemical reaction. In real life , Chemical Stoichiometry is used for many purposes and serves many real life applications. like battery cells, in corrosion of House painting, amount of water pollution. However, One of most known problem in this field is to find a mass for any reactant. known as "Mass-Mass Stoichiometry Problem".

The mass of any reactant is the main stone for many applications. Solving this problem can be done manually by any chemist , but getting the desired result (reactant mass) is not a single step. It needs to go through several steps. This consumes time , and effort especially if we have bunch of chemical reactions to solve. In addition, automatic program gives more accurate result than the manual method. Having a program that automate all needed steps to get the reactant mass is necessary.

The program needs to convert unbalanced equation to balanced one as first stage by applying "Law of Conservation of Mass in Chemistry". Then use the given mass of other reactant to get the amount of mole using mole-to-mass conversions. Using the known molar ratio of known reactant we can get the mole quantity for unknown reactant . Finally, use this mole to get the amount of reactant mass using the mole-to-mass conversions of that substance.

The environment of software is MacOS. The programming language will be used is undecidable yet. However, it will be either C++ or Python programming language.

The Stakeholders of the project are:

1. Chemist or chemical students.

2. Any one has an interest in chemistry.

3. Application developers who need to get the mass of the reactant as a requirement of their application.