Arithmetic Operations

a. Implement basic integer arithmetic on numbers.

b. Extend the integer algorithms that work with arbitrary precision real numbers.

Additional Points:

1. It would help to use the vector class that is available in C++ STL (Standard Template Library) as the base class for your implementation.
2. Part B is not as difficult as it sounds – the underlying data structure will still be an array (vector in C++); you only need to keep track of how big the fractional part is. All arithmetic can be done by treating the numbers as integers and adjusting for the fractional part at the end.

Requirements:

1.Analyzing requirements:

Identify the key functionalities (arithmetic operations) which your team will implement. Try to keep it generalized.

eg. Numbers are represented in some (configurable) base B — assume that B is of the form 2^m for some m.

2. Prioritizing the requirements:

Identify the priority of all the mentioned requirements.

3. Realizing NFRs:

eg. Latency will be an important aspect while implementing the arithmetic operations.