

# SOEN 6011 Project - Calculato-F3

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## 1 Requirements

### 1.1

ID: REQ-1

Type : Functional Requirement

Priority: 1 ( 1- Highest, 5 - Lowest )

Description: if the user provides input of real number  $x$ , the system should calculate and display the hyperbolic sine value for the given input.

### 1.2

ID: REQ-2

Type : Functional Requirement

Priority: 1 ( 1- Highest, 5 - Lowest )

Description: if the user provides input other than a number, such as special character or alphabet then function should not produce any value.

## 2 Assumptions

### 2.1

ID: ASSUMPTION-1

Description: Mathematically hyperbolic sine function has a domain of all possible real numbers. As function will be implemented on the computer using java as a programming language, there is a limitation on user input because of the datatype.  $+1.79769313486231570E+308$  is the maximum input number that the user can provide and  $-1.79769313486231570E+308$  is the minimum number that the user can provide.

### 2.2

ID: ASSUMPTION-2

Description: As the user can provide decimal numbers as input, there is a limitation on the number of decimal points considered for the calculation due to the data type used. First 10 decimal points will be considered as a significant decimal point

## References

- [1] <http://www.mathcentre.ac.uk/resources/workbooks/mathcentre/hyperbolicfunctions.pdf>
- [2] [https://www.analyzemath.com/DomainRange/domain\\_range\\_functions.html](https://www.analyzemath.com/DomainRange/domain_range_functions.html)
- [3] <http://functions.wolfram.com/ElementaryFunctions/Sinh/04/>