

Problem 2: Requirements Specification

Saraswati Saud
Student ID: 40115097

1 Introduction

1.1 Definitions and Abbreviations

Terms	Definitions
FR	Functional Requirement
NFR	Non-Functional Requirement
User	Someone who interacts with the system
System	Software Program for calculation of Gamma Function

1.2 Constraints and Assumptions

- User should provide input for 'x'.
- Based on the function characteristics, the value of 'x' should either be positive integer or half-integer value.
- The input value cannot be 0.

2 Requirements

2.1 Functional Requirements

ID	FR1
Type	Functional
Owner	Saraswati
Description	System should prompt the user to enter the value of 'x'
Rationale	To get user input and start calculation

ID	FR2
Type	Functional
Owner	Saraswati
Description	System should display an error message when entered value is not a number
Rationale	For calculations, input should be numbers only

ID	FR3
Type	Functional
Owner	Saraswati
Description	System should display an error message if a user entered negative, zero or positive non-
Rationale	For calculations, input should only be positive integer or half-integer value

ID	FR4
Type	Functional
Owner	Saraswati
Description	User should have an option to exit the program anytime during the use
Rationale	If user is done with the calculations

2.2 Non-Functional Requirements

ID	NFR1
Type	Non-Functional
Owner	Saraswati
Description	The error message displayed should be appropriate and helpful for the user.
Rationale	User should be able to know what went wrong

ID	NFR2
Type	Non-Functional
Owner	Saraswati
Description	The text-based interface should be user friendly
Rationale	It should be easy for the user to use the system

ID	NFR3
Type	Non-Functional
Owner	Saraswati
Description	The displayed result should be as accurate as possible
Rationale	Incorrect output should not be displayed

ID	NFR4
Type	Non-Functional
Owner	Saraswati
Description	Calculation time should be less than 1 second
Rationale	Waiting a long time for the output might not be desired for the user