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.

- The output will always be a positive decimal.

2 Requirements

2.1 Functional Requirements

ID:	FR1
TYPE:	Functional
VERSION:	1.0
DIFFICULTY:	Easy
PRIORITY:	1
OWNER:	Saraswati Saud
DESCRIPTION:	System should prompt the user to enter the value of 'x'.
RATIONALE:	To get user input and start calculation.

ID:	FR2
TYPE:	Functional
VERSION:	1.0
DIFFICULTY:	Medium
PRIORITY:	2
OWNER:	Saraswati Saud
DESCRIPTION:	System should display an error message when entered value is not a number.
RATIONALE:	For calculations, input should only be numbers.

ID:	FR3
TYPE:	Functional
VERSION:	1.0
DIFFICULTY:	Difficult
PRIORITY:	1
OWNER:	Saraswati Saud
DESCRIPTION:	System should display an error message if a user entered negative, zero or positive non-half integer.
RATIONALE:	For calculations, input should only be positive integer or half-integer value.

ID:	FR4
TYPE:	Functional
VERSION:	1.0
DIFFICULTY:	Easy
PRIORITY:	3
OWNER:	Saraswati Saud
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
VERSION:	1.0
DIFFICULTY:	Medium
PRIORITY:	2
OWNER:	Saraswati Saud
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
VERSION:	1.0
DIFFICULTY:	Easy
PRIORITY:	3
OWNER:	Saraswati Saud
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
VERSION:	1.0
DIFFICULTY:	Medium
PRIORITY:	2
OWNER:	Saraswati Saud
DESCRIPTION:	The displayed result should be as accurate as possible.
RATIONALE:	Incorrect output should not be displayed.

ID:	NFR4
TYPE:	Non-Functional
VERSION:	1.0
DIFFICULTY:	Difficult
PRIORITY:	1
OWNER:	Saraswati Saud
DESCRIPTION:	Calculation time should be less than 1 second.
RATIONALE:	Waiting a long time for the output might not be desired for the user.