

**INTERNATIONAL SCHOOL**

**GROUP PROJECT**

**CMU-CS 246 BIS**

**USER INTERFACE DESIGN DOCUMENT**

Version: 2.0

**CALCULATOR SYSTEM – CS**

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**PROJECT INFORMATION**

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**PROJECT PLAN DOCUMENT**

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**DOCUMENT HISTORY**

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| 2.0 | Nguyen Trung Kien | Feb 28th, 2024 | Update |

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# I. INTRODUCTION

## PURPOSE

* Document the design of user interface of functions of the Calculator Management
* Be the primary document driving the implementation of the user interfaces.
* Introduce interface design for the reader. Including the background, content information display, command buttons.

## SCOPE

* This document helps to better understand the interface of the System, detailed specification components and function of the System.
* With this document, the development team can understand the structure and composition to create a consistent and complete system.
* Overview of the stages and modules of the software and create a complete interface.

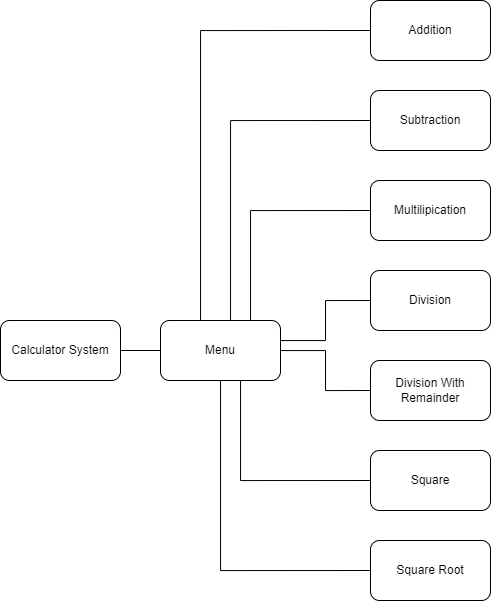
## SCOPE

This document is intended for the following audiences:

* Requirements Analysts/Customers
* Project Manager
* System Designers/Architects
* Implementers, including:
  + Developers.
  + Testers.

# II. LIST OF USER INTERFACE

## 1. BUSINESS FUNCTION DIAGRAM:

****

*Figure 1: Business Function diagram*

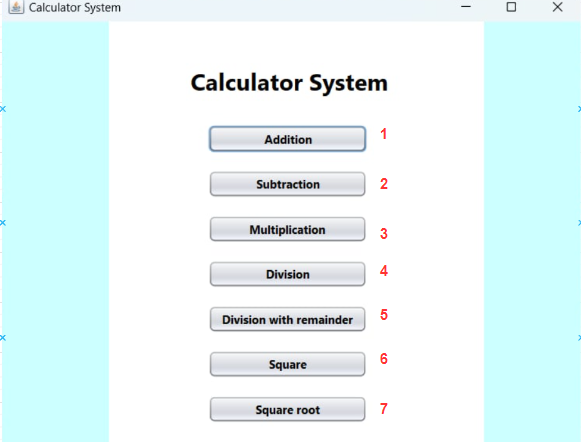
## 2. MENU:

|  |  |  |
| --- | --- | --- |
| **User Interface ID** | **UI Name** | **Description** |
| UI-01 | Menu Page | Menu is used to display all system calculations |
| UI-02 | Addition Page | This page is for users to calculate the sum of 2 numbers |
| UI-03 | Subtraction Page | This page is for users to calculate the difference of 2 numbers |
| UI-04 | Multiplication Page | This page is for users to calculate the product of 2 numbers |
| UI-05 | Division Page | This page is for users to calculate the quotient of 2 numbers |
| UI-06 | Division With Remainder Page | This page is for users to to find the remainder when dividing two numbers |
| UI-07 | Square Page | This page is for users to calculate the square of number |
| UI-08 | Square Root Page | This page is for users to calculate the square root of number |

*Table 1: List of Interface*

# III. DESCRIBE USER INTERFACE

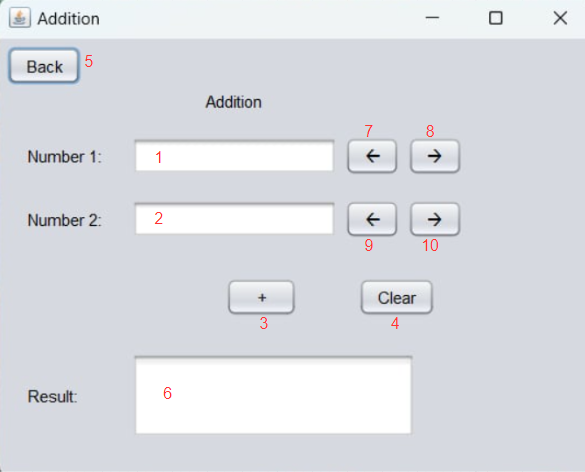
## MENU PAGE



|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Button | Click to move to Addition page. |
| 2 | Press | Button | Click to move to Subtraction page. |
| 3 | Press | Button | Click to move to Multiplication page. |
| 4 | Press | Button | Click to move to Division page. |
| 5 | Press | Button | Click to move to Division with remainder page. |
| 6 | Press | Button | Click to move to Square page. |
| 7 | Press | Button | Click to move to Square Root page. |

*Table 2: Describe User Interface Menu page*

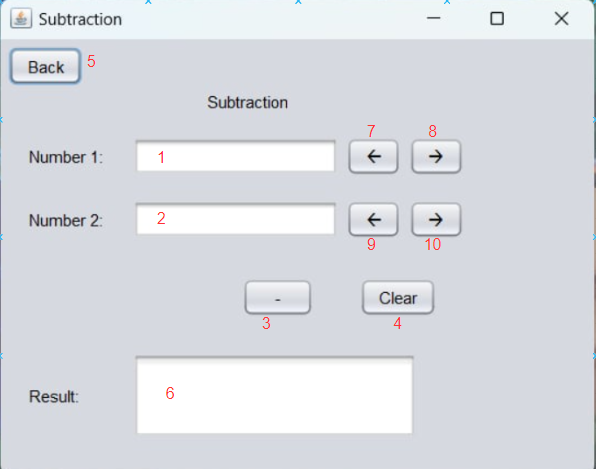
## ADDITION PAGE



|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Input number | Enter the first number. |
| 2 | Press | Input number | Enter the second number. |
| 3 | Press | Button | Click to plus 2 numbers. |
| 4 | Press | Button | Click to clear all data. |
| 5 | Press | Button | Click to back to Menu page. |
| 6 | Calculate | Display result | Print out the result of addition. |
| 7 | Press | Button | Click to delete a character from right to left of the first number. |
| 8 | Press | Button | Click to delete a character from left to right of the first number. |
| 9 | Press | Button | Click to delete a character from right to left of the second number. |
| 10 | Press | Button | Click to delete a character from left to right of the second number. |

*Table 3: Describe User Interface Addition page*

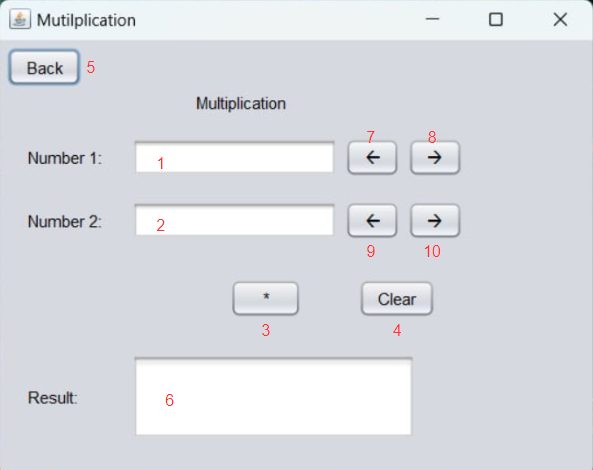
## SUBTRACTION PAGE



|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Input number | Enter the first number. |
| 2 | Press | Input number | Enter the second number. |
| 3 | Press | Button | Click to subtract 2 numbers. |
| 4 | Press | Button | Click to clear all data. |
| 5 | Press | Button | Click to back to Menu page. |
| 6 | Calculate | Display result | Print out the result of subtraction. |
| 7 | Press | Button | Click to delete a character from right to left of the first number. |
| 8 | Press | Button | Click to delete a character from left to right of the first number. |
| 9 | Press | Button | Click to delete a character from right to left of the second number. |
| 10 | Press | Button | Click to delete a character from left to right of the second number. |

*Table 4: Describe User Interface Subtraction page*

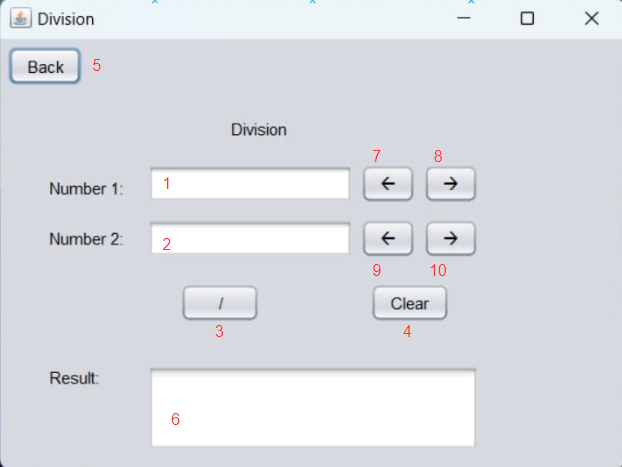
## MULTIPLICATION PAGE



|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Input number | Enter the first number. |
| 2 | Press | Input number | Enter the second number. |
| 3 | Press | Button | Click to multiply 2 numbers. |
| 4 | Press | Button | Click to clear all data. |
| 5 | Press | Button | Click to back to Menu page. |
| 6 | Calculate | Display result | Print out the result of multiplication. |
| 7 | Press | Button | Click to delete a character from right to left of the first number. |
| 8 | Press | Button | Click to delete a character from left to right of the first number. |
| 9 | Press | Button | Click to delete a character from right to left of the second number. |
| 10 | Press | Button | Click to delete a character from left to right of the second number. |

*Table 5: Describe User Interface Multiplication page*

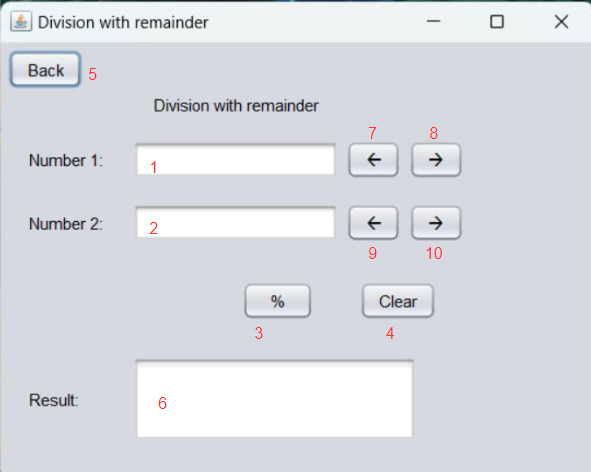
## DIVISION PAGE



|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Input number | Enter the first number. |
| 2 | Press | Input number | Enter the second number. |
| 3 | Press | Button | Click to divide 2 numbers. |
| 4 | Press | Button | Click to clear all data. |
| 5 | Press | Button | Click to back to Menu page. |
| 6 | Calculate | Display result | Print out the result of division. |
| 7 | Press | Button | Click to delete a character from right to left of the first number. |
| 8 | Press | Button | Click to delete a character from left to right of the first number. |
| 9 | Press | Button | Click to delete a character from right to left of the second number. |
| 10 | Press | Button | Click to delete a character from left to right of the second number. |

*Table 6: Describe User Interface Divison page*

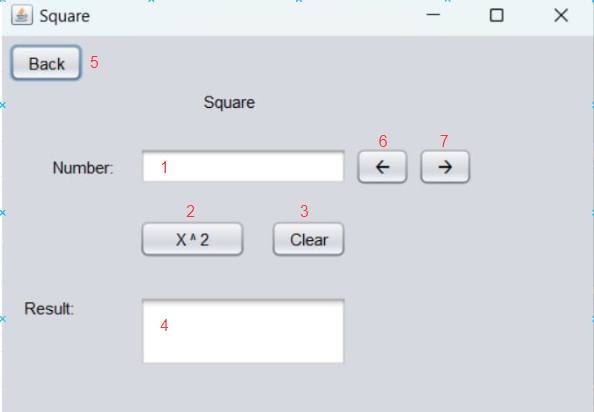
## DIVISION WITH REMAINDER PAGE



|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Input number | Enter the first number. |
| 2 | Press | Input number | Enter the second number. |
| 3 | Press | Button | Click to divide with remainder 2 numbers. |
| 4 | Press | Button | Click to clear all data. |
| 5 | Press | Button | Click to back to Menu page. |
| 6 | Calculate | Display result | Print out the result of division with remainder. |
| 7 | Press | Button | Click to delete a character from right to left of the first number. |
| 8 | Press | Button | Click to delete a character from left to right of the first number. |
| 9 | Press | Button | Click to delete a character from right to left of the second number. |
| 10 | Press | Button | Click to delete a character from left to right of the second number. |

*Table 7: Describe User Interface Division With Remainder page*

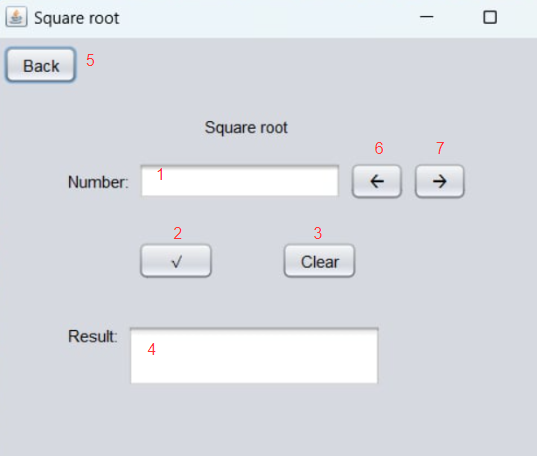
## SQUARE PAGE

**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Input number | Enter the number. |
| 2 | Press | Button | Click to square 2 numbers. |
| 3 | Press | Button | Click to clear all data. |
| 4 | Calculate | Display result | Print out the result of square of number. |
| 5 | Press | Button | Click to back to Menu page. |
| 6 | Press | Button | Click to delete a character from right to left of the number. |
| 7 | Press | Button | Click to delete a character from left to right of the number. |

*Table 8: Describe User Interface Square page*

## SQUARE ROOT PAGE

**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Condition** | **Control Type** | **Target** |
| 1 | Press | Input number | Enter the number. |
| 2 | Press | Button | Click to square 2 numbers. |
| 3 | Press | Button | Click to clear all data. |
| 4 | Calculate | Display result | Print out the result of square root of number. |
| 5 | Press | Button | Click to back to Menu page. |
| 6 | Press | Button | Click to delete a character from right to left of the number. |
| 7 | Press | Button | Click to delete a character from left to right of the number. |

*Table 9: Describe User Interface Square Root page*