

object Oreinted Analysis and Design

Project Report



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To Be Submitted To:

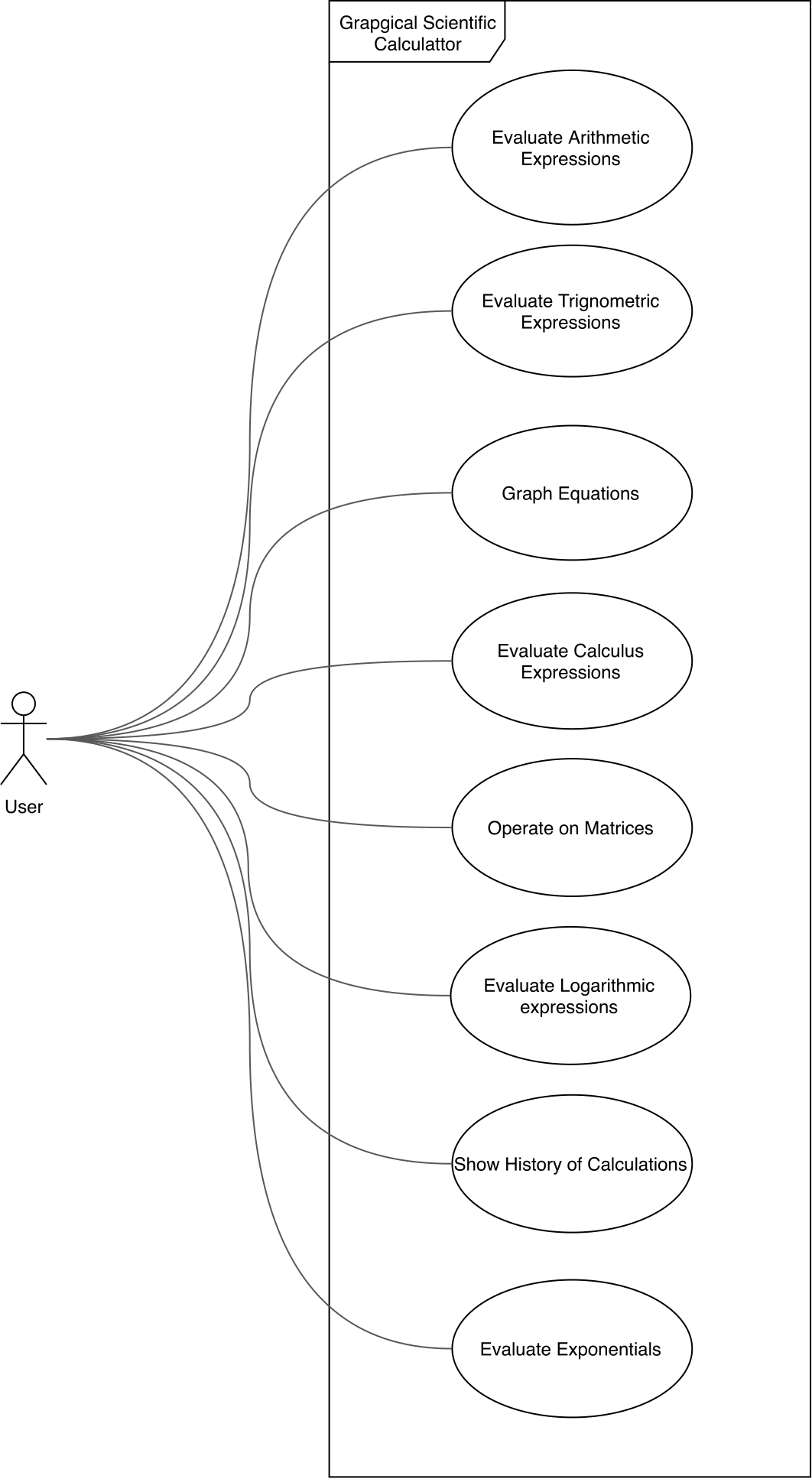
Dr. Islam El Maddah

Eng. Sarah Abdelazim

# Use cases Used

1. Graph Equations
2. Operate on Matrices
3. Evaluate Arithmetic Expressions
4. Evaluate Logarithmic Expressions
5. Evaluate Exponential Expressions
6. Evaluate Trigonometric Expressions
7. Evaluate Calculus Expressions
8. Show History of calculations

# Use Case Diagram



Use Case Descriptions   
  
Use Case Name: Perform matrices arithmetic calculations

Goal in context: Get the value of an add, subtract or multiply matrix calculation

Pre-Conditions: User enters 2 valid matrices

Successful end conditions: User gets the result

Failure End Conditions: User does not get the result

Primary Actors: User

**Secondary actors: ---**

Trigger: User wants to do an arithmetic matrix calculation

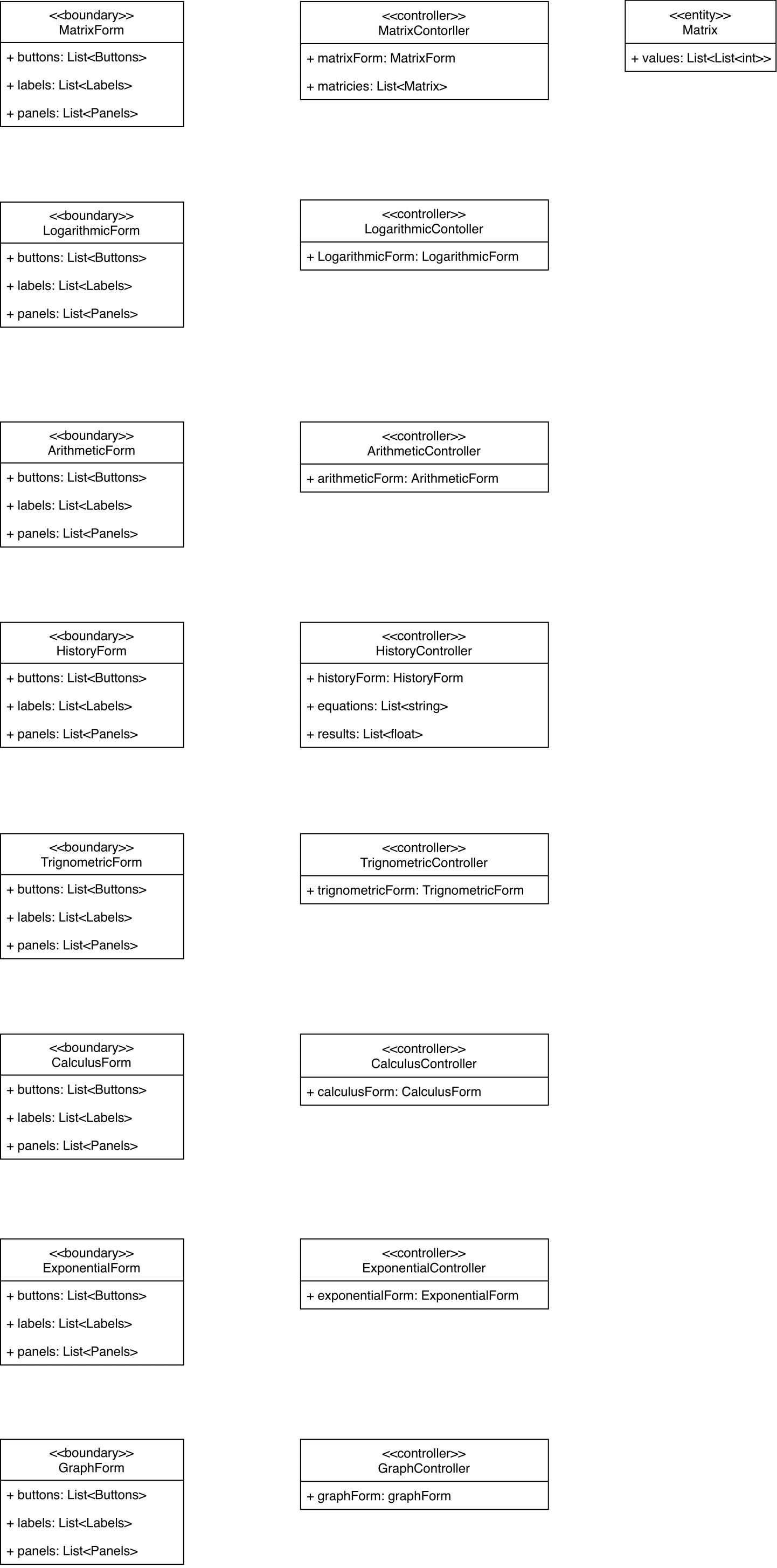
Main Flow:

1. User enter number of rows and columns
2. User press “Create” button
3. User enters the first matrix
4. User press “Save” button
5. User repeat the above steps with the second matrix
6. User choose the type of operations
7. System verify if the matrices are valid
8. User gets the result of the equation

Extensions:

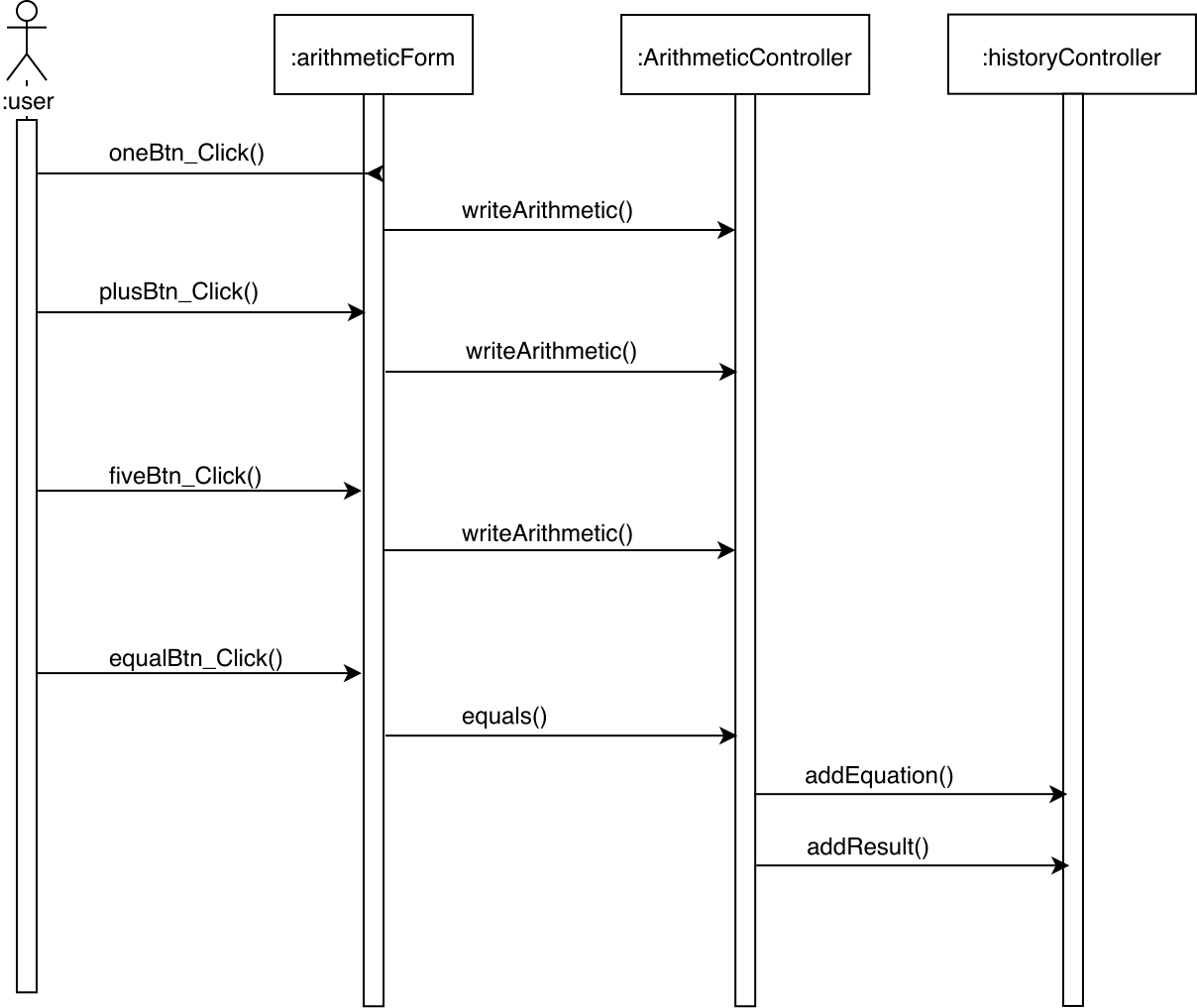
7.1. Matrices are invalid

# Analysis Classes

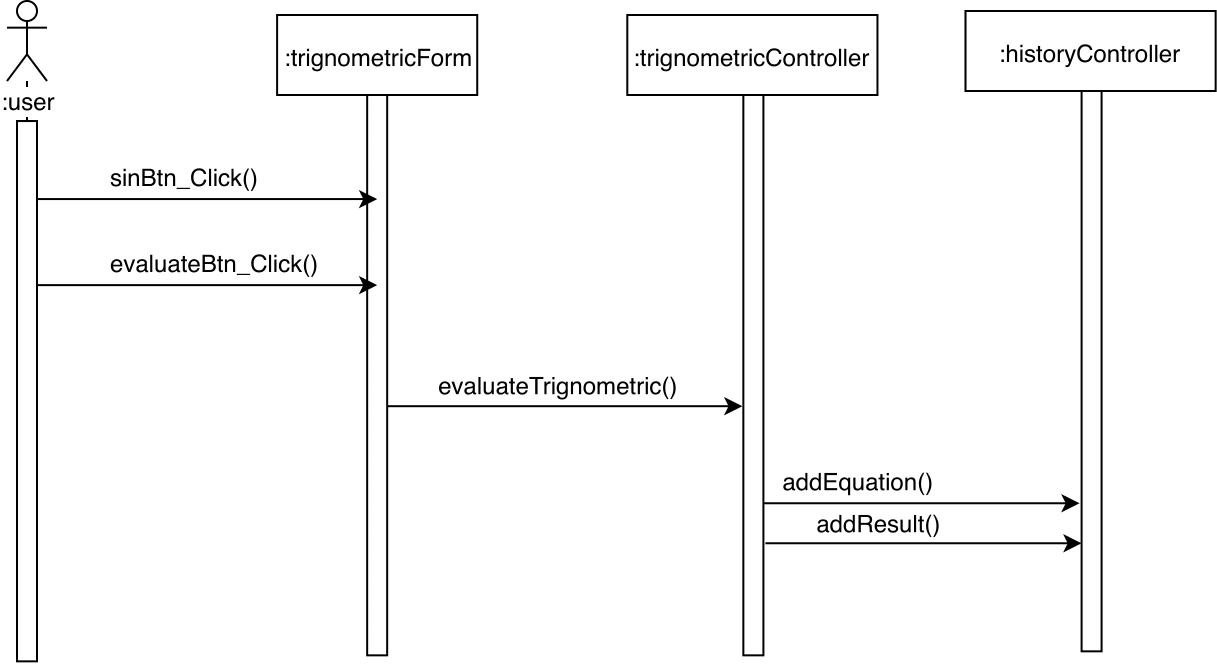


Sequence Diagrams

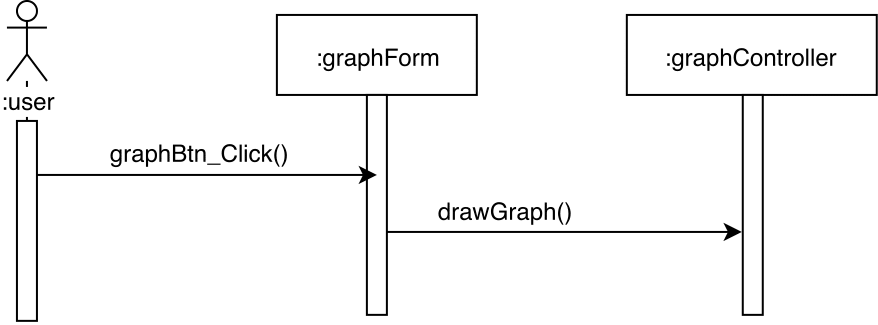
## Evaluate Arithmetic Expression



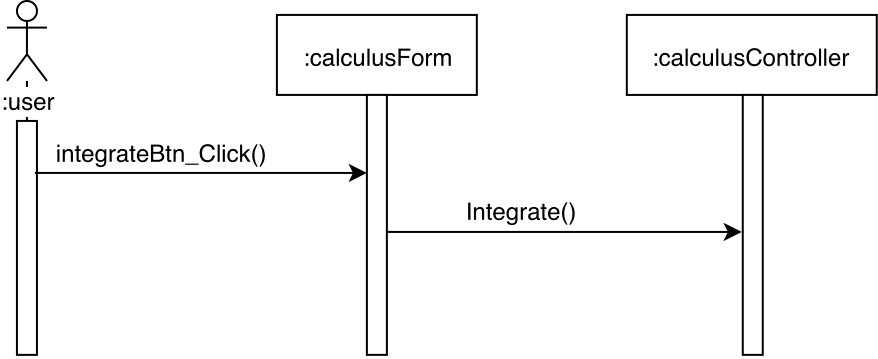
## Evaluate Trigonometric Expression



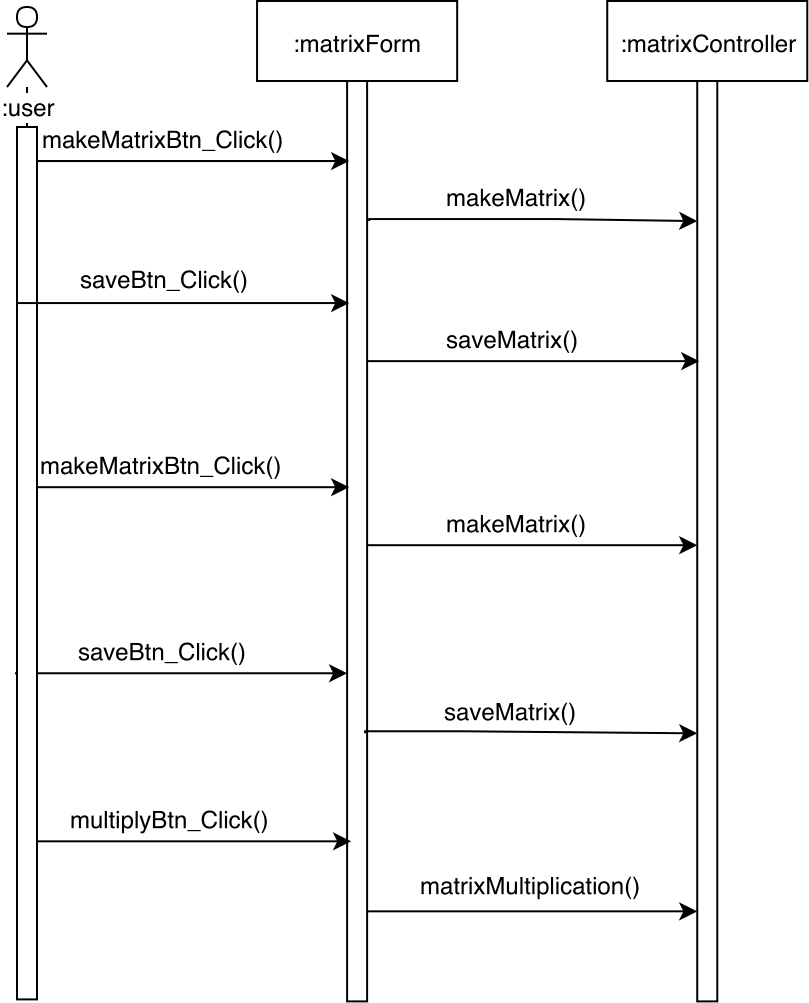
## Graph Equations



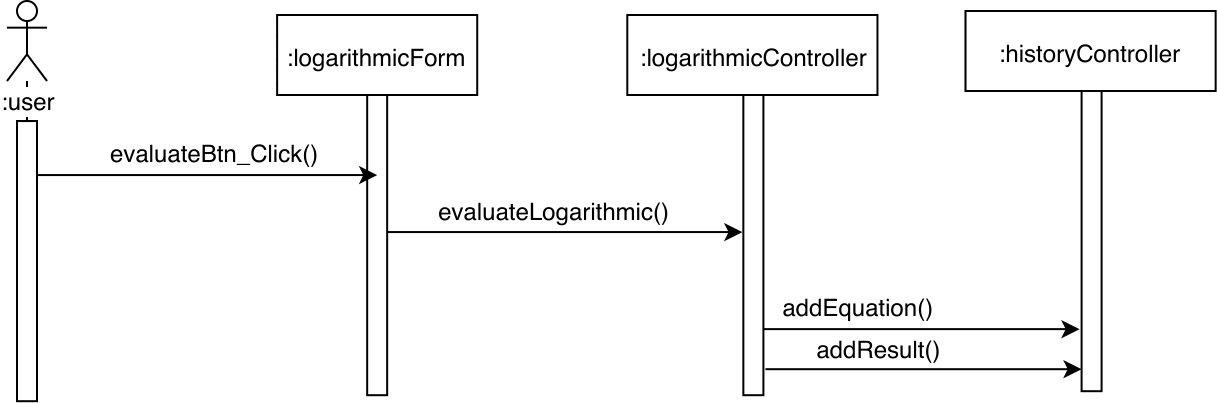
## Evaluate Calculus Expressions



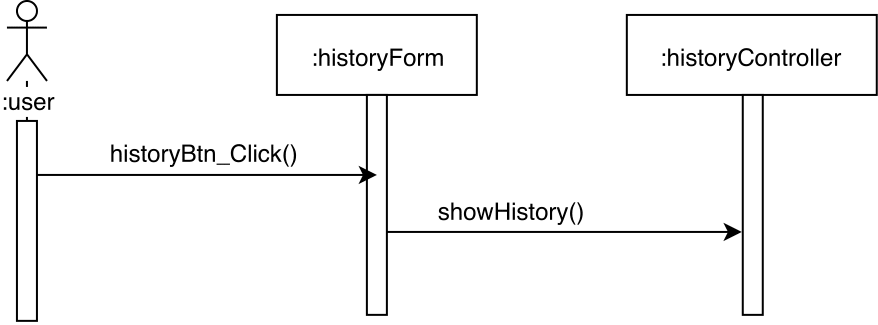
## Operate on Matrices



## Evaluate logarithmic Expressions



## Show History of Calculations



## Evaluate Exponentials

