

# SORTING DEMONSTRATION

Presentation begins



TOOLKIT

## TEAM MEMBERS

Phan Thái Việt - 20204895 : screen, controller, mergesort, demo, slide, element

Lê Thành Vinh - 20200668 : countingsort

Đoàn Ngọc Vinh - 20204935 : element, screen, controller, radixsort, slide, report

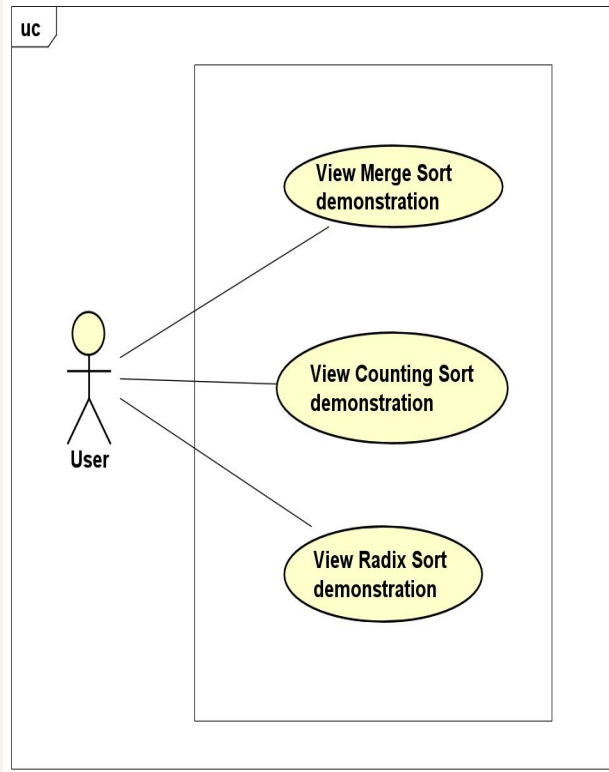
Đinh Công Vũ - 20204896 : screens, controller, exception, testing

PROBLEM

Visualize three sorting algorithms: MergeSort, CountingSort, RadixSort

DESIGN

An UI sorting visualizer



## USE CASE DIAGRAM

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User can choose to view one of the three counting algorithms

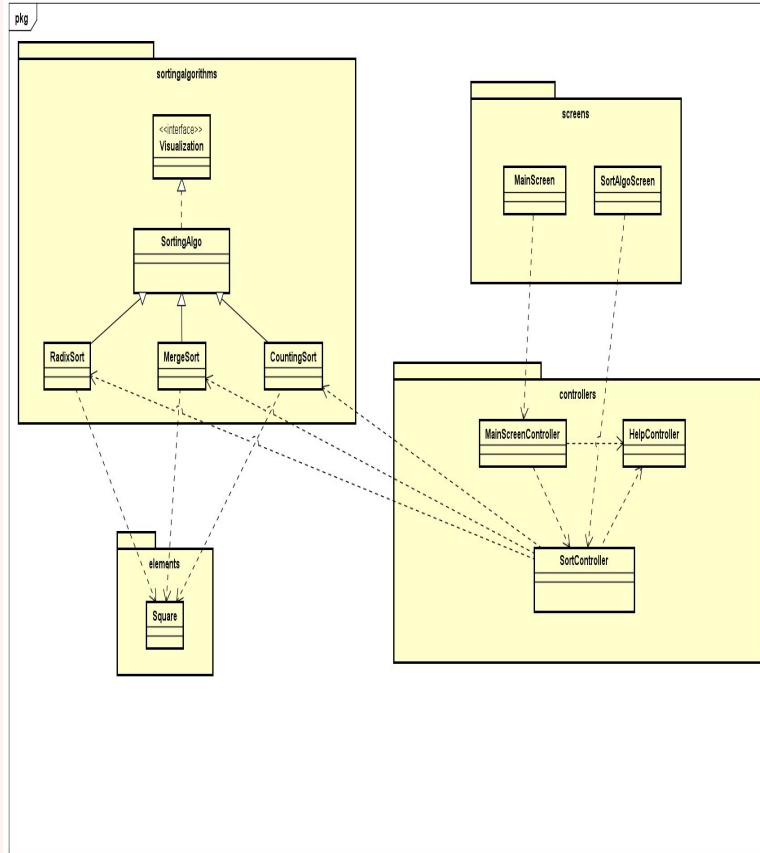
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User can choose to view the help menu

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User can choose to quit the program

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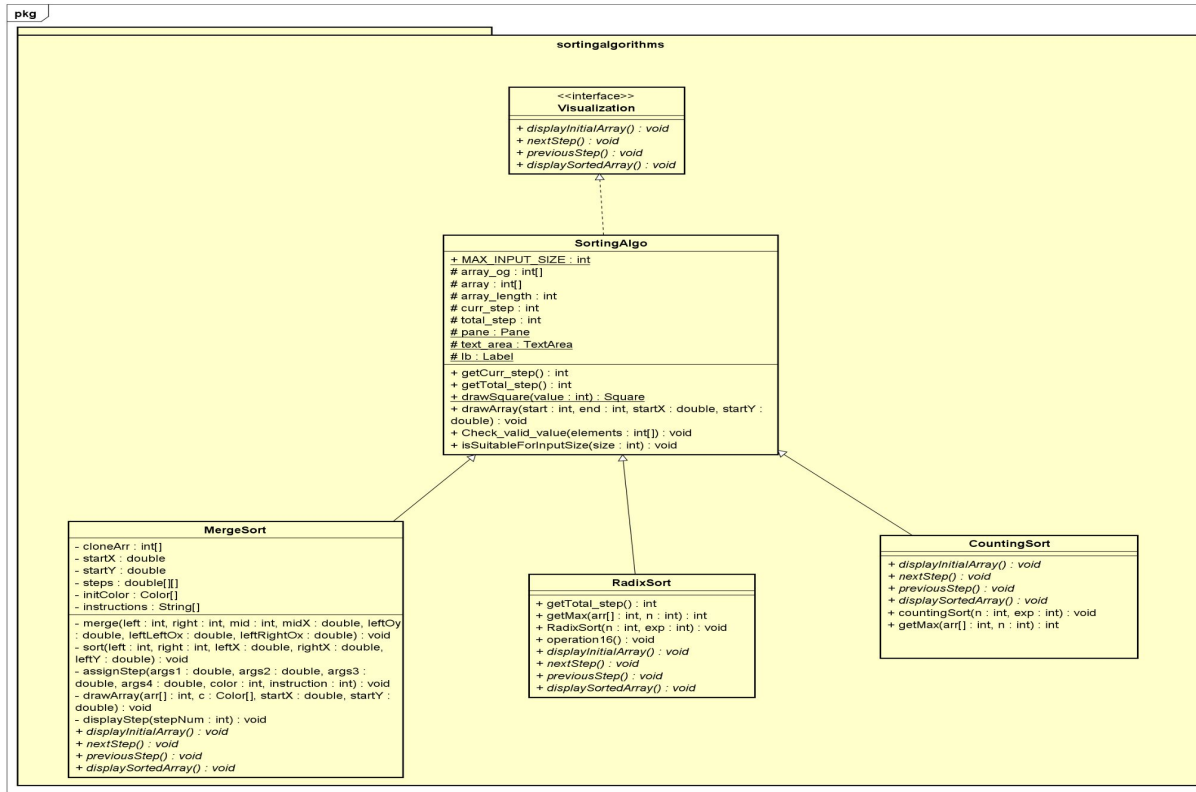
## GENERAL CLASS DIAGRAM

'algorithms' package : Store 3 algorithms with abstract class **SortingAlgorithm**

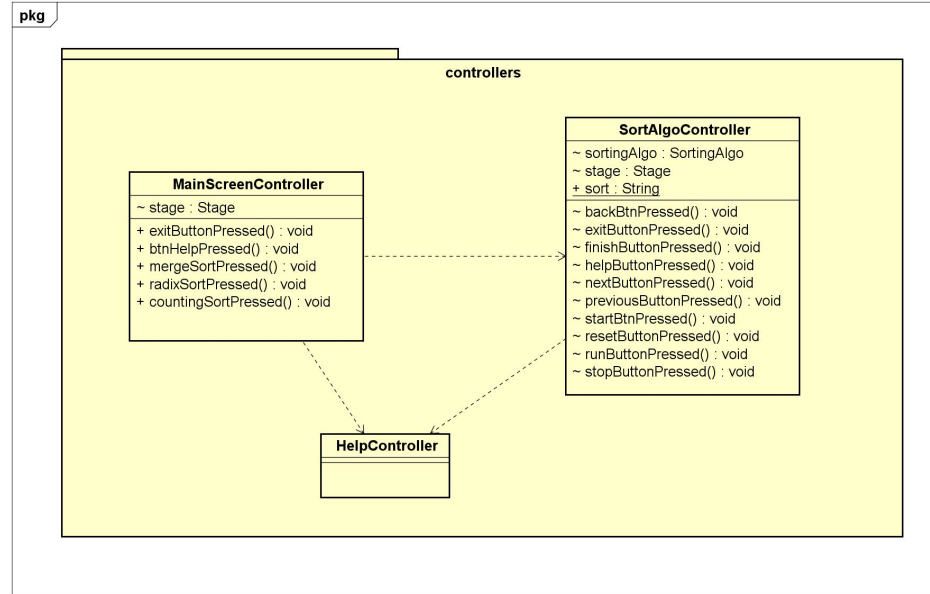
'controllers' package : Store the two controller and the helpmenu controller

'Screen' package : Store the screen of the program

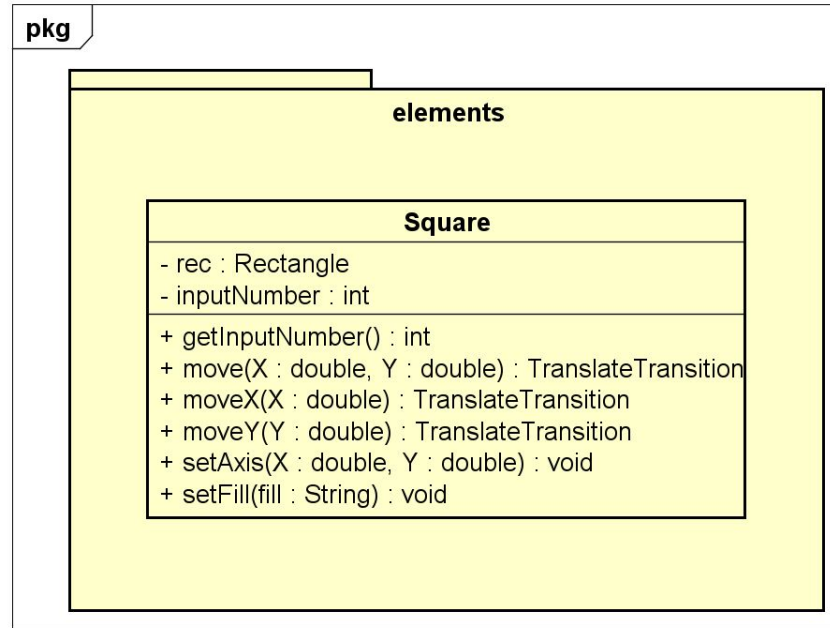
'ElemenOnScreen' package : store the class 'square'



Sorting algorithm package

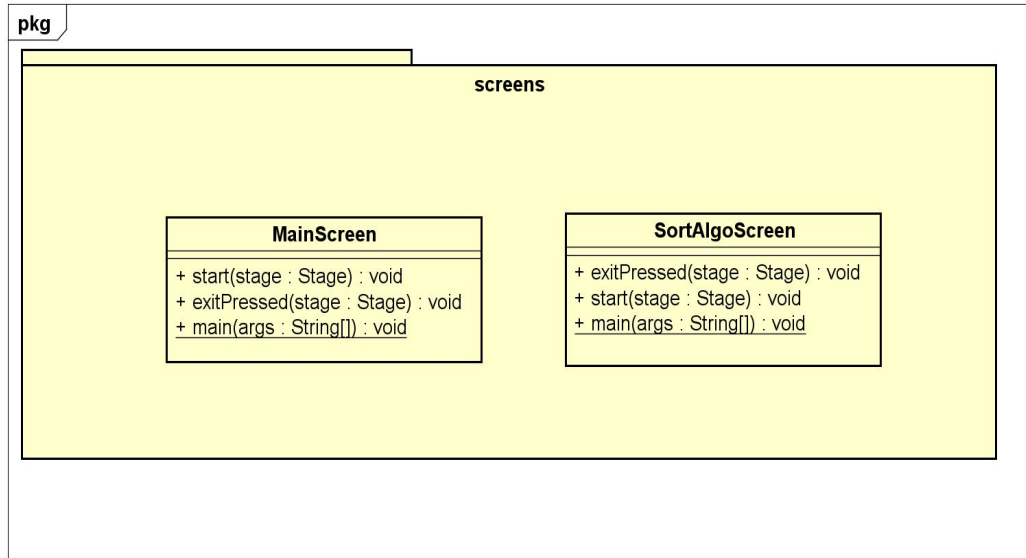


Controller package



Elements package





Screens package

- An abstract class sorting algorithm, the 3 algorithms inherit it.
- Encapsulated methods and attributes in classes, avoid direct access from users.
- Using implementation, polymorphism.

## OOP TECHNIQUE