CODE WALKTHROUGH

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- SortingUtil
  - bubbleSort(JsonSorting)
- SortingException

SERVER MODUDLE DESCRIPTION

Sorting Controller

It used to interract with the client modules to take the request and responses with the service they opted for in the form of JSON values

SaveAndSortUnSortedList(JsonSorting)

It used to take a client request values for the sorting from the **JsonSorting** to perform the sorting and return the new and history of the client requested sorted value in the **JsonSortings**. It will give the GUID (one time) to identify the machine/user.

getAllSortedList(String guid)

It used to send all the sorted values to client in the form of **JsonSortings** for the given guid.

Sorting Service

It used to interact with the controller/dao modules to perform the sorting.

SaveUnSortedList(JsonSorting)

It used to save the unsorted list by sending the values of JsonSorting to the DAO.

getAllSortedList(String guid)

It used to retrieve all the unsorted values from DAO and perform the sorting , count the exchange of values during the sorting , execution time with the SortingUtil.

Sorting Dao

It used to interact with the service level and hibernate modules to perform the database operations.

saveUnsortedList(Session, JsonSorting)

It used to save the unsorted values , guid.

getAllUnsortedList(Session, String guid)

It used to retrieve the list of all unsorted values for the given guid in the descending order based on unique value.

JPASessionFactory

It used to get the local session factory bean (spring + hibernate integration)to perform the database operations

getSortingSessionFactory()

It will return the factory bean to the service layer.

Sorting Results

It is an entity class to save the unsorted values, guid and sort id.

getGuid()

It will return the guid.

getUnSortedList()

It will return the unSorted values.

setGuid(String guid)

It will take the guid.

setUnSortedList(String)

It will take the unSortedList.

JsonSorting

It is an pojo class used to accept the client values.

exchange()

It will return the no of exchanges of sorted values in the unsorted values.

getExecutionTime()

It will return the execution time of the sorting.

getGuid()

It will return the the guid.

getSortedList()

It will return the sorted values to the client/server.

getUnSortedList()

It will return the unsorted values to the client /server.

setExecutionTime(String)

It the set the execution time for the sorting.

setGuid(String)

It will set the guid.

setSortedList(String)

It will set the sorted item in the server.

setUnSortedList(String)
It will set the unsorted items in the server.

JsonSortings

It used to return the list of JsonSorting object to the client to iterate the list of result.

getGuid()
It will return the guid.

setGuid()
It will set the guid.

getSorting()
It will return the list of JsonSortings object.

setSorting(List<JsonSorting>)
It used to set the list of JsonSorting object.

SortingUtil
It used to hold the sorting algorithms.

bubbleSort(jsonSorting)
It will sort the values based on the bubble sort algorithms, it will update the execution time and no of sorting exchange.

SortingException
It used to handle the system exception to the user understandable message.

CLIENT MODULE LIST

- sort_controller.js
  - patternSort
  - sort
  - getHistory
- Index.jsp

CLIENT MODULE DESCRIPTION

Sort_controller.js
It is used to sent/accept the request/ response to and from the server. It will use the localstorage option.

patternSort
It is used to valid the input of the user is in the comma separated values and each numbers is between 1-9 digit

sort
It will send the unsorted values from the user input to the server and get the response as list of sorted values, execution time , exchange of sorted values and guid.

getHistory
It will load during the initial time of launching of the application to load the sort history in the table if the guid is present in the client.

Index.jsp
It will acts an user interface for enter the value to get the sorted values along with the history of values.