

Table1 The original class Select in ApacheHSQLDB

Original Class Select	
Attributes	Methods
tFilter	resolve()
eCondition	resolve(TableFilter,oolean)
eColumn	checkResolved()
iResultLen	getValue(type)
iGroupLen	getResult(maxrows)
iOrderLen	updateAggregateRow(Object, Object, int)
sUnion	addAggregateRow(Result, Object, int, int)
sIntoTable	removeDuplicates(Result)
iUnionType	removeSecond(Result,result minus)
UNION	removeDifferent(Result,result2)
limitStart	sortResult(Result, int, int)
limitCount	trimResult(Result, maxrows)
	compareRecord(Object, Object,result, int, int)
	compareRecord(Object, Object,result, int)

Table2 The new classes extracted by developers

Class Extracted by the Developers - 1	
Attributes	Methods
	trimResult(Result, int)
	removeDuplicates(Result)
	removeSecond(Result, Result)
	removeDifferent(Result, Result r2)
	sortResult(Result, int, int)
	compareRecord(Object, Object, Result, int, int)
	compareRecord(Object, Object, Result, int)
Class Extracted by the Developers - 2	
Attributes	Methods
tFilter	resolve()
eCondition	resolve(TableFilter, boolean)
eColumn	checkResolved()
iResultLen	getValue(int type)
iGroupLen	getResult(int maxrows)
iOrderLen	updateAggregateRow(Object row, Object, int)
sUnion	addAggregateRow(Result x, Object row, int, int count)
sIntoTable	
iUnionType	
UNION	
limitStart	
limitCount	

Table3 The new classes extracted by our approach

Class Extracted our approach - 1	
Attributes	Methods
iUnionType	compareRecord(Object[], Object[], Result, int)
iResultLen	compareRecord (Object[], Object[], Result, int[], int[])
iOrderLen	getValue(int)
iGroupLen	resolve()
sUnion	resolve(TableFilter, boolean)
UNION	checkResolved()
limitCount	addAggregateRow(Result, Object[], int, int)
limitStart	updateAggregateRow(Object[], Object[], int)
sIntoTable	
tFilter	
eColumn	
eCondition	
Class Extracted our approach - 2	
Attributes	Methods
	getResult(int)
	removeSecond(Result, Result)
	removeDifferent(Result, Result)
	removeDuplicates(Result)
	sortResult(Result, int[], int[])
	trimResult(Result, int)