Distribution of Parameters for Generated SQL Queries on the TPC-H Database

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## Scenario: 1-6jp_rjjp__g_hOss_hOnss

## Scale factor: 100 GB

## The 1000-query pack was generated on: 2023-11-12

## First column ('Query parameter or value') displays either:

## - a parameter name, or

## - a value of the current parameter (only for low-cardinality parameters).

## Second column ('Descriptive statistics') displays:

## - for low cardinality parameters: frequency and proportion from total (of 1000 queries)
```

Query parameter or value	Descriptive statistics	
SELECT_n_of_columns	[1, 9, 209] 16 / 24	
SELECT_n_of_non_aggr_funcLOWER		
0	598 (60%)	
1	271 (27%)	
10	1 (0.1%)	
15	1 (0.1%)	
2	84 (8.4%)	
3	$22\ (2.2\%)$	
4	8 (0.8%)	
5	8 (0.8%)	
6	7 (0.7%)	
SELECT_n_of_non_aggr_funcLTRIM	,	
0	596 (60%)	
1	282 (28%)	
2	$72\ (7.2\%)$	
	` '	

- for higher cardinality parameters: [min, median, max] mean / SD

Query parameter or value	Descriptive statistics
3	23 (2.3%)
4	12 (1.2%)
5	7 (0.7%)
6	5~(0.5%)
7	1 (0.1%)
8	2(0.2%)
SELECT_n_of_non_aggr_funcROUND	
0	916 (92%)
1	67~(6.7%)
2	15~(1.5%)
3	2~(0.2%)
SELECT_n_of_non_aggr_funcSUBSTR	[0.00, 0.00, 9.00] 0.64 / 1.08
SELECT_n_of_non_aggr_funcFLOOR	
0	924~(92%)
1	63~(6.3%)
2	9~(0.9%)
3	1 (0.1%)
4	2~(0.2%)
5	1~(0.1%)
SELECT_n_of_non_aggr_funcRTRIM	
0	615~(62%)
1	260~(26%)
11	1~(0.1%)
2	79 (7.9%)
3	17 (1.7%)
4	$12 \ (1.2\%)$
5	6~(0.6%)
6	8~(0.8%)
7	2~(0.2%)
SELECT_n_of_non_aggr_funcUPPER	[0.00, 0.00, 9.00] 0.62 / 1.05
SELECT_n_of_non_aggr_funcSQRT	
0	795~(80%)
1	138 (14%)
2	$29 \; (2.9\%)$
3	$20\ (2.0\%)$
4	7 (0.7%)
5	7 (0.7%)
6	3 (0.3%)
8	1 (0.1%)
SELECT_n_of_non_aggr_funcDAY	000 (000)
0	889 (89%)
1	87 (8.7%)
2	11 (1.1%)
3	10 (1.0%)
4	1 (0.1%)
5	1 (0.1%)

1 (0.1%)	Query parameter or value	Descriptive statistics
SELECT_n_of_non_aggr_fune_MONTH [0.00, 0.00, 16.00] 0.32 / 1.00 SELECT_n_of_non_aggr_fune_YEAR 845 (85%) 1 97 (9.7%) 15 1 (0.1%) 2 33 (3.3%) 3 14 (1.4%) 4 6 (0.6%) 5 3 (0.3%) 6 1 (0.1%) SELECT_n_of_non_aggr_fune_LOG 856 (86%) 1 97 (9.7%) 2 29 (2.9%) 3 8 (0.8%) 4 6 (0.6%) 5 3 (0.3%) 6 6 (0.6%) 5 3 (0.3%) 6 6 (0.6%) 5 3 (0.3%) 6 6 (0.6%) 5 923 (92%) 6 1 (0.1%) SELECT_n_of_non_aggr_fune_DOW 869 (87%) 1 1 (0.1%) 2 23 (2.3%) 3 13 (1.3%) 4 5 (0.5%) 5 2 (0.2%) SELECT_n_of_non_aggr_fune_TRUNC 905 (91%) <tr< td=""><td>6</td><td>1 (0.1%)</td></tr<>	6	1 (0.1%)
0 845 (85%) 15 97 (9.7%) 16 1 (0.1%) 2 33 (3.3%) 3 14 (1.4%) 4 6 (0.6%) 5 3 (0.3%) 6 1 (0.1%) SELECT_n_of_non_aggr_func_LOG 0 856 (86%) 1 97 (9.7%) 2 29 (2.9%) 3 8 (0.8%) 4 6 (0.6%) 5 3 (0.3%) 6 6 (0.6%) 5 3 (0.3%) 6 1 (0.1%) SELECT_n_of_non_aggr_func_ABS 0 923 (92%) 1 1 (0.1%) SELECT_n_of_non_aggr_func_DOW 0 869 (87%) 1 1 (0.1%) 2 2 (0.2%) SELECT_n_of_non_aggr_func_TRUNC 87 (8.7%) 0 905 (91%) 1 83 (8.3%) 2 2 (0.2%) 5 2 (0.0%) 5 2 (0.0%) 5 2 (0.0%) 5 </td <td>SELECT_n_of_non_aggr_funcMONTH</td> <td>` '</td>	SELECT_n_of_non_aggr_funcMONTH	` '
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	SELECT_n_of_non_aggr_funcYEAR	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0	845 (85%)
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4 6 (0.6%) 5 3 (0.3%) 6 1 (0.1%) SELECT_n of non_aggr_func_LOG 0 856 (86%) 1 97 (9.7%) 2 29 (2.9%) 3 8 (0.8%) 4 6 (0.6%) 5 5 6 (6.6%) 5 3 (0.3%) 6 (0.6%) 5 3 (0.3%) 6 (0.6%) 5 5 6 (6.6%) 5 3 (0.3%) 6 (0.6%) 5 3 (0.3%) 6 (0.6%) 5 4 (0.6%) 5 5 (6.6%) 6 (0.6%) 5 5 (0.5%) 6 (0.6%) 7 (0.9%) 8 (0.8%) 8 (0.8%) 9 (0.9%) 9 (0.9%) 9 (0.9%) 9 (0.9%) 9 (0.9%) 9 (0.9%) 9 (0.9%) 9 (0.9%) 1 1 (0.1%) 2 2 (0.2%) SELECT_n_of_non_aggr_func_DOW 0 869 (87%) 1 1 (0.1%) 2 2 3 (2.3%) 3 13 (1.3%) 4 5 (0.5%) 5 (0.5%) 5 (0.5%) 5 (0.5%) 5 (0.5%) 5 (0.5%) 5 (0.0%) 8 (0.8%) 3 (0.0%) 1 83 (8.3%) 2 (0.2%) SELECT_n_of_aggr_func_TRUNC 0 905 (91%) 1 83 (8.3%) 2 (0.2%) SELECT_n_of_aggr_func_MAX [0.00, 0.00, 15.00] 0.83 / 1.93 SELECT_n_of_aggr_func_COUNT_DISTINCT SELECT_n_of_aggr_func_AVG 0 922 (92%) 1 922 (92%) 1 922 (92%)		,
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$		1 (0.170)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		923 (92%)
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0	869 (87%)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1	87 (8.7%)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11	1~(0.1%)
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$		$2\;(0.2\%)$
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
4 2 (0.2%) SELECT_n_of_all_non_aggr_func [0.0, 3.0, 114.0] 5.1 / 8.5 SELECT_n_of_aggr_funcMAX [0.00, 0.00, 15.00] 0.83 / 1.93 SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 12.00] 0.78 / 1.82 SELECT_n_of_aggr_funcAVG 0 922 (92%) 1 56 (5.6%)		, ,
SELECT_n_of_all_non_aggr_func [0.0, 3.0, 114.0] 5.1 / 8.5 SELECT_n_of_aggr_funcMAX [0.00, 0.00, 15.00] 0.83 / 1.93 SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 12.00] 0.78 / 1.82 SELECT_n_of_aggr_funcAVG 922 (92%) 0 922 (92%) 1 56 (5.6%)		· · · · · · · · · · · · · · · · · · ·
SELECT_n_of_aggr_funcMAX [0.00, 0.00, 15.00] 0.83 / 1.93 SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 12.00] 0.78 / 1.82 SELECT_n_of_aggr_funcAVG 922 (92%) 1 56 (5.6%)		, ,
SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 12.00] 0.78 / 1.82 SELECT_n_of_aggr_funcAVG 0 922 (92%) 1 56 (5.6%)		
SELECT_n_of_aggr_funcAVG 0 922 (92%) 1 56 (5.6%)		
922 (92%) 1 56 (5.6%)		[0.00, 0.00, 12.00] 0.10 / 1.02
56 (5.6%)		922 (92%)
		` '
== \ === / · · /	2	15 (1.5%)

Query parameter or value	Descriptive statistics
3	6 (0.6%)
4	1 (0.1%)
SELECT_n_of_aggr_funcSUM	1 (0.170)
0	922 (92%)
1	46 (4.6%)
2	28 (2.8%)
3	3(0.3%)
4	1 (0.1%)
SELECT_n_of_aggr_funcMIN	[0.00, 0.00, 13.00] 0.86 / 1.89
SELECT_n_of_aggr_funcCOUNT	$\begin{bmatrix} 0.00, \ 0.00, \ 14.00 \end{bmatrix} \ 0.94 \ / \ 2.02$
SELECT_n_of_all_aggr_func	[0.00, 3.00, 15.00] 3.63 / 3.10
FROM_n_of_join_paths	
1	167 (17%)
2	161 (16%)
3	154 (15%)
4	176 (18%)
5	159~(16%)
6	183 (18%)
$FROM_n_of_super_joins__FULL$	
0	568 (57%)
1	295~(30%)
2	109 (11%)
3	$24 \ (2.4\%)$
4	4~(0.4%)
FROM_n_of_super_joinsRIGHT	
0	532 (53%)
1	308 (31%)
2	130 (13%)
3	24 (2.4%)
4 EDOM C :: LEET	6~(0.6%)
FROM_n_of_super_joinsLEFT	F4F (FF07)
0	545 (55%) $309 (31%)$
1 2	114 (11%)
3	26 (2.6%)
	5 (0.5%)
4 5	1 (0.1%)
FROM_n_of_joinsINNER	[0.00, 3.00, 14.00] 3.41 / 2.60
FROM_n_of_joinsRIGHT	[0.00, 3.00, 14.00] 3.39 / 2.50
FROM_n_of_processed_rows	[5, 945,038,020, 4,491,227,492] 1,247,422,185 /
	1,000,705,984
WHERE_n_of_predicates	[0.00, 3.00, 12.00] 3.84 / 2.96
WHERE_n_of_attribs_of_typecharacte	
0	369 (37%)
1	293 (29%)
2	163 (16%)
	• •

Query parameter or value	Descriptive statistics
3	97 (9.7%)
4	60 (6.0%)
5	9 (0.9%)
6	7 (0.7%)
γ	1~(0.1%)
8	1 (0.1%)
WHERE_n_of_attribs_of_typecharacter	, ,
0	644~(64%)
1	$253\ (25\%)$
2	76 (7.6%)
3	19 (1.9%)
4	7~(0.7%)
5	1~(0.1%)
WHERE_n_of_attribs_of_typeinteger	
0	365 (37%)
1	304 (30%)
2	173~(17%)
3	85~(8.5%)
4	51 (5.1%)
5	22~(2.2%)
$WHERE_n_of_attribs_of_type__numeric$	
0	558~(56%)
1	310 (31%)
2	94~(9.4%)
3	31 (3.1%)
4	7 (0.7%)
$WHERE_n_of_attribs_of_type__date$	
0	$788 \ (79\%)$
1	171 (17%)
2	$35 \; (3.5\%)$
3	6~(0.6%)
$WHERE_n_of_pkey_attribs$	
0	542 (54%)
1	$302 \; (30\%)$
2	102~(10%)
3	$46 \; (4.6\%)$
4	4~(0.4%)
5	4~(0.4%)
WHERE_n_of_connect_OR	$[0.00, 1.00, 11.00] \ 2.22 \ / \ 2.44$
WHERE_n_of_operatorsin	4
0	$526 \ (53\%)$
1	$286 \ (29\%)$
2	137 (14%)
3	41 (4.1%)
4	4 (0.4%)
5	6~(0.6%)

Query parameter or value	Descriptive statistics
WHERE_n_of_operatorsbetween	
0	546~(55%)
1	296 (30%)
2	108 (11%)
3	38~(3.8%)
4	9~(0.9%)
5	2~(0.2%)
6	1 (0.1%)
$WHERE_n_of_operators__greater_or_less$	
0	320 (32%)
1	273~(27%)
2	186 (19%)
3	113 (11%)
4	64 (6.4%)
5	35~(3.5%)
6	3~(0.3%)
7	6~(0.6%)
WHERE_n_of_operatorslike	
0	775 (78%)
1	186 (19%)
2	$30 \ (3.0\%)$
3	7 (0.7%)
4	2~(0.2%)
$WHERE_n_of_non_aggr_func__SQRT$	
0	871 (87%)
1	118 (12%)
2	10 (1.0%)
3	1~(0.1%)
WHERE_n_of_non_aggr_funcLOG	
0	927~(93%)
1	$70 \ (7.0\%)$
2	3~(0.3%)
WHERE_n_of_non_aggr_funcYEAR	
0	963~(96%)
1	$37 \; (3.7\%)$
WHERE_n_of_non_aggr_funcFLOOR	
0	956~(96%)
1	$43 \ (4.3\%)$
2	1~(0.1%)
$WHERE_n_of_non_aggr_func__DOW$	
0	$959 \; (96\%)$
1	39~(3.9%)
2	2~(0.2%)
$WHERE_n_of_non_aggr_func__MONTH$	
0	962~(96%)
1	38 (3.8%)

Query parameter or value	Descriptive statistics
WHERE_n_of_non_aggr_funcROUND	
0	960 (96%)
1	40 (4.0%)
WHERE_n_of_non_aggr_funcDAY	
0	961 (96%)
1	$39 \ (3.9\%)$
WHERE_n_of_non_aggr_funcABS	
0	957~(96%)
1	$42 \ (4.2\%)$
2	1 (0.1%)
WHERE_n_of_non_aggr_funcTRUNC	
0	971 (97%)
1	$28 \ (2.8\%)$
2	1~(0.1%)
WHERE_n_of_all_non_aggr_func	
0	610 (61%)
1	280 (28%)
2	$83 \ (8.3\%)$
3	$21\ (2.1\%)$
4	6~(0.6%)
GROUP_BY_n_of_columns	[0.00, 3.00, 12.00] 3.38 / 2.95
$HAVING_n_of_main_predicates$	
0	411 (41%)
1	196 (20%)
2	195 (20%)
3	198 (20%)
ORDER_BY_n_of_columns	[0.00, 1.00, 9.00] 1.31 / 1.23
limit	[1, 492, 1,000] 495 / 289
offset	[0, 19, 999] 246 / 319