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

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## Scenario: 1-3jp_ujjp__g__h0-3ss_h0-3nss

## Scale factor: 0.01 GB

## The 1000-query pack was generated on: 2023-11-10

## 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)

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

Query parameter or value	Descriptive statistics
SELECT_n_of_columns	[1, 6, 93] 9 / 11
SELECT_n_of_non_aggr_funcSUBSTR	
0	707 (71%)
1	$216\ (22\%)$
2	57 (5.7%)
3	11 (1.1%)
4	6~(0.6%)
5	1 (0.1%)
6	$2\ (0.2\%)$
SELECT_n_of_non_aggr_funcLOG	
0	891 (89%)
1	94 (9.4%)
2	12(1.2%)
4	1 (0.1%)
5	2~(0.2%)

Query parameter or value	Descriptive statistics
SELECT_n_of_non_aggr_funcABS	
0	945 (95%)
1	52 (5.2%)
2	3~(0.3%)
SELECT_n_of_non_aggr_funcDAY	
0	$921 \; (92\%)$
1	66~(6.6%)
2	10~(1.0%)
3	3~(0.3%)
SELECT_n_of_non_aggr_funcRTRIM	
0	708 (71%)
1	$220\ (22\%)$
2	57 (5.7%)
3	11 (1.1%)
4	$3\ (0.3\%)$
7	$1\ (0.1\%)$
SELECT_n_of_non_aggr_funcSQRT	,
0	846 (85%)
1	$126\ (13\%)$
2	$20\ (2.0\%)$
3	$3~(0.3\%)^{'}$
4	$3\;(0.3\%)$
5	2~(0.2%)
SELECT_n_of_non_aggr_funcLTRIM	,
0	683~(68%)
1	$250\ (25\%)$
2	$52\ (5.2\%)$
3	11 (1.1%)
4	$3\ (0.3\%)$
7	1(0.1%)
SELECT_n_of_non_aggr_funcLOWER	, ,
0	675 (68%)
1	$261\ (26\%)$
2	49 (4.9%)
3	11 (1.1%)
4	4(0.4%)
SELECT_n_of_non_aggr_funcUPPER	, ,
0	694~(69%)
1	$252\ (25\%)$
2	44 (4.4%)
3	5~(0.5%)
4	3~(0.3%)
5	1 (0.1%)
6	1 (0.1%)
SELECT_n_of_non_aggr_funcDOW	\ · · -/
0	890 (89%)
	` - /

Query parameter or value	Descriptive statistics
1	92 (9.2%)
2	$15\ (1.5\%)$
3	2 (0.2%)
4	1~(0.1%)
SELECT_n_of_non_aggr_funcMONTH	,
0	861 (86%)
1	103 (10%)
2	29~(2.9%)
3	4~(0.4%)
4	2~(0.2%)
5	1~(0.1%)
SELECT_n_of_non_aggr_funcTRUNC	
0	940 (94%)
1	53 (5.3%)
2	5~(0.5%)
3	2~(0.2%)
SELECT_n_of_non_aggr_funcFLOOR	
0	$948 \; (95\%)$
1	$45 \ (4.5\%)$
2	6~(0.6%)
3	1~(0.1%)
SELECT_n_of_non_aggr_funcROUND	4
0	940 (94%)
1	52 (5.2%)
2	8 (0.8%)
SELECT_n_of_non_aggr_funcYEAR	0 T (00 C)
0	875 (88%)
1	101 (10%)
2	18 (1.8%)
3	3 (0.3%)
4	2 (0.2%)
5	1 (0.1%)
SELECT_n_of_all_non_aggr_func SELECT_n_of_aggr_funcCOUNT_DISTINCT	[0.00, 2.00, 48.00] 3.14 / 4.16
SELECT_n_of_aggr_funcMIN	[0.00, 0.00, 9.00] 0.71 / 1.51 [0.00, 0.00, 10.00] 0.66 / 1.52
SELECT_n_of_aggr_funcCOUNT	[0.00, 0.00, 10.00] 0.00 / 1.32
0	769 (77%)
1	82 (8.2%)
2	56 (5.6%)
3	32 (3.2%)
	25 (2.5%)
4 5	19 (1.9%)
6	9 (0.9%)
$\frac{\sigma}{\gamma}$	5 (0.5%)
8	3 (0.3%)
SELECT_n_of_aggr_funcAVG	0.070)
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Query parameter or value	Descriptive statistics
0	935 (94%)
1	54 (5.4%)
2	7~(0.7%)
3	4~(0.4%)
SELECT_n_of_aggr_funcMAX SELECT_n_of_aggr_funcSUM	[0.00,  0.00,  12.00]  0.58  /  1.39
0	944 (94%)
1	43 (4.3%)
2	12 (1.2%)
3	1 (0.1%)
SELECT_n_of_all_aggr_func	[0.00, 2.00, 12.00] $[0.70]$ $[0.70]$ $[0.70]$ $[0.70]$
FROM_n_of_join_paths	[0100, 2100, 22100] 2110 / 2121
1	326 (33%)
2	$347\ (35\%)$
3	$327\ (33\%)$
FROM_n_of_super_joinsRIGHT	` ,
0	761 (76%)
1	$226\ (23\%)$
2	13 (1.3%)
FROM_n_of_super_joinsLEFT	
0	769 (77%)
1	211 (21%)
2	$20 \ (2.0\%)$
FROM_n_of_super_joinsFULL	
$\theta$	764~(76%)
1	$210 \ (21\%)$
2	26~(2.6%)
FROM_n_of_joinsINNER	(
0	235 (24%)
1	266 (27%)
2	234 (23%)
3	139 (14%)
4	82 (8.2%)
5	28 (2.8%)
6	12 (1.2%)
7	3 (0.3%)
8 EDOM C.: DICHE	1 (0.1%)
FROM_n_of_joinsRIGHT	247 (250/)
0	247 (25%)
1 2	259 (26%) 226 (23%)
<i>z</i> <i>3</i>	226 (23%) 138 (14%)
	82 (8.2%)
<i>4 5</i>	35 (3.5%)
6	7 (0.7%)
$\frac{\sigma}{\gamma}$	5 (0.5%)
<i>'</i>	0 (0.070)

Query parameter or value	Descriptive statistics
8	1 (0.1%)
FROM_n_of_processed_rows	[5, 68,375, 230,055] 65,762 / 60,094
WHERE_n_of_predicates	[0.00,  2.00,  10.00]   2.80   /   2.21
WHERE_n_of_attribs_of_typecharacter_varying	
0	464~(46%)
1	306 (31%)
2	148 (15%)
3	57 (5.7%)
4	24 (2.4%)
5	1 (0.1%)
$WHERE\_n\_of\_attribs\_of\_type\_\_integer$	
0	428 (43%)
1	336 (34%)
2	158~(16%)
3	56 (5.6%)
4	$16 \ (1.6\%)$
5	4 (0.4%)
6	2 (0.2%)
WHERE_n_of_attribs_of_typedate	
0	828 (83%)
1	$146 \ (15\%)$
2	25~(2.5%)
3	1 (0.1%)
$WHERE\_n\_of\_attribs\_of\_type\_\_numeric$	
0	632~(63%)
1	254~(25%)
2	97 (9.7%)
3	$13 \ (1.3\%)$
4	3~(0.3%)
5	1 (0.1%)
$WHERE\_n\_of\_attribs\_of\_type\_\_character$	
0	746~(75%)
1	209~(21%)
2	38 (3.8%)
3	7~(0.7%)
$WHERE\_n\_of\_pkey\_attribs$	
$\theta$	591 (59%)
1	$318 \; (32\%)$
2	74 (7.4%)
3	15~(1.5%)
4	2 (0.2%)
WHERE_n_of_connect_OR	
0	475~(48%)
1	$158 \ (16\%)$
2	127 (13%)
3	98 (9.8%)

Query parameter or value	Descriptive statistics
4	77 (7.7%)
5	$39\ (3.9\%)$
6	21 (2.1%)
$\gamma$	5~(0.5%)
WHERE_n_of_operatorsgreater_or_less	
0	407 (41%)
1	296 (30%)
2	173 (17%)
3	81 (8.1%)
4	31 (3.1%)
5	9~(0.9%)
6	3~(0.3%)
$WHERE\_n\_of\_operators\_\_in$	
0	625~(63%)
1	266~(27%)
2	80 (8.0%)
3	28~(2.8%)
4	1 (0.1%)
WHERE_n_of_operatorslike	
0	840 (84%)
1	152~(15%)
2	7 (0.7%)
3	1 (0.1%)
WHERE_n_of_operatorsbetween	
0	617~(62%)
1	283 (28%)
2	75 (7.5%)
3	20 (2.0%)
4	4 (0.4%)
5	1 (0.1%)
WHERE_n_of_non_aggr_funcROUND	070 (007)
0	959 (96%)
1	40 (4.0%)
2 NAMED DE LA CORP.	1 (0.1%)
WHERE_n_of_non_aggr_funcFLOOR	070 (0707)
0	970 (97%)
1	$30 \ (3.0\%)$
WHERE_n_of_non_aggr_funcYEAR	071 (0707)
0	971 (97%)
1	28 (2.8%)
2 WHERE GODE	1 (0.1%)
WHERE_n_of_non_aggr_funcSQRT	005 (0107)
0	905 (91%)
1	89 (8.9%)
2	5 (0.5%)
3	1 (0.1%)

Query parameter or value	Descriptive statistics
WHERE_n_of_non_aggr_funcDOW	
0	976 (98%)
1	$24\ (2.4\%)$
WHERE_n_of_non_aggr_funcLOG	
0	941 (94%)
1	56 (5.6%)
2	$3\;(0.3\%)$
WHERE_n_of_non_aggr_funcMONTH	
0	967 (97%)
1	33~(3.3%)
WHERE_n_of_non_aggr_funcABS	070 (000)
0	958 (96%)
1	42~(4.2%)
WHERE_n_of_non_aggr_funcTRUNC	072 (07%)
<i>0 1</i>	$972 (97\%) \\ 28 (2.8\%)$
_	28 (2.8%)
WHERE_n_of_non_aggr_funcDAY 0	983 (98%)
1	17 (1.7%)
WHERE_n_of_all_non_aggr_func	11 (1.170)
0	698 (70%)
1	212 (21%)
2	73 (7.3%)
3	$16\ (1.6\%)$
4	1 (0.1%)
GROUP_BY_n_of_columns	[0.00, 2.00, 9.00] 2.43 / 2.13
HAVING_n_of_main_predicates	[0.00,  4.00,  9.00]  3.39  /  2.54
$HAVING\_n\_of\_main\_predicates\_\_non\_scalar\_subque$	ery
0	422~(42%)
1	200 (20%)
2	187 (19%)
3	191 (19%)
HAVING_n_of_main_predicatesscalar_subquery	(4.404)
0	440 (44%)
1	192 (19%)
2	181 (18%)
3	187 (19%)
HAVING_n_of_subqueriesnon_scalar_subquery	422 (4207)
0 1	$422 (42\%) \\ 200 (20\%)$
2	187 (19%)
3	197 (19%)
HAVING_n_of_subqueriesscalar_subquery	[0.0, 1.0, 23.0] 2.3 / 3.6
	0, 49,590, 3,818,100] 237,950 / 415,849
ORDER_BY_n_of_columns	0, 10,000, 0,010,100] 201,000 / 410,049
0	297 (30%)
·	20. (33/0)

Query parameter or value	Descriptive statistics
1	390 (39%)
2	218 (22%)
3	72 (7.2%)
4	12(1.2%)
5	6~(0.6%)
6	5~(0.5%)
limit	[3, 481, 1,000] 491 / 285
offset	$[0, 3, 999] \ 252 \ / \ 323$