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

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

## Scale factor: 5 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
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0 1	D ' ' ' ' ' ' ' '	
Query parameter or value	Descriptive statistics	
SELECT_n_of_columns	$[1, 7, 106] \ 10 \ / \ 13$	
SELECT_n_of_non_aggr_funcLOWER		
0	692~(69%)	
1	243~(24%)	
2	53 (5.3%)	
3	8 (0.8%)	
4	2~(0.2%)	
5	2~(0.2%)	
SELECT_n_of_non_aggr_funcRTRIM		
0	687 (69%)	
1	235~(24%)	
2	63~(6.3%)	
3	11 (1.1%)	
4	4~(0.4%)	
$SELECT_n_of_non_aggr_func__SQRT$		

Query parameter or value	Descriptive statistics
0	857 (86%)
1	110 (11%)
2	$23\ (2.3\%)$
3	5 (0.5%)
4	4(0.4%)
5	1(0.1%)
SELECT_n_of_non_aggr_funcUPPER	,
0	678~(68%)
1	$243\ (24\%)$
2	52(5.2%)
3	18 (1.8%)
4	5 (0.5%)
5	3~(0.3%)
6	1 (0.1%)
SELECT_n_of_non_aggr_funcLTRIM	
0	692~(69%)
1	238 (24%)
2	52 (5.2%)
3	15 (1.5%)
4	3~(0.3%)
SELECT_n_of_non_aggr_funcFLOOR	
0	935 (94%)
1	59 (5.9%)
2	5~(0.5%)
3	1~(0.1%)
SELECT_n_of_non_aggr_funcLOG	
θ	895 (90%)
1	89 (8.9%)
2	11 (1.1%)
3	4~(0.4%)
5	1~(0.1%)
SELECT_n_of_non_aggr_funcSUBSTR	
θ	684 (68%)
1	249~(25%)
2	49 (4.9%)
3	12 (1.2%)
4	2~(0.2%)
5	2~(0.2%)
6	1 (0.1%)
8	1 (0.1%)
SELECT_n_of_non_aggr_funcDAY	010 (010)
0	913 (91%)
1	70 (7.0%)
2	10 (1.0%)
3	6 (0.6%)
4	1 (0.1%)

Query parameter or value	Descriptive statistics
SELECT_n_of_non_aggr_funcDOW	
0	898 (90%)
1	84 (8.4%)
2	$12\ (1.2\%)$
3	5~(0.5%)
4	1 (0.1%)
SELECT_n_of_non_aggr_funcMONTH	,
0	846~(85%)
1	115 (12%)
2	$26\ (2.6\%)$
3	7 (0.7%)
4	$3\ (0.3\%)$
5	$3\ (0.3\%)$
SELECT_n_of_non_aggr_funcYEAR	,
0	864 (86%)
1	107 (11%)
2	19 (1.9%)
3	6 (0.6%)
4	1 (0.1%)
5	2(0.2%)
6	1 (0.1%)
SELECT_n_of_non_aggr_funcABS	,
0	949~(95%)
1	45 (4.5%)
2	4 (0.4%)
3	2(0.2%)
SELECT_n_of_non_aggr_funcTRUNC	,
0	936~(94%)
1	$62 \ (6.2\%)$
2	2~(0.2%)
SELECT_n_of_non_aggr_funcROUND	
θ	927~(93%)
1	$68 \; (6.8\%)$
2	4~(0.4%)
3	1~(0.1%)
SELECT_n_of_all_non_aggr_func	[0.0, 2.0, 43.0] 3.3/ 4.3
SELECT_n_of_aggr_funcCOUNT	[0.00, 0.00, 9.00] 0.68 / 1.50
SELECT_n_of_aggr_funcMIN	[0.00, 0.00, 9.00] 0.56 / 1.37
SELECT_n_of_aggr_funcCOUNT_DISTINCT SELECT_n_of_aggr_funcMAX	[0.00, 0.00, 10.00] 0.69 / 1.52
0	763~(76%)
1	80 (8.0%)
2	49 (4.9%)
3	39 (3.9%)
4	27 (2.7%)
5	19 (1.9%)
	10 (1.0,0)

Query parameter or value	Descriptive statistics
6	16 (1.6%)
7	4(0.4%)
8	$3\ (0.3\%)$
SELECT_n_of_aggr_funcSUM	,
0	926 (93%)
1	56 (5.6%)
2	14 (1.4%)
3	$1 \ (0.1\%)$
4	2~(0.2%)
5	$1 \ (0.1\%)$
SELECT_n_of_aggr_funcAVG	
0	938 (94%)
1	48 (4.8%)
2	$10 \ (1.0\%)$
3	$3\;(0.3\%)$
4	1~(0.1%)
SELECT_n_of_all_aggr_func	[0.00, 2.00, 11.00] 2.75 / 2.37
FROM_n_of_join_paths	
1	$333 \; (33\%)$
2	$333 \; (33\%)$
3	334~(33%)
FROM_n_of_super_joinsRIGHT	
0	778 (78%)
1	200 (20%)
2	$22 \; (2.2\%)$
FROM_n_of_super_joinsFULL	(
0	782 (78%)
1	198 (20%)
2 EDOM (LEDT	20~(2.0%)
FROM_n_of_super_joinsLEFT	DED (DOM)
0	757 (76%)
1	219 (22%)
2 EDOM C.: DIGHT	24 (2.4%)
FROM_n_of_joinsRIGHT	947 (9507)
0	247 (25%)
1	278 (28%)
2 3	198 (20%)
	151 (15%)
<i>4 5</i>	71 (7.1%)
<i>5 6</i>	$36 (3.6\%) \\ 14 (1.4\%)$
7	` ,
	5~(0.5%)
FROM_n_of_joinsINNER 0	222 (22%)
<i>0 1</i>	222 (22%) $272 (27%)$
1 2	, ,
4	$221\ (22\%)$

Query parameter or value	Descriptive statistics
3	145 (15%)
4	85 (8.5%)
5	$34\ (3.4\%)$
6	$14\ (1.4\%)$
γ	$5~(0.5\%)^{'}$
8	2(0.2%)
FROM_n_of_processed_rows	$[5, 34,\! 050,\! 148, 114,\! 749,\! 792] 32,\! 290,\! 694/ 28,\! 984,\! 274$
WHERE_n_of_predicates	[0.00, 2.00, 10.00] 2.78 / 2.22
WHERE n_of_attribs_of_typecha	
0 = 0	715~(72%)
1	218~(22%)
2	59 (5.9%)
~ 3	8 (0.8%)
WHERE n_of_attribs_of_typenu	,
0	647 (65%)
1	265 (27%)
2	68 (6.8%)
3	17 (1.7%)
	3 (0.3%)
WHERE n of attribu of type ch	, ,
WHERE_n_of_attribs_of_typecha	
0	436 (44%)
1	320 (32%)
2	155 (16%)
3	64 (6.4%)
4	22 (2.2%)
5	2(0.2%)
	1~(0.1%)
WHERE_n_of_attribs_of_typeint	_
0	470 (47%)
1	307 (31%)
2	155 (16%)
3	48 (4.8%)
4	18 (1.8%)
5	$2\;(0.2\%)$
WHERE_n_of_attribs_of_typeda	
0	842 (84%)
1	136 (14%)
2	$20\ (2.0\%)$
3	2 (0.2%)
$WHERE_n_of_pkey_attribs$	
0	$616 \; (62\%)$
1	294 (29%)
2	70 (7.0%)
3	$16 \ (1.6\%)$
4	4 (0.4%)
$WHERE_n_of_connect_OR$	[0.00,1.00,9.00]1.38/1.68

Query parameter or value	Descriptive statistics
WHERE_n_of_operatorsin	
0	616~(62%)
1	291 (29%)
2	78 (7.8%)
3	11 (1.1%)
4	3~(0.3%)
5	1 (0.1%)
$WHERE_n_of_operators__between$	
0	607~(61%)
1	284~(28%)
2	87 (8.7%)
3	$17 \ (1.7\%)$
4	4~(0.4%)
5	1 (0.1%)
WHERE_n_of_operatorsgreater_or_less	
0	406 (41%)
1	307 (31%)
2	158 (16%)
3	95 (9.5%)
4	26 (2.6%)
5	5 (0.5%)
6 WHERE p of approximations like	3 (0.3%)
WHERE_n_of_operatorslike 0	815 (82%)
1	165 (17%)
2	19 (1.7%)
3	19 (1.3%) $1 (0.1%)$
WHERE_n_of_non_aggr_funcROUND	1 (0.170)
0	972 (97%)
1	28 (2.8%)
WHERE_n_of_non_aggr_funcSQRT	20 (21070)
	916 (92%)
1	77 (7.7%)
2	7 (0.7%)
WHERE_n_of_non_aggr_funcFLOOR	,
0	963~(96%)
1	37 (3.7%)
WHERE_n_of_non_aggr_funcDAY	
0	981 (98%)
1	19 (1.9%)
$WHERE_n_of_non_aggr_func__ABS$	
0	$973 \ (97\%)$
1	$26 \ (2.6\%)$
2	1~(0.1%)
WHERE_n_of_non_aggr_funcTRUNC	0=0 (0=0)
0	$970 \ (97\%)$

Query parameter or value	Descriptive statistics
1	30 (3.0%)
WHERE_n_of_non_aggr_funcLOG	(3.073)
0	934 (93%)
1	66 (6.6%)
WHERE_n_of_non_aggr_funcDOW	,
0	977 (98%)
1	$23\ (2.3\%)$
WHERE_n_of_non_aggr_funcYEAR	
0	970 (97%)
1	29~(2.9%)
3	1~(0.1%)
$WHERE_n_of_non_aggr_func__MONTH$	
0	979 (98%)
1	$21 \ (2.1\%)$
WHERE_n_of_all_non_aggr_func	
0	713 (71%)
1	211~(21%)
2	66~(6.6%)
3	8~(0.8%)
4	2~(0.2%)
GROUP_BY_n_of_columns	[0.00, 2.00, 9.00] 2.39 / 2.13
HAVING_n_of_main_predicates	[0.00, 4.00, 9.00] 3.41 / 2.59
HAVING_n_of_main_predicatesnon_scalar_sub-	
0	426 (43%)
1	$203 \ (20\%)$
2	185 (19%)
3	186 (19%)
HAVING_n_of_main_predicatesscalar_subquery	100 (1004)
0	426 (43%)
1	190 (19%)
2	202 (20%)
3	182 (18%)
HAVING_n_of_subqueriesnon_scalar_subquery	196 (1987)
0	426 (43%)
1	203 (20%)
2	185 (19%)
3	186 (19%)
HAVING_n_of_subqueriesscalar_subquery HAVING_n_of_processed_rows_by_subqueries [0, 2]	[0.0, 1.0, 20.0] 2.4 / 3.6
nAving_n_oi_processed_rows_by_subqueries [0, 2	
ORDER_BY_n_of_columns	219,106,642
0 $=$ $=$ $=$	291~(29%)
1	376 (38%)
2	$233\ (23\%)$
3	73 (7.3%)
4	$14\ (1.4\%)$

Query parameter or value	Descriptive statistics
5	7 (0.7%)
6	5~(0.5%)
γ	1 (0.1%)
limit	[1, 517, 1,000] 512 / 285
offset	$[0, 28, 1,000] \ 261 \ / \ 328$