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

```
## Scenario: 1-3jp_rjjp__g__h0-3ss_h0nss

## Scale factor: 1 GB

## The 1000-query pack was generated on: 2023-11-06

## 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, 99] 10 / 12
SELECT_n_of_non_aggr_funcDOW	,
0	889 (89%)
1	85 (8.5%)
2	$22\ (2.2\%)$
3	4 (0.4%)
SELECT_n_of_non_aggr_funcLOWER	,
0	695~(70%)
1	$234\ (23\%)$
2	57 (5.7%)
3	9 (0.9%)
4	5(0.5%)
SELECT_n_of_non_aggr_funcMONTH	,
0	851 (85%)
1	109 (11%)

Query parameter or value	Descriptive statistics
2	25 (2.5%)
3	6~(0.6%)
4	7 (0.7%)
5	$2\ (0.2\%)$
$SELECT_n_of_non_aggr_func__SUBSTR$	
0	727 (73%)
1	219~(22%)
2	$39 \; (3.9\%)$
3	8 (0.8%)
4	$3\ (0.3\%)$
5	4~(0.4%)
SELECT_n_of_non_aggr_funcUPPER	000 (0 - 04)
0	666 (67%)
1	264 (26%)
2	58 (5.8%)
3	9 (0.9%)
GELECT VEAD	$3\;(0.3\%)$
SELECT_n_of_non_aggr_funcYEAR	971 (9707)
0	871 (87%)
1 2	$100 \ (10\%) \ 16 \ (1.6\%)$
3	11 (1.1%)
	2(0.2%)
4 SELECT_n_of_non_aggr_funcLTRIM	2 (0.270)
0	715 (72%)
1	222 (22%)
2	48 (4.8%)
3	$13\ (1.3\%)$
4	1(0.1%)
5	1~(0.1%)
SELECT_n_of_non_aggr_funcLOG	,
0	907 (91%)
1	81 (8.1%)
2	$10 \ (1.0\%)$
3	2~(0.2%)
SELECT_n_of_non_aggr_funcRTRIM	
θ	712 (71%)
1	$232\ (23\%)$
2	44 (4.4%)
3	11 (1.1%)
4 CELECTE C FOUND	1 (0.1%)
SELECT_n_of_non_aggr_funcROUND	0.46 (0.504)
0	946 (95%)
1	47 (4.7%)
2	3(0.3%)
3	4 (0.4%)

Query parameter or value	Descriptive statistics
SELECT_n_of_non_aggr_funcDAY	
0	932 (93%)
1	54 (5.4%)
2	$13\ (1.3\%)$
3	1 (0.1%)
SELECT_n_of_non_aggr_funcSQRT	` ,
0	852 (85%)
1	119 (12%)
2	20(2.0%)
3	4 (0.4%)
4	5~(0.5%)
SELECT_n_of_non_aggr_funcTRUNC	,
0	944 (94%)
1	$51 \ (5.1\%)$
2	5~(0.5%)
SELECT_n_of_non_aggr_funcABS	,
0	942 (94%)
1	54 (5.4%)
2	4(0.4%)
SELECT_n_of_non_aggr_funcFLOOR	,
0	944 (94%)
1	50 (5.0%)
2	5~(0.5%)
3	1~(0.1%)
SELECT_n_of_all_non_aggr_func	[0.00, 2.00, 35.00] $3.05 / 3.74$
SELECT_n_of_aggr_funcMIN	[0.00, 0.00, 10.00] $[0.57]$ $[0.37]$
SELECT_n_of_aggr_funcCOUNT_DISTINCT	[0.00, 0.00, 11.00] $[0.71]$ $[0.04]$
SELECT_n_of_aggr_funcCOUNT	[0.00, 0.00, 9.00] 0.63 / 1.43
SELECT_n_of_aggr_funcMAX	[0.00, 0.00, 10.00] $[0.67]$ $[0.49]$
SELECT_n_of_aggr_funcAVG	, , ,
0	943 (94%)
1	44 (4.4%)
2	$12\ (1.2\%)$
3	1 (0.1%)
SELECT_n_of_aggr_funcSUM	,
0	953 (95%)
1	34 (3.4%)
2	9 (0.9%)
3	4(0.4%)
SELECT_n_of_all_aggr_func FROM_n_of_join_paths	[0.00, 2.00, 12.00] $2.71 / 2.39$
$=$ \rightarrow \rightarrow 1	345 (35%)
2	322 (32%)
3	333 (33%)
FROM_n_of_super_joinsFULL	,
	777 (78%)
	` '/

Query parameter or value	Descriptive statistics
1	204 (20%)
2	19 (1.9%)
FROM_n_of_super_joinsLEFT	,
0	791 (79%)
1	188 (19%)
2	21 (2.1%)
$FROM_n_of_super_joins__RIGHT$	
0	761~(76%)
1	$222\ (22\%)$
2	$17 \ (1.7\%)$
FROM_n_of_joinsINNER	
0	260~(26%)
1	256~(26%)
2	$205\ (21\%)$
3	134 (13%)
4	78 (7.8%)
5	47 (4.7%)
6	14 (1.4%)
7 FDOM C.: DIGHT	6~(0.6%)
FROM_n_of_joinsRIGHT	260 (2707)
0	268 (27%)
1 2	241 (24%) 213 (21%)
3	140 (14%)
4	80 (8.0%)
5	33 (3.3%)
6	21 (2.1%)
7	4 (0.4%)
FROM_n_of_processed_rows	[5, 6,810,591, 22,951,828] 6,306,893 / 6,079,348
WHERE_n_of_predicates	$[0.00, 3.00, 10.00] \ 2.80 \ / \ 2.16$
$WHERE_n_of_attribs_of_type__character_$	varying
0	426 (43%)
1	309 (31%)
2	173~(17%)
3	$73 \ (7.3\%)$
4	$16 \ (1.6\%)$
5	$2\;(0.2\%)$
8	1~(0.1%)
WHERE_n_of_attribs_of_typeinteger	112 (1104)
0	442 (44%)
1	329 (33%)
2	155 (16%)
3	64 (6.4%)
4 5	$egin{array}{c} 8 \; (0.8\%) \ 2 \; (0.2\%) \end{array}$
WHERE_n_of_attribs_of_typenumeric	2 (0.270)
willeric_ii_oi_autilos_oi_typeitumeric	

Query parameter or value	Descriptive statistics
0	637 (64%)
1	272 (27%)
2	70 (7.0%)
3	$20\ (2.0\%)$
4	1 (0.1%)
WHERE_n_of_attribs_of_typedate	
0	853 (85%)
1	127 (13%)
2	19 (1.9%)
3	1~(0.1%)
$WHERE_n_of_attribs_of_type__character$	
0	739 (74%)
1	201~(20%)
2	$53 \ (5.3\%)$
3	7 (0.7%)
WHERE_n_of_pkey_attribs	
0	613 (61%)
1	297 (30%)
2	79 (7.9%)
3	10 (1.0%)
4	1 (0.1%)
WHERE_n_of_connect_OR	(
0	447 (45%)
1	183 (18%)
2	131 (13%)
3	123 (12%)
4	56 (5.6%)
5 6	36 (3.6%)
7	$19 \ (1.9\%) \ 5 \ (0.5\%)$
WHERE_n_of_operatorsbetween	5(0.370)
0	620 (62%)
1	270 (27%)
2	90 (9.0%)
3	17 (1.7%)
4	3 (0.3%)
WHERE n of operators in	0 (0.570)
0	613 (61%)
1	269 (27%)
2	95 (9.5%)
3	19 (1.9%)
4	3 (0.3%)
5	1 (0.1%)
WHERE_n_of_operatorsgreater_or_less	- 1
0 = 0	423~(42%)
1	298 (30%)
	` '

Query parameter or value	Descriptive statistics
2	168 (17%)
3	77 (7.7%)
4	28 (2.8%)
5	4~(0.4%)
6	$2 \; (0.2\%)$
WHERE_n_of_operatorslike	
0	822 (82%)
1	153 (15%)
2	25~(2.5%)
WHERE_n_of_non_aggr_funcLOG	0.41 (0.404)
0	941 (94%)
1	54 (5.4%)
WHERE is of non-agen fund. MONTH	5 (0.5%)
WHERE_n_of_non_aggr_funcMONTH 0	977 (98%)
1	23 (2.3%)
WHERE_n_of_non_aggr_funcDAY	20 (2.070)
0	973 (97%)
1	27(2.7%)
WHERE_n_of_non_aggr_funcSQRT	=1 (=1170)
0	904 (90%)
1	88 (8.8%)
2	8 (0.8%)
WHERE_n_of_non_aggr_funcABS	, ,
0	976 (98%)
1	$24\ (2.4\%)$
$WHERE_n_of_non_aggr_func__FLOOR$	
0	971 (97%)
1	29~(2.9%)
WHERE_n_of_non_aggr_funcTRUNC	
0	980 (98%)
1	$20 \ (2.0\%)$
WHERE_n_of_non_aggr_funcYEAR	001 (0004)
0	981 (98%)
1	19 (1.9%)
WHERE_n_of_non_aggr_funcROUND	070 (0707)
0 1	$970 (97\%) \\ 30 (3.0\%)$
WHERE_n_of_non_aggr_funcDOW	30 (3.0%)
0	976 (98%)
1	24 (2.4%)
WHERE_n_of_all_non_aggr_func	21 (2.1/0)
0	724 (72%)
1	206 (21%)
2	54 (5.4%)
~ 3	14 (1.4%)
	(/)

Query parameter or value	Descriptive statistics
4	2 (0.2%)
GROUP_BY_n_of_columns	[0.00, 2.00, 9.00] $[2.26 / 2.09]$
HAVING_n_of_main_predicates	
0	292~(29%)
1	$98 \; (9.8\%)$
2	153 (15%)
3	173 (17%)
4	151 (15%)
5	84 (8.4%)
6	49 (4.9%)
HAVING_n_of_main_predicatesscalar_subqu	ery
0	442~(44%)
1	196 (20%)
2	168 (17%)
3	194 (19%)
HAVING_n_of_subqueriesscalar_subquery	$[0.0,\ 1.0,\ 21.0]\ 2.4\ /\ 3.5$
HAVING_n_of_processed_rows_by_subquerie[0,	$200,\!000,296,\!423,\!699]\ 15,\!416,\!534\ /\ 35,\!608,\!638$
ORDER_BY_n_of_columns	
θ	275 (28%)
1	369 (37%)
2	265~(27%)
3	69~(6.9%)
4	15 (1.5%)
5	$3\;(0.3\%)$
6	4~(0.4%)
limit	[3, 526, 1,000] 508 / 277
offset	[0,0,995]243/322