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

```
## Scenario: 1-3jp_ujjp__g__h0-3ss_h0nss

## Scale factor: 200 GB

## The 1000-query pack was generated on: 2023-11-09

## 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, 110] 9 / 12
SELECT_n_of_non_aggr_funcDAY	
0	914 (91%)
1	70 (7.0%)
2	8 (0.8%)
3	6~(0.6%)
4	2(0.2%)
SELECT_n_of_non_aggr_funcRTRIM	,
0	670 (67%)
1	$259\ (26\%)$
2	59 (5.9%)
3	8 (0.8%)
4	3~(0.3%)
6	1(0.1%)
SELECT_n_of_non_aggr_funcUPPER	,

Query parameter or value	Descriptive statistics
0	680 (68%)
1	$255\ (26\%)$
2	$49\ (4.9\%)$
3	$12 \ (1.2\%)$
4	1~(0.1%)
5	2~(0.2%)
6	1 (0.1%)
SELECT_n_of_non_aggr_funcSQRT	
0	846 (85%)
1	136 (14%)
2	11 (1.1%)
3	4~(0.4%)
4	2~(0.2%)
6	1 (0.1%)
SELECT_n_of_non_aggr_funcLTRIM	
0	676 (68%)
1	253~(25%)
2	59 (5.9%)
3	7 (0.7%)
4	$2\;(0.2\%)$
6	$2\;(0.2\%)$
7	1 (0.1%)
SELECT_n_of_non_aggr_funcLOWER	
0	713 (71%)
1	213~(21%)
2	58 (5.8%)
3	$14 \ (1.4\%)$
4	1 (0.1%)
5	1 (0.1%)
SELECT_n_of_non_aggr_funcSUBSTR	
0	692~(69%)
1	249~(25%)
2	41 (4.1%)
3	10~(1.0%)
4	5~(0.5%)
5	3~(0.3%)
SELECT_n_of_non_aggr_funcFLOOR	
0	$952 \ (95\%)$
1	38 (3.8%)
2	8 (0.8%)
3	1 (0.1%)
4	1 (0.1%)
SELECT_n_of_non_aggr_funcLOG	
0	907 (91%)
1	84 (8.4%)
2	7 (0.7%)

Query parameter or value	Descriptive statistics
3	2 (0.2%)
SELECT_n_of_non_aggr_funcDOW	,
0	907 (91%)
1	80 (8.0%)
2	9~(0.9%)
3	$3\;(0.3\%)$
4	1~(0.1%)
SELECT_n_of_non_aggr_funcYEAR	
0	875 (88%)
1	105 (11%)
2	17 (1.7%)
3	3~(0.3%)
SELECT_n_of_non_aggr_funcROUND	
0	$939 \ (94\%)$
1	56 (5.6%)
2	5~(0.5%)
SELECT_n_of_non_aggr_funcMONTH	
0	862~(86%)
1	$107 \ (11\%)$
2	$18 \ (1.8\%)$
3	$11 \ (1.1\%)$
4	$1\ (0.1\%)$
5	1~(0.1%)
SELECT_n_of_non_aggr_funcABS	4
0	947 (95%)
1	46 (4.6%)
2	7 (0.7%)
SELECT_n_of_non_aggr_funcTRUNC	270 (000)
0	956 (96%)
1	39 (3.9%)
2	3(0.3%)
3	1 (0.1%)
4	1 (0.1%)
SELECT_n_of_all_non_aggr_func	[0.00, 2.00, 44.00] 3.11 / 3.98
SELECT_n_of_aggr_funcCOUNT_DISTINCT	$[0.00, 0.00, 9.00] \ 0.69 \ / \ 1.47$
SELECT_n_of_aggr_funcCOUNT	[0.00, 0.00, 9.00] 0.73 / 1.50
SELECT_n_of_aggr_funcMIN	$[0.00, 0.00, 10.00] \ 0.56 \ / \ 1.33$
SELECT_n_of_aggr_funcSUM	040 (0407)
0	940 (94%)
1	45 (4.5%)
2 3	13 (1.3%)
	$egin{array}{ccc} 1 & (0.1\%) \ 1 & (0.1\%) \end{array}$
4 SELECT n of aggr func MAX	$[0.00, 0.00, 10.00] \ 0.64 \ / \ 1.50$
00	$[0.00, 0.00, 10.00] \ 0.04 / 1.00$
SELECT_n_of_aggr_funcAVG 0	951 (95%)
U	991 (90/0)

Query parameter or value	Descriptive statistics
1	35 (3.5%)
2	12(1.2%)
3	$2\;(0.2\%)$
SELECT_n_of_all_aggr_func	[0.00, 2.00, 11.00] $2.76 / 2.25$
FROM_n_of_join_paths	, , ,
1	334 (33%)
2	331 (33%)
3	$335\ (34\%)$
FROM_n_of_super_joinsFULL	
0	779 (78%)
1	196 (20%)
2	25~(2.5%)
FROM_n_of_super_joinsRIGHT	
0	751~(75%)
1	$229\ (23\%)$
2	20~(2.0%)
FROM_n_of_super_joinsLEFT	
0	788 (79%)
1	188 (19%)
2	$24\ (2.4\%)$
FROM_n_of_joinsRIGHT	,
0	240 (24%)
1	276 (28%)
2	192 (19%)
3	154 (15%)
4	88 (8.8%)
5	$34\ (3.4\%)$
6	12(1.2%)
$\gamma$	1 (0.1%)
8	$3\;(0.3\%)$
FROM_n_of_joinsINNER	
0	251~(25%)
1	271 (27%)
2	207 (21%)
3	145 (15%)
4	73 (7.3%)
5	$34\ (3.4\%)$
6	15 (1.5%)
$\gamma$	4 (0.4%)
FROM_n_of_processed_rows	[5, 1,362,018,459, 4,590,055,357] 1,261,686,373 /
-	1,200,745,300
WHERE_n_of_predicates	[0.00, 2.00, 10.00] 2.79 / 2.21
WHERE_n_of_attribs_of_typecharacte	, , ,
0 $=$ $=$ $=$ $=$ $=$ $=$ $=$ $=$ $=$	732 (73%)
1	$203\ (20\%)$
2	$56\ (5.6\%)$
	` '

Query parameter or value	Descriptive statistics
3	9 (0.9%)
WHERE_n_of_attribs_of_typecharacter_varying	
0	$420 \ (42\%)$
1	340 (34%)
2	$147 \ (15\%)$
3	71 (7.1%)
4	$16 \ (1.6\%)$
5	5~(0.5%)
6	1~(0.1%)
$WHERE\_n\_of\_attribs\_of\_type\_\_integer$	
0	464~(46%)
1	324 (32%)
2	$144 \ (14\%)$
3	48 (4.8%)
4	$16 \ (1.6\%)$
5	4~(0.4%)
WHERE_n_of_attribs_of_typenumeric	
0	641 (64%)
1	256~(26%)
2	$82 \ (8.2\%)$
3	$20 \ (2.0\%)$
4	1~(0.1%)
WHERE_n_of_attribs_of_typedate	
0	844 (84%)
1	$132\ (13\%)$
2	$22\ (2.2\%)$
3	2~(0.2%)
WHERE_n_of_pkey_attribs	
0	636 (64%)
1	280 (28%)
2	69 (6.9%)
3	$15 \ (1.5\%)$
WHERE_n_of_connect_OR	170 (100Y)
0	459 (46%)
1	174 (17%)
2	142 (14%)
3	91 (9.1%)
4	62 (6.2%)
5	46 (4.6%)
6	13 (1.3%)
7	12 (1.2%)
	1 (0.1%)
WHERE_n_of_operatorsgreater_or_less	401 (4007)
0	401 (40%)
1	304 (30%)
2	194~(19%)

Query parameter or value	Descriptive statistics
3	59 (5.9%)
4	30 (3.0%)
5	10 (1.0%)
6	2(0.2%)
WHERE_n_of_operatorsin	
0	620~(62%)
1	277 (28%)
2	85~(8.5%)
3	17 (1.7%)
4	1~(0.1%)
WHERE_n_of_operatorslike	
0	849 (85%)
1	137 (14%)
2	12~(1.2%)
3	2 (0.2%)
$WHERE\_n\_of\_operators\_\_between$	
0	600~(60%)
1	292~(29%)
2	89 (8.9%)
3	16 (1.6%)
4	3~(0.3%)
WHERE_n_of_non_aggr_funcFLOOR	
0	971 (97%)
1	28 (2.8%)
2	1~(0.1%)
$WHERE\_n\_of\_non\_aggr\_func\_\_SQRT$	
0	912 (91%)
1	81 (8.1%)
2	7~(0.7%)
WHERE_n_of_non_aggr_funcDAY	
0	974~(97%)
1	26~(2.6%)
WHERE_n_of_non_aggr_funcABS	
0	$966 \; (97\%)$
1	$33 \; (3.3\%)$
2	1~(0.1%)
WHERE_n_of_non_aggr_funcLOG	
0	$937 \ (94\%)$
1	59~(5.9%)
2	4~(0.4%)
WHERE_n_of_non_aggr_funcMONTH	
0	976 (98%)
1	23~(2.3%)
2	1~(0.1%)
WHERE_n_of_non_aggr_funcTRUNC	
0	$967 \ (97\%)$

Query parameter or value	Descriptive statistics
1	33 (3.3%)
WHERE n_of_non_aggr_funcYEAR	(
0	978 (98%)
1	$21\ (2.1\%)$
2	1 (0.1%)
WHERE_n_of_non_aggr_funcROUND	
0	975 (98%)
1	24 (2.4%)
2	1 (0.1%)
WHERE_n_of_non_aggr_funcDOW	
0	980 (98%)
1	$20 \ (2.0\%)$
WHERE_n_of_all_non_aggr_func	(
0	711 (71%)
1	210 (21%)
2	68 (6.8%)
3	10 (1.0%)
4 CDOUD DV 6 1	1 (0.1%)
GROUP_BY_n_of_columns	$[0.00, 2.00, 10.00] \ 2.44 \ / \ 2.19$
HAVING_n_of_main_predicates	270 (2007)
0	278 (28%)
1 2	89 (8.9%) 142 (14%)
3	173 (17%)
	163 (16%)
4 5	94 (9.4%)
6	61 (6.1%)
HAVING n of main predicates scalar subquery	01 (0.170)
	418 (42%)
1	200 (20%)
2	176 (18%)
3	206 (21%)
HAVING_n_of_subqueriesscalar_subquery	$[0.0, 1.0, 19.0] \ 2.3 \ / \ 3.3$
HAVING_n_of_processed_rows_by_subquer[0s 62,00]	00,135, 70,752,886,112] 2,998,864,248 /
	6,901,963,991
ORDER_BY_n_of_columns	
$\theta$	310 (31%)
1	$366 \ (37\%)$
2	238 (24%)
3	68 (6.8%)
4	14 (1.4%)
5	3~(0.3%)
6	1 (0.1%)
limit	[1, 482, 998] 496 / 278
offset	[0, 0, 996] 241 / 322