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

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## Scenario: 1-6jp_ujjp__g_h0-3ss_h0-3nss

## Scale factor: 1 GB

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

## 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, 8, 162] 15 / 22
SELECT_n_of_non_aggr_funcFLOOR	
0	912 (91%)
1	74 (7.4%)
2	$12\ (1.2\%)$
3	$2\ (0.2\%)$
SELECT_n_of_non_aggr_funcLTRIM	,
0	653~(65%)
1	241 (24%)
2	$62 \ (6.2\%)$
3	$23\ (2.3\%)$
4	11 (1.1%)
5	4 (0.4%)
6	4(0.4%)
8	2(0.2%)

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

Query parameter or value	Descriptive statistics
SELECT_n_of_non_aggr_funcRTRIM	
0	596 (60%)
1	283~(28%)
2	75 (7.5%)
3	25~(2.5%)
4	12 (1.2%)
5	6~(0.6%)
6	2~(0.2%)
7	1~(0.1%)
SELECT_n_of_non_aggr_funcSUBSTR	$[0.00,0.00,9.00]\;0.58\;/\;1.02$
SELECT_n_of_non_aggr_funcUPPER	
0	609~(61%)
1	259~(26%)
2	83~(8.3%)
3	24 (2.4%)
4	11 (1.1%)
5	11 (1.1%)
6	2~(0.2%)
9	1 (0.1%)
SELECT_n_of_non_aggr_funcYEAR	
0	825 (83%)
1	121~(12%)
2	$28 \ (2.8\%)$
3	$13 \ (1.3\%)$
4	10 (1.0%)
5	3~(0.3%)
SELECT_n_of_non_aggr_funcLOWER	
0	657~(66%)
1	233~(23%)
2	70 (7.0%)
3	19~(1.9%)
4	9~(0.9%)
5	9~(0.9%)
6	1 (0.1%)
7	1~(0.1%)
8	1~(0.1%)
SELECT_n_of_non_aggr_funcSQRT SELECT_n_of_non_aggr_funcDAY	[0.00, 0.00, 9.00] 0.33 / 0.89
0	896 (90%)
1	77 (7.7%)
2	17 (1.7%)
3	8 (0.8%)
4	2(0.2%)
SELECT_n_of_non_aggr_funcLOG	` '
0	868 (87%)
1	96 (9.6%)

Query parameter or value	Descriptive statistics
2	21 (2.1%)
3	6 (0.6%)
4	6(0.6%)
5	2(0.2%)
6	1(0.1%)
SELECT_n_of_non_aggr_funcMONTH	$[0.00, 0.00, 9.00] \ 0.32 \ / \ 0.89$
SELECT_n_of_non_aggr_funcROUND	<u> </u>
0	922~(92%)
1	65~(6.5%)
2	11 (1.1%)
3	2(0.2%)
SELECT_n_of_non_aggr_funcDOW	,
0	843 (84%)
1	112 (11%)
2	27(2.7%)
3	10 (1.0%)
4	4 (0.4%)
5	2(0.2%)
6	1 (0.1%)
$\frac{1}{7}$	1 (0.1%)
SELECT_n_of_non_aggr_funcTRUNC	1 (0.170)
	919 (92%)
1	70 (7.0%)
2	5 (0.5%)
~ 3	6 (0.6%)
SELECT_n_of_non_aggr_funcABS	0 (0.070)
0	935 (94%)
1	56 (5.6%)
2	7 (0.7%)
~ 3	2(0.2%)
SELECT_n_of_all_non_aggr_func	[0.0, 3.0, 68.0] 4.7 / 7.3
SELECT_n_of_aggr_funcCOUNT_DISTINCT	[0.00, 0.00, 12.00] $[0.80 / 1.76]$
SELECT_n_of_aggr_funcCOUNT	[0.00, 0.00, 12.00] $[0.97 / 2.05]$
SELECT_n_of_aggr_funcMIN	[0.00, 0.00, 12.00] $[0.75 / 1.78]$
SELECT_n_of_aggr_funcAVG	[0.00, 0.00, 12.00] 0.70 / 1.70
θ	924 (92%)
1	42 (4.2%)
2	20 (2.0%)
3	10 (1.0%)
4	4 (0.4%)
SELECT_n_of_aggr_funcMAX	$[0.00, 0.00, 12.00] \ 0.72 \ / \ 1.76$
SELECT_n_of_aggr_funcSUM	[0.00, 0.00, 12.00] 0.72 / 1.70
	931 (93%)
	` '
1	42 (4.2%)
2 3	18 (1.8%)
J	9~(0.9%)

Query parameter or value	Descriptive statistics
SELECT_n_of_all_aggr_func	[0.00, 3.00, 13.00] 3.48 / 3.04
FROM_n_of_join_paths	
1	191 (19%)
2	177 (18%)
3	155~(16%)
4	162~(16%)
5	162~(16%)
6	153~(15%)
FROM_n_of_super_joinsFULL	
θ	583~(58%)
1	284~(28%)
2	113 (11%)
3	$14 \ (1.4\%)$
4	5~(0.5%)
5	1 (0.1%)
FROM_n_of_super_joinsRIGHT	
0	544 (54%)
1	325 (33%)
2	$117 \ (12\%)$
3	$12 \ (1.2\%)$
4	$2\;(0.2\%)$
FROM_n_of_super_joinsLEFT	
0	575 (58%)
1	292 (29%)
2	108 (11%)
3	21 (2.1%)
4	4 (0.4%)
FROM_n_of_joinsINNER	[0.00, 3.00, 13.00] $[0.00, 3.00, 13.00]$ $[0.00, 3.00, 13.00]$
FROM_n_of_joinsRIGHT	[0.00, 3.00, 12.00] 3.08 / 2.41
FROM_n_of_processed_rows	[5, 9,150,591, 43,373,661] $[11,437,676]$ $[9,565,124]$
WHERE_n_of_predicates	[0.00, 3.00, 13.00] 3.69 / 2.85
WHERE_n_of_attribs_of_typecharacter	697 (697)
0	627 (63%)
1	279 (28%)
2 3	79 (7.9%)
	13 (1.3%)
WHERE n of attribs of type character	2~(0.2%)
### WHERE_II_OI_attHOS_OI_typecharacter_ ### ### ### ########################	_varying 383 (38%)
1	300 (30%)
2	152 (15%)
3	103 (10%)
	43 (4.3%)
<i>4 5</i>	13 (1.3%)
6	4 (0.4%)
7	$\frac{4(0.4\%)}{2(0.2\%)}$
•	2 (0.270)

Query parameter or value	Descriptive statistics
WHERE_n_of_attribs_of_typedate	
0	798 (80%)
1	159 (16%)
2	$40 \ (4.0\%)$
3	$3\;(0.3\%)$
WHERE_n_of_attribs_of_typeinteger	
0	379 (38%)
1	301 (30%)
2	174 (17%)
3	89 (8.9%)
4	$43\ (4.3\%)$
5	$12\ (1.2\%)$
6	$2\ (0.2\%)$
WHERE_n_of_attribs_of_typenumeric	•
0	584 (58%)
1	273 (27%)
2	102 (10%)
3	$33\ (3.3\%)$
4	6 (0.6%)
5	$2\;(0.2\%)$
WHERE_n_of_pkey_attribs	· · ·
0	538~(54%)
1	311 (31%)
2	110 (11%)
3	$32 \ (3.2\%)$
4	8 (0.8%)
5	1 (0.1%)
WHERE_n_of_connect_OR	[0.00, 1.00, 11.00] $[2.08]$ $[2.28]$
WHERE_n_of_operatorsbetween	
0	554~(55%)
1	277 (28%)
2	113 (11%)
3	$43 \ (4.3\%)$
4	$10 \ (1.0\%)$
5	$3\;(0.3\%)$
WHERE_n_of_operatorsgreater_or_less	
0	341 (34%)
1	276 (28%)
2	194 (19%)
3	113 (11%)
4	48 (4.8%)
5	16 (1.6%)
6	8 (0.8%)
7	1 (0.1%)
8	3~(0.3%)
WHERE_n_of_operatorsin	

Query parameter or value	Descriptive statistics
0	542 (54%)
1	280 (28%)
2	113 (11%)
3	49 (4.9%)
4	$12\ (1.2\%)$
5	4 (0.4%)
WHERE_n_of_operatorslike	
0	806 (81%)
1	173 (17%)
2	18 (1.8%)
3	2 (0.2%)
4	1 (0.1%)
WHERE_n_of_non_aggr_funcYEAR	
0	961 (96%)
1	39 (3.9%)
WHERE_n_of_non_aggr_funcABS	
0	960 (96%)
1	$40 \ (4.0\%)$
WHERE_n_of_non_aggr_funcFLOOR	
0	966~(97%)
1	34 (3.4%)
WHERE_n_of_non_aggr_funcSQRT	
0	879 (88%)
1	108~(11%)
2	11 (1.1%)
3	2 (0.2%)
WHERE_n_of_non_aggr_funcDAY	
0	976 (98%)
1	24~(2.4%)
WHERE_n_of_non_aggr_funcLOG	4 . 40
0	928 (93%)
1	70 (7.0%)
2	2~(0.2%)
WHERE_n_of_non_aggr_funcROUND	0.70 (0.704)
0	953 (95%)
1	47 (4.7%)
WHERE_n_of_non_aggr_funcTRUNC	070 (00%)
0	959 (96%)
1	41 (4.1%)
WHERE_n_of_non_aggr_funcDOW	000 (0004)
0	962 (96%)
1	36 (3.6%)
2	2~(0.2%)
WHERE_n_of_non_aggr_funcMONTH	000 (0=04)
0	966 (97%)
1	34 (3.4%)

Query parameter or value	Descriptive statistics
WHERE_n_of_all_non_aggr_func	
0	636~(64%)
1	$252\ (25\%)$
2	85 (8.5%)
3	$21\ (2.1\%)$
4	6~(0.6%)
GROUP_BY_n_of_columns	[0.00, 2.00, 13.00] 3.06 / 2.89
$HAVING_n_of_main_predicates$	[0.00, 4.00, 9.00] 3.46 / 2.64
HAVING_n_of_main_predicatesnon_scalar_s	subquery
0	429~(43%)
1	157 (16%)
2	212~(21%)
3	202~(20%)
$HAVING_n_of_main_predicates__scalar_subqu$	ery
0	434 (43%)
1	184 (18%)
2	183 (18%)
3	199~(20%)
HAVING_n_of_subqueriesnon_scalar_subque	ery
0	429~(43%)
1	$157 \ (16\%)$
2	$212 \ (21\%)$
3	202~(20%)
HAVING_n_of_subqueriesscalar_subquery	[0.0,1.0,23.0]2.6/3.8
HAVING_n_of_processed_rows_by_subqueries	$[0, 13,\!611,\!182, 893,\!834,\!991] \ 41,\!526,\!597 \ /$
	75,017,528
ORDER_BY_n_of_columns	
0	316 (32%)
1	312 (31%)
2	236 (24%)
3	91 (9.1%)
4	25~(2.5%)
5	11 (1.1%)
6	7 (0.7%)
7	2 (0.2%)
limit	[1, 478, 999] 487 / 287
offset	[0, 0, 999] 240 / 316