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

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## Scenario: 1-6jp_ujjp__g__h0-3ss_h0nss

## 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, 9, 183] 16 / 26
SELECT_n_of_non_aggr_funcLOWER	$[0.00, 0.00, 15.00] \ 0.66 \ / \ 1.15$
SELECT_n_of_non_aggr_funcSQRT	
0	798 (80%)
1	144 (14%)
2	29~(2.9%)
3	14~(1.4%)
4	9~(0.9%)
5	3~(0.3%)
6	1~(0.1%)
7	2~(0.2%)
SELECT_n_of_non_aggr_funcUPPER	[0.00, 0.00, 11.00] 0.58 / 1.02
SELECT_n_of_non_aggr_funcLTRIM	
0	627~(63%)
1	265 (27%)
	• •

Query parameter or value	Descriptive statistics
2	67 (6.7%)
3	18 (1.8%)
4	12 (1.2%)
5	5~(0.5%)
6	4~(0.4%)
7	1 (0.1%)
	$1 \ (0.1\%)$
SELECT_n_of_non_aggr_funcLOG	00= (0004)
0	887 (89%)
1	79 (7.9%)
2	21 (2.1%)
3	7 (0.7%)
<i>4 5</i>	$\begin{array}{c} 4 \ (0.4\%) \\ 1 \ (0.1\%) \end{array}$
6	1 (0.1%) $1 (0.1%)$
SELECT_n_of_non_aggr_funcSUBSTR	1 (0.170)
0	617 (62%)
1	268 (27%)
2	64 (6.4%)
3	27(2.7%)
4	$12\;(1.2\%)$
5	5 (0.5%)
6	1~(0.1%)
7	3~(0.3%)
8	$3\;(0.3\%)$
SELECT_n_of_non_aggr_funcRTRIM	
0	627 (63%)
1	254 (25%)
2	76 (7.6%)
3	20 (2.0%)
4	9(0.9%)
5 6	$8 (0.8\%) \ 2 (0.2\%)$
$\frac{\sigma}{\gamma}$	2(0.2%) $2(0.2%)$
8	2(0.2%) $2(0.2%)$
SELECT_n_of_non_aggr_funcTRUNC	2 (0.270)
0	916 (92%)
1	74 (7.4%)
2	8 (0.8%)
3	2 (0.2%)
SELECT_n_of_non_aggr_funcROUND	
0	920 (92%)
1	$65\ (6.5\%)$
2	10 (1.0%)
3	$3\;(0.3\%)$
4	2~(0.2%)

Query parameter or value	Descriptive statistics
SELECT_n_of_non_aggr_funcABS	
0	926~(93%)
1	59~(5.9%)
2	12 (1.2%)
3	2~(0.2%)
4	1~(0.1%)
SELECT_n_of_non_aggr_funcYEAR	
0	842 (84%)
1	107 (11%)
2	26~(2.6%)
3	$12 \ (1.2\%)$
4	3~(0.3%)
5	6~(0.6%)
6	2~(0.2%)
7	1~(0.1%)
8	1~(0.1%)
SELECT_n_of_non_aggr_funcFLOOR	
θ	$924 \ (92\%)$
1	61~(6.1%)
2	12~(1.2%)
3	$2 \; (0.2\%)$
4	1 (0.1%)
SELECT_n_of_non_aggr_funcMONTH	[0.00, 0.00, 11.00] 0.34 / 0.95
SELECT_n_of_non_aggr_funcDAY	
0	880 (88%)
1	89 (8.9%)
2	20 (2.0%)
3	5 (0.5%)
4	3 (0.3%)
5	1 (0.1%)
6	1 (0.1%)
8 CELECIT C DOW	1 (0.1%)
SELECT_n_of_non_aggr_funcDOW	061 (0604)
0	861 (86%)
1	101 (10%)
2	20 (2.0%)
3	7 (0.7%)
4	6 (0.6%)
5	1 (0.1%)
6	3(0.3%)
7	1 (0.1%)
SELECT_n_of_all_non_aggr_func	[0.0, 3.0, 81.0] 4.8 / 8.0
SELECT_n_of_aggr_funcCOUNT	[0.00, 0.00, 13.00] 0.87 / 2.03
SELECT_n_of_aggr_funcMAX	[0.00, 0.00, 13.00] 0.96 / 2.05
SELECT_n_of_aggr_funcSUM	027 (0407)
0	$937 \; (94\%)$

Query parameter or value	Descriptive statistics
1	40 (4.0%)
2	17 (1.7%)
3	4 (0.4%)
4	2~(0.2%)
SELECT_n_of_aggr_funcMIN	$[0.00, 0.00, 13.00] \ 0.89 \ / \ 2.04$
SELECT_n_of_aggr_funcCOUNT_DISTINCT	$[0.00, 0.00, 12.00] \ 0.73 \ / \ 1.69$
SELECT_n_of_aggr_funcAVG	
0	936 (94%)
1	$46 \ (4.6\%)$
2	14 (1.4%)
3	1 (0.1%)
4	2(0.2%)
5	1 (0.1%)
SELECT_n_of_all_aggr_func	[0.00, 3.00, 14.00] $3.63 / 3.11$
FROM_n_of_join_paths	, , ,
1	164~(16%)
2	171 (17%)
3	186 (19%)
4	144 (14%)
5	159 (16%)
6	176 (18%)
FROM_n_of_super_joinsRIGHT	(-,)
0	544 (54%)
1	314 (31%)
2	109 (11%)
3	31 (3.1%)
4	1 (0.1%)
5	1 (0.1%)
FROM_n_of_super_joinsLEFT	(= ,,,)
	541 (54%)
1	314 (31%)
2	116 (12%)
3	$25 \ (2.5\%)$
4	3 (0.3%)
5	1 (0.1%)
FROM_n_of_super_joinsFULL	= (0,0)
0	554 (55%)
1	317 (32%)
2	105 (11%)
~ 3	21 (2.1%)
4	3(0.3%)
FROM_n_of_joinsINNER	[0.00, 3.00, 13.00] 3.28 / 2.49
FROM_n_of_joinsRIGHT	[0.00, 3.00, 13.00] 3.27 / 2.46
FROM_n_of_processed_rows	[5, 93,258, 433,730] 119,327 / 97,267
WHERE_n_of_predicates	[0.00, 4.00, 12.00] $[0.00, 4.00, 12.00]$ $[0.00, 4.00, 12.00]$
WHERE_n_of_attribs_of_typecharacter_varying	[0.00, 4.00, 12.00] 4.00 / 2.91
will red_ii_oi_autilos_oi_typecharacter_varying	

Query parameter or value	Descriptive statistics
)	352 (35%)
!	291~(29%)
	187 (19%)
3	99~(9.9%)
	48 (4.8%)
	$20 \ (2.0\%)$
	3~(0.3%)
HERE_n_of_attribs_of_typedate	
	774 (77%)
	181 (18%)
	36 (3.6%)
	8 (0.8%)
	1~(0.1%)
THERE_n_of_attribs_of_typeinteger	
	349 (35%)
	289~(29%)
	$175 \ (18\%)$
	113 (11%)
	52 (5.2%)
	18 (1.8%)
	4~(0.4%)
HERE_n_of_attribs_of_typecharacter	
	642~(64%)
	258~(26%)
	82 (8.2%)
	14 (1.4%)
	4~(0.4%)
HERE_n_of_attribs_of_typenumeric	
	548~(55%)
	292~(29%)
	$116 \ (12\%)$
	31 (3.1%)
	$13 \ (1.3\%)$
HERE_n_of_pkey_attribs	
	527~(53%)
	305 (31%)
	123~(12%)
	33~(3.3%)
	10 (1.0%)
	2~(0.2%)
HERE_n_of_connect_OR	[0.00, 2.00, 10.00] $[2.32]$ $[2.43]$
HERE_n_of_operatorsbetween	
	504 (50%)
	310 (31%)
	$127\ (13\%)$
	40 (4.0%)

Query parameter or value	Descriptive statistics
4	16 (1.6%)
5	$3\ (0.3\%)$
$WHERE_n_of_operators__greater_or_less$	
0	312 (31%)
1	263~(26%)
2	$196 \ (20\%)$
3	$122\ (12\%)$
4	60 (6.0%)
5	28 (2.8%)
6	16 (1.6%)
7	1 (0.1%)
8	$2\;(0.2\%)$
WHERE_n_of_operatorsin	F91 /F9M)
0	531 (53%)
1	289 (29%)
2	111 (11%)
3	56 (5.6%)
4	11 (1.1%)
$rac{5}{6}$	$ \begin{array}{c} 1 \ (0.1\%) \\ 1 \ (0.1\%) \end{array} $
WHERE_n_of_operatorslike	1 (0.170)
### OF THE RELATIONS OF THE PROPERTY OF THE PR	794 (79%)
1	175 (18%)
2	28 (2.8%)
2 3	3 (0.3%)
WHERE_n_of_non_aggr_funcLOG	9 (0.970)
0	926 (93%)
1	67 (6.7%)
2	7 (0.7%)
WHERE_n_of_non_aggr_funcFLOOR	(011,0)
0	961 (96%)
1	38 (3.8%)
2	1 (0.1%)
WHERE_n_of_non_aggr_funcMONTH	,
0	971 (97%)
1	27 (2.7%)
2	$2\;(0.2\%)$
WHERE_n_of_non_aggr_funcSQRT	
0	883 (88%)
1	106 (11%)
2	10 (1.0%)
3	1 (0.1%)
WHERE_n_of_non_aggr_funcROUND	
0	$956 \ (96\%)$
1	$44 \ (4.4\%)$
WHERE_n_of_non_aggr_funcTRUNC	

Query parameter or value	Descriptive statistics
$\frac{c}{\theta}$	966 (97%)
1	34 (3.4%)
WHERE n_of_non_aggr_funcDOW	31 (3.170)
0	957 (96%)
1	$43\ (4.3\%)$
WHERE_n_of_non_aggr_funcYEAR	,
0	962~(96%)
1	$38 \; (3.8\%)$
WHERE_n_of_non_aggr_funcABS	
0	954~(95%)
1	$44 \ (4.4\%)$
2	2~(0.2%)
WHERE_n_of_non_aggr_funcDAY	
0	965~(97%)
1	34 (3.4%)
2	1 (0.1%)
WHERE_n_of_all_non_aggr_func	
0	643~(64%)
1	226~(23%)
2	101 (10%)
3	$24\ (2.4\%)$
4	6~(0.6%)
GROUP_BY_n_of_columns	[0.00, 3.00, 12.00] 3.10 / 2.85
HAVING_n_of_main_predicates	
0	284~(28%)
1	88 (8.8%)
2	$143 \; (14\%)$
3	199~(20%)
4	$146 \; (15\%)$
5	97 (9.7%)
6	43~(4.3%)
HAVING_n_of_main_predicatesscalar_subquery	
θ	413 (41%)
1	176 (18%)
2	221 (22%)
3	190 (19%)
HAVING_n_of_subqueriesscalar_subquery	$[0.0, 1.0, 20.0] \ 2.5 \ / \ 3.6$
HAVING_n_of_processed_rows_by_subqueries ORDER_BY_n_of_columns	$[0, 29,063, 4,659,325] \ 299,104 \ / \ 606,998$
0	292~(29%)
1	344 (34%)
2	$222\ (22\%)$
3	100 (10%)
4	20~(2.0%)
5	9~(0.9%)
6	9~(0.9%)

Query parameter or value	Descriptive statistics
$\overline{\gamma}$	4 (0.4%)
limit	[1, 471, 1,000] 477 / 294
offset	[0, 0, 999] 231 / 313