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

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## Scenario: 1-3jp_ujjp__g_hOss_hOnss

## Scale factor: 100 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, 107] 11 / 14	
SELECT_n_of_non_aggr_funcLOG		
0	895 (90%)	
1	88 (8.8%)	
2	15 (1.5%)	
3	$2\ (0.2\%)$	
SELECT_n_of_non_aggr_funcLTRIM		
0	694~(69%)	
1	$233\ (23\%)$	
2	57 (5.7%)	
3	9~(0.9%)	
4	3(0.3%)	
5	2(0.2%)	
6	2(0.2%)	
$SELECT_n_of_non_aggr_func__RTRIM$. ,	

Query parameter or value	Descriptive statistics
0	697 (70%)
1	232 (23%)
2	47 (4.7%)
3	17 (1.7%)
4	5~(0.5%)
5	1 (0.1%)
8	1 (0.1%)
SELECT_n_of_non_aggr_funcLOWER	
0	684 (68%)
1	$229\ (23\%)$
2	$65\ (\hat{6}.5\%)$
3	14(1.4%)
4	$3\ (0.3\%)$
5	4~(0.4%)
6	1 (0.1%)
SELECT_n_of_non_aggr_funcUPPER	(- , -)
0	704 (70%)
1	219 (22%)
2	64 (6.4%)
3	7 (0.7%)
4	4 (0.4%)
5	2(0.2%)
SELECT_n_of_non_aggr_funcABS	= (0:=/0)
0	946 (95%)
1	44 (4.4%)
2	6 (0.6%)
3	3 (0.3%)
4	1 (0.1%)
SELECT_n_of_non_aggr_funcSUBSTR	1 (0.170)
0	680 (68%)
1	240 (24%)
2	65 (6.5%)
3	10 (1.0%)
	3 (0.3%)
<i>4 5</i>	1 (0.1%)
6	1 (0.1%) $1 (0.1%)$
SELECT_n_of_non_aggr_funcSQRT	1 (0.1/0)
0	829 (83%)
1	133 (13%)
2	24 (2.4%)
3	8(0.8%)
	4 (0.4%)
<i>4 5</i>	4(0.4%) $1(0.1%)$
8	1 (0.1%) $1 (0.1%)$
	1 (U.1/0)
SELECT_n_of_non_aggr_funcFLOOR 0	958 (96%)
U	990 (90/0)

Query parameter or value	Descriptive statistics
1	37 (3.7%)
2	4 (0.4%)
3	1 (0.1%)
SELECT_n_of_non_aggr_funcDOW	
0	891 (89%)
1	85 (8.5%)
2	16 (1.6%)
3	6 (0.6%)
5	2~(0.2%)
$SELECT_n_of_non_aggr_func__MONTH$	
0	$852 \ (85\%)$
1	106 (11%)
2	31 (3.1%)
3	$4\ (0.4\%)$
4	3~(0.3%)
5	2~(0.2%)
6	$2\;(0.2\%)$
SELECT_n_of_non_aggr_funcTRUNC	
0	947 (95%)
1	52 (5.2%)
2	1 (0.1%)
SELECT_n_of_non_aggr_funcYEAR	
0	880 (88%)
1	$86 \ (8.6\%)$
2	22 (2.2%)
3	9~(0.9%)
4	2~(0.2%)
5	1~(0.1%)
SELECT_n_of_non_aggr_funcDAY	
0	901 (90%)
1	80 (8.0%)
2	$14 \ (1.4\%)$
3	$3\ (0.3\%)$
4	1 (0.1%)
5	1 (0.1%)
SELECT_n_of_non_aggr_funcROUND	
0	947 (95%)
1	$46 \ (4.6\%)$
2	7 (0.7%)
SELECT_n_of_all_non_aggr_func	[0.0, 2.0, 46.0] 3.3 / 4.8
SELECT_n_of_aggr_funcMIN	[0.00,0.00,10.00]0.57/1.33
SELECT_n_of_aggr_funcSUM	
0	942~(94%)
1	44 (4.4%)
2	9~(0.9%)
3	4~(0.4%)

Total Color	Query parameter or value	Descriptive statistics
SELECT_n_of_aggr_funeCOUNT_DISTINCT 773 (77%) 0 775 (7.5%) 1 75 (7.5%) 2 57 (5.7%) 3 39 (3.9%) 4 28 (2.8%) 5 18 (1.8%) 6 4 (0.4%) 8 2 (0.2%) SELECT_n_of_aggr_funeAVG 932 (93%) 1 50 (5.0%) 2 13 (1.3%) 3 5 (0.5%) SELECT_n_of_aggr_funeCOUNT [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT_n_of_all_aggr_fune [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT_n_of_aggr_funeCOUNT [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT_n_of_aggr_fune [0	4	1 (0.1%)
0 773 (77%) 1 75 (7.5%) 2 57 (5.7%) 3 39 (3.9%) 4 28 (2.8%) 5 18 (1.8%) 6 4 (0.4%) 7 4 (0.4%) 8 2 (0.2%) SELECT n of aggr func AVG 932 (93%) 0 932 (93%) 1 50 (5.0%) 2 13 (1.3%) 3 5 (0.5%) SELECT n of aggr func COUNT [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT n of aggr func 200 (0.00, 9.00] 0.61 / 1.48 SELECT n of aggr func 200 (0.00, 9.00] 0.61 / 1.48 SELECT n of all aggr func [0.00, 0.00, 9.0] 0.61 / 1.48 <		[0.00,0.00,11.00]0.70/1.57
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4 28 (2.8%) 5 18 (1.8%) 6 4 (0.4%) 7 4 (0.4%) 8 2 (0.2%) SELECT_n_of_aggr_func_AVG 0 932 (93%) 1 50 (5.0%) 2 13 (1.3%) 3 5 (0.5%) SELECT_n_of_aggr_func_COUNT [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT_n_of_all_aggr_func [0.00, 2.00, 11.00] 2.63 / 2.30 FROM_n_of_join_paths 1 359 (36%) 2 324 (32%) 3 317 (32%) FROM_n_of_super_joins_FULL 0 778 (78%) 1 203 (20%) 2 19 (1.9%) FROM_n_of_super_joins_RIGHT 0 795 (80%) 1 184 (18%) 2 21 (2.1%) FROM_n_of_super_joins_LEFT 0 784 (78%) 1 192 (19%) 2 24 (2.4%) FROM_n_of_joins_INNER 0 263 (26%) 1 263 (26%) 2 224 (22%) 3 3118 (12%) 4 72 (7.2%) 5 33 (3.3%) 6 6 16 (1.6%) 7 6 (0.6%) 8 5 (0.5%)		,
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$\begin{array}{c} 0 & 932 \ (93\%) \\ 1 & 50 \ (5.0\%) \\ 2 & 13 \ (1.3\%) \\ 3 & 5 \ (0.5\%) \\ \\ \text{SELECT_n_of_aggr_func} COUNT \\ \text{SELECT_n_of_all_aggr_func} & [0.00, 0.00, 9.00] \ 0.61 \ / \ 1.48 \\ \text{SELECT_n_of_all_aggr_func} & [0.00, 2.00, 11.00] \ 2.63 \ / \ 2.30 \\ \text{FROM_n_of_join_paths} \\ 1 & 359 \ (36\%) \\ 2 & 324 \ (32\%) \\ 3 & 317 \ (32\%) \\ \\ \text{FROM_n_of_super_joins_FULL} \\ 0 & 778 \ (78\%) \\ 1 & 203 \ (20\%) \\ 2 & 19 \ (1.9\%) \\ \\ \text{FROM_n_of_super_joins_RIGHT} \\ 0 & 795 \ (80\%) \\ 1 & 184 \ (18\%) \\ 2 & 21 \ (2.1\%) \\ \\ \text{FROM_n_of_super_joins_LEFT} \\ 0 & 784 \ (78\%) \\ 1 & 192 \ (19\%) \\ 2 & 24 \ (2.4\%) \\ \\ \text{FROM_n_of_joins_INNER} \\ 0 & 263 \ (26\%) \\ 1 & 263 \ (26\%) \\ 2 & 224 \ (22\%) \\ 3 & 118 \ (12\%) \\ 4 & 72 \ (7.2\%) \\ 5 & 33 \ (3.3\%) \\ 6 & 6 \ (16 \ (1.6\%) \\ 7 & 6 \ (0.6\%) \\ 8 & 5 \ (0.5\%) \\ \end{array}$		2 (0.2%)
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3 5 (0.5%) SELECT_n_of_aggr_funcCOUNT [0.00, 0.00, 9.00] 0.61 / 1.48 SELECT_n of all_aggr_func [0.00, 2.00, 11.00] 2.63 / 2.30 FROM_n_of_join_paths 359 (36%) 2 324 (32%) 3 317 (32%) FROM_n_of_super_joinsFULL 778 (78%) 1 203 (20%) 2 19 (1.9%) FROM_n_of_super_joinsRIGHT 795 (80%) 1 184 (18%) 2 21 (2.1%) FROM_n_of_super_joinsLEFT 784 (78%) 1 192 (19%) 2 24 (2.4%) FROM_n_of_joinsINNER 263 (26%) 2 224 (22%) 3 118 (12%) 4 72 (7.2%) 5 33 (3.3%) 6 16 (1.6%) 7 6 (0.6%) 8 5 (0.5%)		, ,
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1 184 (18%) 2 21 (2.1%) FROM_n_of_super_joins_LEFT 0 784 (78%) 1 192 (19%) 2 24 (2.4%) FROM_n_of_joins_INNER 0 263 (26%) 1 263 (26%) 2 224 (22%) 3 118 (12%) 4 72 (7.2%) 5 33 (3.3%) 6 16 (1.6%) 7 6 (0.6%) 8 5 (0.5%)	FROM_n_of_super_joinsRIGHT	
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FROM_n_of_super_joinsLEFT 0		, ,
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1 192 (19%) 2 24 (2.4%) FROM_n_of_joins_INNER 0 263 (26%) 1 263 (26%) 2 224 (22%) 3 118 (12%) 4 72 (7.2%) 5 33 (3.3%) 6 16 (1.6%) 7 6 (0.6%) 8		
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2 224 (22%) 3 118 (12%) 4 72 (7.2%) 5 33 (3.3%) 6 16 (1.6%) 7 6 (0.6%) 8 5 (0.5%)		, ,
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6 16 (1.6%) 7 6 (0.6%) 8 5 (0.5%)	4 5	,
$egin{array}{cccccccccccccccccccccccccccccccccccc$, ,
5~(0.5%)		, ,
,		` ,
	FROM_n_of_joinsRIGHT	0.070)

Query parameter or value	Descriptive statistics
9	245 (25%)
1	250 (25%)
2	$230\ (23\%)$
3	136 (14%)
4	79 (7.9%)
5	28 (2.8%)
\mathcal{G}	26 (2.6%)
7	6 (0.6%)
FROM_n_of_processed_rows	[5, 681,037,927, 2,295,113,731] 660,041,223 /
	622,698,872
$WHERE_n_of_predicates$	[0.00, 2.00, 10.00] 2.80 / 2.23
WHERE_n_of_attribs_of_typecharac	
9	$447 \ (45\%)$
1	323~(32%)
2	174 (17%)
3	$42 \ (4.2\%)$
4	9~(0.9%)
5	5~(0.5%)
WHERE_n_of_attribs_of_typecharac	eter
)	700 (70%)
!	243~(24%)
2	$47 \ (4.7\%)$
3	7 (0.7%)
4	$3\ (0.3\%)$
WHERE_n_of_attribs_of_typenumer	· · · · · · · · · · · · · · · · · · ·
9	632~(63%)
1	$265\ (27\%)$
2	82 (8.2%)
3	18(1.8%)
4	3~(0.3%)
$WHERE_n_of_attribs_of_type__integen$, ,
=========0	448 (45%)
1	326 (33%)
2	150 (15%)
3	61 (6.1%)
4	14 (1.4%)
6	1 (0.1%)
WHERE_n_of_attribs_of_typedate	1 (0.170)
9	832 (83%)
) 1	133 (13%)
	31 (3.1%)
z 3	` /
	4 (0.4%)
WHERE_n_of_pkey_attribs	694 (6907)
9	624 (62%)
1	279 (28%)
2	80 (8.0%)

Query parameter or value	Descriptive statistics
3	15 (1.5%)
4	1 (0.1%)
5	1 (0.1%)
WHERE_n_of_connect_OR	,
0	455~(46%)
1	185 (19%)
2	124~(12%)
3	109 (11%)
4	62~(6.2%)
5	39 (3.9%)
6	$21 \ (2.1\%)$
γ	3~(0.3%)
8	2~(0.2%)
$WHERE_n_of_operators__greater_or_less$	
0	417 (42%)
1	309 (31%)
2	$158 \; (16\%)$
3	$78 \ (7.8\%)$
4	29~(2.9%)
5	6~(0.6%)
6	$2\;(0.2\%)$
7	1~(0.1%)
WHERE_n_of_operatorsbetween	
0	618 (62%)
1	275 (28%)
2	78 (7.8%)
3	23 (2.3%)
4	6~(0.6%)
WHERE_n_of_operatorsin	010 (0104)
0	612 (61%)
1	278 (28%)
2	87 (8.7%)
3	19 (1.9%)
WHERE a of an anatom library	4 (0.4%)
WHERE_n_of_operatorslike	099 (0907)
0	823 (82%)
1	165 (17%)
WHERE n of non agen func. TRUNC	$12 \ (1.2\%)$
WHERE_n_of_non_aggr_funcTRUNC	071 (0707)
0	971 (97%)
1 WHERE n of non-agen fine FLOOR	29 (2.9%)
WHERE_n_of_non_aggr_funcFLOOR	064 (0697)
0	964 (96%)
1	$36 \ (3.6\%)$
WHERE_n_of_non_aggr_funcLOG	0.4.4 (0.4.07.)
0	944~(94%)

Query parameter or value	Descriptive statistics
1	55 (5.5%)
2	1 (0.1%)
WHERE_n_of_non_aggr_funcDOW	,
0	968 (97%)
1	$30\ (3.0\%)$
2	2(0.2%)
WHERE_n_of_non_aggr_funcSQRT	` ,
0	890 (89%)
1	106 (11%)
2	4 (0.4%)
WHERE_n_of_non_aggr_funcYEAR	
0	973 (97%)
1	$27 \ (2.7\%)$
WHERE_n_of_non_aggr_funcMONTH	
0	968 (97%)
1	$32\ (3.2\%)$
WHERE_n_of_non_aggr_funcDAY	
0	975 (98%)
1	25~(2.5%)
WHERE_n_of_non_aggr_funcROUND	·
0	978 (98%)
1	$22\ (2.2\%)$
WHERE_n_of_non_aggr_funcABS	
0	$969 \; (97\%)$
1	31 (3.1%)
WHERE_n_of_all_non_aggr_func	
0	683~(68%)
1	240 (24%)
2	65~(6.5%)
3	11 (1.1%)
4	1 (0.1%)
GROUP_BY_n_of_columns	[0.00, 2.00, 10.00] 2.37 / 2.14
HAVING_n_of_main_predicates	
0	$438 \ (44\%)$
1	187 (19%)
2	187 (19%)
3	188 (19%)
ORDER_BY_n_of_columns	
0	299 (30%)
1	366 (37%)
2	245~(25%)
3	66~(6.6%)
4	$16 \ (1.6\%)$
5	2~(0.2%)
6	5~(0.5%)
7	1 (0.1%)

Query parameter or value	Descriptive statistics
limit	[4, 494, 1,000] 492 / 290
offset	[0, 0, 999] 239 / 321