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

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## Scenario: 1-6jp_rjjp__g_hOss_hOnss

## Scale factor: 10 GB

## The 1000-query pack was generated on: 2023-11-12

## 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, 184] 16 / 24	
SELECT_n_of_non_aggr_funcABS		
0	906 (91%)	
1	78 (7.8%)	
2	$13 \ (1.3\%)$	
3	$2 \ (0.2\%)$	
5	1 (0.1%)	
SELECT_n_of_non_aggr_funcDAY		
0	885 (89%)	
1	84 (8.4%)	
2	22~(2.2%)	
3	$3\;(0.3\%)$	
4	1 (0.1%)	
5	5~(0.5%)	
SELECT_n_of_non_aggr_funcDOW		

Query parameter or value	Descriptive statistics
0	855 (86%)
1	105 (11%)
2	$26\ (2.6\%)$
3	8 (0.8%)
4	3(0.3%)
5	3~(0.3%)
SELECT_n_of_non_aggr_funcLOG	,
0	867 (87%)
1	107 (11%)
2	$13\ (1.3\%)$
3	7 (0.7%)
4	4~(0.4%)
5	2~(0.2%)
$SELECT_n_of_non_aggr_func__LOWER$	
0	638 (64%)
1	234 (23%)
2	88 (8.8%)
3	$17 \ (1.7\%)$
4	9~(0.9%)
5	7 (0.7%)
6	$3\;(0.3\%)$
7	$2\;(0.2\%)$
9	$2\;(0.2\%)$
SELECT_n_of_non_aggr_funcLTRIM	[0.00,0.00,11.00]0.62/1.03
SELECT_n_of_non_aggr_funcMONTH	[0.00, 0.00, 10.00] 0.32 / 0.90
SELECT_n_of_non_aggr_funcROUND	(04)
0	930 (93%)
1	61 (6.1%)
2	6 (0.6%)
g control of property	3 (0.3%)
SELECT_n_of_non_aggr_funcRTRIM	[0.00, 0.00, 10.00] 0.63 / 1.11
SELECT_n_of_non_aggr_funcSQRT	00= (010)
0	807 (81%)
1	132 (13%)
2	31 (3.1%)
3	13 (1.3%)
<i>4 5</i>	9 (0.9%)
6	7 (0.7%)
	1 (0.1%)
SELECT_n_of_non_aggr_funcSUBSTR 0	625 (6207)
<i>0 1</i>	$625~(63\%) \ 256~(26\%)$
1 11	1 (0.1%)
2	71 (7.1%)
$\frac{z}{3}$	$\frac{71}{27} \frac{(7.1\%)}{(2.7\%)}$
	9(0.9%)
4	9 (0.9/0)

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Query parameter or value	Descriptive statistics
9	5	7 (0.7%)
SELECT_n_of_non_aggr_funcTRUNC 0	7	3~(0.3%)
0 919 (92%) 1 66 (6.6%) 2 11 (1.1%) 3 4 (0.4%) SELECT_n_of_non_aggr_func_UPPER SELECT_n_of_non_aggr_func_YEAR 0 822 (82%) 1 122 (12%) 2 33 (3.3%) 3 11 (1.1%) 4 7 (0.7%) 5 2 (0.2%) 6 1 (0.1%) 7 (0.7%) 5 2 (0.2%) 8ELECT_n_of_non_aggr_func_FLOOR 0 909 (91%) 1 77 (7.7%) 2 99 (9.9%) 3 4 (0.4%) 4 1 (0.1%) 3 4 (0.4%) 4 (0.4%) 4 (0.4%) 4 (0.0, 0.00, 13.00] 0.84 / 1.96 8ELECT_n_of_aggr_func_MIN [0.00, 0.00, 13.00] 0.84 / 1.96 8ELECT_n_of_aggr_func_MAX [0.00, 0.00, 13.00] 0.84 / 1.92 8ELECT_n_of_aggr_func_SUM 0 917 (92%) 1 45 (4.5%) 2 25 (2.5%) 3 12 (1.2%) 4 5ELECT_n_of_aggr_func_COUNT_DISTINCT [0.00, 0.00, 11.00] 0.79 / 1.85 8ELECT_n_of_aggr_func_AVG 0 935 (94%)	9	1 (0.1%)
1 66 (6.6%) 2 11 (1.1%) 3 4 (0.4%) SELECT_n_of_non_aggr_funcUPPER SELECT_n_of_non_aggr_funcYEAR 0 822 (82%) 1 122 (12%) 2 33 (3.3%) 3 11 (1.1%) 4 7 (0.7%) 5 2 (0.2%) 6 1 (0.1%) 7 2 (0.2%) 8ELECT_n_of_non_aggr_funcFLOOR 909 (91%) 0 909 (91%) 1 77 (7.7%) 2 9 (0.9%) 3 4 (0.4%) 4 1 (0.1%) SELECT_n_of_all_non_aggr_func [0.0, 3.0, 74.0] 4.9 / 7.7 SELECT_n_of_aggr_funcMAX [0.00, 0.00, 13.00] 0.84 / 1.96 SELECT_n_of_aggr_funcSUM [0.00, 0.00, 11.00] 0.86 / 1.92 SELECT_n_of_aggr_funcSUM 917 (92%) 4 45 (4.5%) 2 25 (2.5%) 3 12 (1.2%) 4 1 (0.1%) SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 11.00] 0.79 / 1.85 SELECT_n_of_aggr	SELECT_n_of_non_aggr_funcTRUNC	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0	919 (92%)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1	$66 \ (6.6\%)$
SELECT_n_of_non_aggr_funcUPPER SELECT_n_of_non_aggr_funcYEAR 0	2	11 (1.1%)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3	4 (0.4%)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	SELECT n of non aggr func UPPER	, ,
$\begin{array}{cccccccccccccccccccccccccccccccccccc$, , ,
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		822 (82%)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		` '
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2 (0.270)
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SELECT_n_of_all_non_aggr_func [0.0, 3.0, 74.0] 4.9 / 7.7 SELECT_n_of_aggr_funcMIN [0.00, 0.00, 13.00] 0.84 / 1.96 SELECT_n_of_aggr_funcMAX [0.00, 0.00, 11.00] 0.86 / 1.92 SELECT_n_of_aggr_funcCOUNT [0.00, 0.00, 13.00] 0.92 / 2.09 SELECT_n_of_aggr_funcSUM 917 (92%) 4 45 (4.5%) 2 25 (2.5%) 3 12 (1.2%) 4 1 (0.1%) SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 11.00] 0.79 / 1.85 SELECT_n_of_aggr_funcAVG 935 (94%)	<i>3</i>	, ,
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SELECT_n_of_aggr_func MAX [0.00, 0.00, 11.00] 0.86 / 1.92 SELECT_n_of_aggr_func COUNT [0.00, 0.00, 13.00] 0.92 / 2.09 SELECT_n_of_aggr_func SUM 0 917 (92%) 1 45 (4.5%) 2 25 (2.5%) 3 12 (1.2%) 4 1 (0.1%) SELECT_n_of_aggr_func COUNT_DISTINCT [0.00, 0.00, 11.00] 0.79 / 1.85 SELECT_n_of_aggr_func AVG 0 935 (94%)		
SELECT_n_of_aggr_funcCOUNT [0.00, 0.00, 13.00] 0.92 / 2.09 SELECT_n_of_aggr_funcSUM 917 (92%) 1 45 (4.5%) 2 25 (2.5%) 3 12 (1.2%) 4 1 (0.1%) SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 11.00] 0.79 / 1.85 SELECT_n_of_aggr_funcAVG 935 (94%)		
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_ = = 00 =	$[0.00, 0.00, 13.00] \ 0.92 \ / \ 2.09$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		017 (0907)
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SELECT_n_of_aggr_funcCOUNT_DISTINCT [0.00, 0.00, 11.00] 0.79 / 1.85 SELECT_n_of_aggr_funcAVG 935 (94%)		,
SELECT_n_of_aggr_funcAVG 935 (94%)		,
935 (94%)		$[0.00, 0.00, 11.00] \ 0.79 \ / \ 1.85$
,		007 (0104)
47 (4.7%)		, ,
·		` ,
2 12 (1.2%)		` ,
5 (0.5%)	3	,
4 1 (0.1%)		,
SELECT_n_of_all_aggr_func $[0.0, 3.0, 15.0] 3.6 / 3.2$		[0.0, 3.0, 15.0] 3.6 / 3.2
	FROM_n_of_join_paths	
169 (17%)		, ,
2 171 (17%)		` '
3 177 (18%)	3	177 (18%)

Query parameter or value	Descriptive statistics
4	171 (17%)
5	151 (15%)
6	161 (16%)
FROM_n_of_super_joinsLEFT	
0	559 (56%)
1	316 (32%)
2	101 (10%)
3	$22\ (2.2\%)$
4	$2\;(0.2\%)$
FROM_n_of_super_joinsRIGHT	
0	556~(56%)
1	302 (30%)
2	114 (11%)
3	$24\ (2.4\%)$
4	4(0.4%)
FROM_n_of_super_joinsFULL	
0	552~(55%)
1	313 (31%)
2	100 (10%)
3	31 (3.1%)
4	4(0.4%)
FROM_n_of_joinsINNER	[0.00, 3.00, 13.00] $3.34 / 2.42$
FROM_n_of_joinsRIGHT	[0.00, 3.00, 13.00] 3.37 / 2.56
FROM_n_of_processed_rows	[5, 96,182,398, 444,380,565] 121,975,035 / 96,136,908
WHERE_n_of_predicates	[0.00, 3.00, 12.00] 3.91 / 3.00
$WHERE_n_of_attribs_of_type__integer$	
0	357~(36%)
1	281~(28%)
2	185 (19%)
3	110 (11%)
4	45~(4.5%)
5	$16 \ (1.6\%)$
6	$3\;(0.3\%)$
7	$3\;(0.3\%)$
WHERE_n_of_attribs_of_typecharact	ser
0	645~(65%)
1	257~(26%)
2	74 (7.4%)
3	$22\ (2.2\%)$
4	$2\;(0.2\%)$
WHERE_n_of_attribs_of_typecharact	ser_varying
0	371 (37%)
1	$275\ (28\%)$
2	181 (18%)
3	109 (11%)
4	$42\ (4.2\%)$
	•

Query parameter or value	Descriptive statistics
5	20 (2.0%)
6	2~(0.2%)
WHERE_n_of_attribs_of_typedate	
)	774 (77%)
1	184 (18%)
2	$35\ (3.5\%)$
3	6~(0.6%)
4	$1\ (0.1\%)$
WHERE_n_of_attribs_of_typenumeric	,
9	566 (57%)
1	294 (29%)
2	99 (9.9%)
3	31 (3.1%)
	6 (0.6%)
4 5	3 (0.3%)
7	1 (0.1%)
WHERE_n_of_pkey_attribs	1 (0.170)
y results of prey_attribs	594 (5907)
	524 (52%) 300 (30%)
1	,
	118 (12%)
3	50 (5.0%)
4	6 (0.6%)
5	2 (0.2%)
WHERE_n_of_connect_OR	$[0.00, 1.00, 11.00] \ 2.26 \ / \ 2.47$
WHERE_n_of_operatorsin	(1.104)
9	540 (54%)
1	275 (28%)
2	$138 \ (14\%)$
3	37 (3.7%)
4	8 (0.8%)
5	2~(0.2%)
WHERE_n_of_operatorsbetween	
)	516 (52%)
1	305 (31%)
2	127 (13%)
3	$42 \ (4.2\%)$
4	7 (0.7%)
õ	3~(0.3%)
WHERE_n_of_operatorsgreater_or_less WHERE_n_of_operatorslike	[0.00, 1.00, 9.00] $1.55 / 1.56$
)	797 (80%)
0 1	170 (17%)
	. ,
2	29 (2.9%)
3	3(0.3%)
4	1 (0.1%)
WHERE_n_of_non_aggr_funcLOG	

Query parameter or value	Descriptive statistics
0	921 (92%)
1	75 (7.5%)
2	4 (0.4%)
WHERE_n_of_non_aggr_funcDAY	,
0	964~(96%)
1	$36\ (3.6\%)$
WHERE_n_of_non_aggr_funcFLOOR	
0	954~(95%)
1	$45\ (4.5\%)$
2	1 (0.1%)
WHERE_n_of_non_aggr_funcTRUNC	(/
0	965 (97%)
1	32 (3.2%)
2	2 (0.2%)
4	1 (0.1%)
WHERE_n_of_non_aggr_funcROUND	1 (0.170)
0	967 (97%)
1	33 (3.3%)
WHERE_n_of_non_aggr_funcSQRT	33 (3.370)
0	876 (88%)
1	110 (11%)
2	13 (1.3%)
3	1 (0.1%)
WHERE_n_of_non_aggr_funcDOW	1 (0.170)
0	962 (96%)
1	35 (3.5%)
2	3(0.3%)
WHERE n of non aggr func YEAR	3(0.3%)
	954 (95%)
0	, ,
1 2	$\begin{array}{c} 45 \ (4.5\%) \\ 1 \ (0.1\%) \end{array}$
	1 (0.170)
WHERE_n_of_non_aggr_funcABS	057 (0607)
0	957 (96%)
1	42 (4.2%)
2 WHERE C. MONTH	$1\ (0.1\%)$
WHERE_n_of_non_aggr_funcMONTH	062 (0204)
0	967 (97%)
1	$33 \; (3.3\%)$
WHERE_n_of_all_non_aggr_func	000 (000)
0	626 (63%)
1	249 (25%)
2	93 (9.3%)
3	23 (2.3%)
4	6 (0.6%)
5	3~(0.3%)
GROUP_BY_n_of_columns	[0.00, 3.00, 12.00] 3.14 / 2.94

Query parameter or value	Descriptive statistics
HAVING_n_of_main_predicates	
0	446~(45%)
1	$192\ (19\%)$
2	169~(17%)
3	193~(19%)
ORDER_BY_n_of_columns	
0	312~(31%)
1	327~(33%)
2	220~(22%)
3	101 (10%)
4	$19\ (1.9\%)$
5	$9\;(0.9\%)$
6	6~(0.6%)
γ	5~(0.5%)
8	1~(0.1%)
limit	[2, 501, 999] 500 / 279
offset	$[0, 0, 1,000] \ 246 \ / \ 323$