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

```
## Scenario: 1-6jp_ujjp__g_hOss_hOnss

## Scale factor: 200 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, 8, 157] 16 / 24	
SELECT_n_of_non_aggr_funcLOWER	• · · · · • • · · · · · · · · · · · · ·	
0	641~(64%)	
1	$255\ (26\%)$	
2	57 (5.7%)	
3	$25\ (2.5\%)$	
4	9 (0.9%)	
5	$6\ (0.6\%)$	
6	3(0.3%)	
8	2(0.2%)	
9	2(0.2%)	
SELECT_n_of_non_aggr_funcRTRIM	,	
0	632~(63%)	
1	$237\ (24\%)$	
2	83 (8.3%)	
	,	

Query parameter or value	Descriptive statistics
3	21 (2.1%)
4	9 (0.9%)
5	10(1.0%)
6	6(0.6%)
7	2(0.2%)
SELECT_n_of_non_aggr_funcSUBSTR	
0	625~(63%)
1	248~(25%)
2	71 (7.1%)
3	26~(2.6%)
4	16~(1.6%)
5	6~(0.6%)
6	$3\ (0.3\%)$
7	2(0.2%)
8	$3\ (0.3\%)$
SELECT_n_of_non_aggr_funcUPPER	
0	607 (61%)
1	268 (27%)
2	75 (7.5%)
3	$23\ (2.3\%)$
4	11 (1.1%)
5	8 (0.8%)
6	5~(0.5%)
7	3~(0.3%)
SELECT_n_of_non_aggr_funcMONTH	
0	819 (82%)
1	124~(12%)
2	$24\ (2.4\%)$
3	19~(1.9%)
4	6~(0.6%)
5	1~(0.1%)
6	3~(0.3%)
γ	1 (0.1%)
8	3(0.3%)
0	` /
1	, ,
3	
4	
	, ,
	3(0.3%)
	, ,
	1~(0.1%)
SELECT_n_of_non_aggr_funcLOG	
θ	852 (85%)
SELECT_n_of_non_aggr_funcYEAR 0 1 2 3 4 5 7 8 9	831 (83%) 109 (11%) 32 (3.2%) 13 (1.3%) 6 (0.6%) 3 (0.3%) 3 (0.3%) 2 (0.2%)

Query parameter or value	Descriptive statistics
1	105 (11%)
2	25~(2.5%)
3	9 (0.9%)
4	4(0.4%)
5	2~(0.2%)
6	2~(0.2%)
8	1~(0.1%)
$SELECT_n_of_non_aggr_func__LTRIM$	
0	611 (61%)
1	257 (26%)
2	79 (7.9%)
3	28~(2.8%)
4	11 (1.1%)
5	9~(0.9%)
6	2~(0.2%)
γ	1~(0.1%)
8	2~(0.2%)
SELECT_n_of_non_aggr_funcROUND	
0	$920 \ (92\%)$
1	$66 \; (6.6\%)$
2	$12 \ (1.2\%)$
3	2~(0.2%)
SELECT_n_of_non_aggr_funcSQRT	
0	781 (78%)
1	153~(15%)
2	37 (3.7%)
3	14 (1.4%)
4	7 (0.7%)
5	5(0.5%)
6	2(0.2%)
	1 (0.1%)
SELECT_n_of_non_aggr_funcDOW	007 (0404)
0	835 (84%)
1	120 (12%)
2	22 (2.2%)
3	13 (1.3%)
4	6 (0.6%)
5	1 (0.1%)
	3~(0.3%)
SELECT_n_of_non_aggr_funcDAY	001 (0007)
0	891 (89%)
1	79 (7.9%)
2	21 (2.1%)
3	6 (0.6%)
<i>4 5</i>	2 (0.2%)
∂	1 (0.1%)

Query parameter or value	Descriptive statistics
SELECT_n_of_non_aggr_funcFLOOR	
0	921 (92%)
1	64 (6.4%)
2	11 (1.1%)
3	4(0.4%)
SELECT_n_of_non_aggr_funcABS	
0	$919 \; (92\%)$
1	66~(6.6%)
2	$11 \ (1.1\%)$
3	1 (0.1%)
4	$3\;(0.3\%)$
SELECT_n_of_non_aggr_funcTRUNC	
θ	917 (92%)
1	65 (6.5%)
2	14 (1.4%)
3	4 (0.4%)
SELECT_n_of_all_non_aggr_func	[0, 3, 68] 5 / 8
SELECT_n_of_aggr_funcCOUNT_DISTINCT	[0.00, 0.00, 14.00] $[0.86]$ $[0.04]$
SELECT_n_of_aggr_funcMAX	[0.00, 0.00, 11.00] $0.84 / 1.85$
SELECT_n_of_aggr_funcCOUNT	[0.00, 0.00, 11.00] $[0.73]$ $[0.73]$
SELECT_n_of_aggr_funcMIN	[0.00, 0.00, 11.00] 0.73 / 1.76
SELECT_n_of_aggr_funcAVG	000 (0007)
0	933 (93%)
1	43 (4.3%)
2	19 (1.9%)
3 CELECT p of each func. CHM	5~(0.5%)
SELECT_n_of_aggr_funcSUM 0	941 (94%)
1	45 (4.5%)
2	13 (1.3%)
2 3	1 (0.1%)
SELECT_n_of_all_aggr_func	[0.00, 3.00, 14.00] $[0.00, 3.00, 14.00]$ $[0.00, 3.00, 14.00]$
FROM_n_of_join_paths	[0.00, 0.00, 11.00] 0.02 / 2.01
1	180 (18%)
2	173 (17%)
3	176 (18%)
4	185 (19%)
5	138 (14%)
6	$148\ (15\%)$
FROM_n_of_super_joinsLEFT	,
0 = = = 1 \rightarrow ==	567 (57%)
1	310 (31%)
2	100 (10%)
3	$19\ (1.9\%)$
4	4 (0.4%)
$FROM_n_of_super_joins__RIGHT$	

Query parameter or value	Descriptive statistics
0	560 (56%)
1	305 (31%)
2	110 (11%)
3	$21\ (2.1\%)$
4	4 (0.4%)
FROM_n_of_super_joinsFULL	` ,
0	572 (57%)
1	314 (31%)
2	89 (8.9%)
3	$22\ (2.2\%)$
4	3(0.3%)
FROM_n_of_joinsINNER	$[0.00, 3.00, 13.00] \ 3.15 \ / \ 2.43$
FROM_n_of_joinsRIGHT	[0.00, 3.00, 14.00] 3.11 / 2.42
FROM_n_of_processed_rows	[5, 1,693,018,547, 8,390,110,684] 2,262,257,826 /
rtow_n_or_processed_rows	1,914,541,451
WHERE_n_of_predicates	[0.00, 3.00, 12.00] 3.67 / 2.89
WHERE_n_of_attribs_of_typecha	
where_n_or_atthos_or_typecha 0	
	372 (37%)
1	299 (30%)
2	187 (19%)
3	93 (9.3%)
4	35 (3.5%)
5	9 (0.9%)
6	4 (0.4%)
7	$1 \; (0.1\%)$
WHERE_n_of_attribs_of_typeint	-
0	374 (37%)
1	$288 \; (29\%)$
2	$171 \ (17\%)$
3	$99 \; (9.9\%)$
4	$49 \; (4.9\%)$
5	$12 \ (1.2\%)$
6	5~(0.5%)
γ	2~(0.2%)
WHERE_n_of_attribs_of_typenu	meric
0	601 (60%)
1	255 (26%)
2	107 (11%)
3	$32\ (3.2\%)$
4	$3\ (0.3\%)^{'}$
5	2(0.2%)
WHERE_n_of_attribs_of_typecha	, ,
θ	669 (67%)
1	241 (24%)
2	75 (7.5%)
3	15 (1.5%)
σ	19 (1.9/0)

Query parameter or value	Descriptive statistics
WHERE_n_of_attribs_of_typedate	
0	796 (80%)
1	161 (16%)
2	$37\ (3.7\%)$
3	6 (0.6%)
WHERE_n_of_pkey_attribs	,
0	527 (53%)
1	302 (30%)
2	120 (12%)
3	40 (4.0%)
4	10 (1.0%)
5	1 (0.1%)
$WHERE_n_of_connect_OR$	$[0.00, 1.00, 11.00] \ 2.05 \ / \ 2.35$
WHERE_n_of_operatorsbetween	
0	531 (53%)
1	267 (27%)
2	151 (15%)
3	$39\ (3.9\%)$
4	10 (1.0%)
5	1 (0.1%)
6	1 (0.1%)
WHERE_n_of_operatorsgreater_or_less	
0	345 (35%)
1	273 (27%)
2	191 (19%)
3	$119\ (12\%)$
4	37 (3.7%)
5	27(2.7%)
6	6 (0.6%)
7	2(0.2%)
WHERE_n_of_operatorsin	
0	555 (56%)
1	280 (28%)
2	$117\ (12\%)$
3	$31\ (3.1\%)$
4	$12\;(1.2\%)$
5	5~(0.5%)
WHERE_n_of_operatorslike	,
0	795 (80%)
1	177 (18%)
2	$25 \ (2.5\%)$
3	3~(0.3%)
WHERE_n_of_non_aggr_funcDAY	, ,
0	962 (96%)
1	36 (3.6%)
2	$2\;(0.2\%)^{'}$
	,

Query parameter or value	Descriptive statistics
WHERE_n_of_non_aggr_funcLOG	
0	905 (91%)
1	91 (9.1%)
2	4 (0.4%)
WHERE_n_of_non_aggr_funcMONTH	,
0	961 (96%)
1	37 (3.7%)
2	2(0.2%)
WHERE_n_of_non_aggr_funcYEAR	
0	957~(96%)
1	$41 \ (4.1\%)$
2	2~(0.2%)
$WHERE_n_of_non_aggr_func__FLOOR$	
0	956~(96%)
1	$44 \ (4.4\%)$
WHERE_n_of_non_aggr_funcROUND	
0	955~(96%)
1	$43 \ (4.3\%)$
2	2 (0.2%)
WHERE_n_of_non_aggr_funcSQRT	
0	869 (87%)
1	124~(12%)
2	7~(0.7%)
WHERE_n_of_non_aggr_funcABS	
0	964~(96%)
1	$36 \ (3.6\%)$
WHERE_n_of_non_aggr_funcDOW	207 (2704)
0	967 (97%)
1	30 (3.0%)
2	$3\;(0.3\%)$
WHERE_n_of_non_aggr_funcTRUNC	0.50 (0.504)
0	952 (95%)
1	46 (4.6%)
	2~(0.2%)
WHERE_n_of_all_non_aggr_func	FOT (COOT)
0	597 (60%)
1	271 (27%)
2	95 (9.5%)
3	33 (3.3%)
CDOUD DV n of columns	4(0.4%)
GROUP_BY_n_of_columns	[0.00, 2.00, 12.00] 2.97 / 2.79
HAVING_n_of_main_predicates	420 (4407)
0 1	439 (44%)
<i>1 2</i>	211 (21%) 178 (18%)
<i>z</i> 3	, ,
J	172~(17%)

Query parameter or value	Descriptive statistics	
ORDER_BY_n_of_columns		
0	289 (29%)	
1	328 (33%)	
2	235~(24%)	
3	112 (11%)	
4	21 (2.1%)	
5	5~(0.5%)	
6	7 (0.7%)	
7	1~(0.1%)	
8	2~(0.2%)	
limit	[2, 494, 1,000] 504 / 290	
offset	[0, 0, 997] 238 / 317	