



examples/aggregates_1.pql

by *Pequel*

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Aggregates Example Script

2.2

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SCRIPT NAME

examples/aggregates_1.pql

DESCRIPTION

Demonstrates aggregation and use of various aggregate function.

1. PROCESS DETAILS

Input records are read from standard input. The input record contains **8** fields. Fields are delimited by the '|' character.

Output records are written to standard output. The output record contains **11** fields. Fields are delimited by the '|' character.

Input records are **grouped** by the input fields **LOCATION** (*string*) and **PRODUCT_CODE** (*string*).

1.1 LOCATION

Output Field

Description

Set to input field **LOCATION**

1.2 PRODUCT_CODE

Output Field

Description

Set to input field **PRODUCT_CODE**

1.3 MIN_COST_PRICE

Output Field

Description

Min aggregation on input field **COST_PRICE**.

1.4 MAX_COST_PRICE

Output Field

Description

Max aggregation on input field **COST_PRICE**.

1.5 AVG_SALES_PRICE

Output Field

Description

Mean aggregation on input field **SALES_PRICE**.

1.7 SALES_TOTAL

Output Field

Description

Sum aggregation on input field **SALES_TOTAL**.

1.8 SALES_TOTAL_2

Output Field

Description**Sum** aggregation on input field **SALES_TOTAL**.**1.9 RANGE_COST**

Output Field

Description**Range** aggregation on input field **COST_PRICE**.**1.10 MODE_SALES_CODE**

Output Field

Description**Mode** aggregation on input field **SALES_CODE**.**1.11 AVGS**

Output Field

Description

Derived (calculated) field.

Derived Field Evaluation

2. CONFIGURATION SETTINGS

2.1 *prefix*

directory pathname prefix.: examples

2.2 *pequeldoc*

generate pod / pdf pequel script Reference Guide.: pdf

2.3 *detail*

Include Pequel Generated Program chapter in Pequeldoc: 1

2.4 *script_name*

script filename: examples/aggregates_1.pql

2.5 *header*

write header record to output.: 1

2.6 *optimize*

optimize generated code.: 1

2.7 *hash*

Generate in memory. Input data can be unsorted.: 1

2.8 *nulls*

print zero for null numeric/decimal.: 1

2.9 *doc_title*

document title.: Aggregates Example Script

2.10 *doc_email*

document email entry.: sample@youraddress.com

2.11 *doc_version*

document version for pequel script.: 2.2

2.12 *show_synonyms*

Show field names in generated code.: 0

3. TABLES

4. TABLE INFORMATION SUMMARY

4.1 Table List Sorted By Table Name

5. EXAMPLES/AGGREGATES_1.PQL

options

```

prefix(examples)
pequeldoc(pdf)
detail(1)
script_name(examples/aggregates_1.pql)
header(1)
optimize(1)
hash(1)
nulls(1)
doc_title(Aggregates Example Script)
doc_email(sample@youraddress.com)
doc_version(2.2)
show_synonyms(0)

```

description

Demonstrates aggregation and use of various aggregate function.

input section

```

PRODUCT_CODE
COST_PRICE
DESCRIPTION
SALES_CODE
SALES_PRICE
SALES_QTY
SALES_DATE
LOCATION
SALES_TOTAL => SALES_QTY * SALES_PRICE

```

group by

```

LOCATION string
PRODUCT_CODE string

```

output section

string	LOCATION	LOCATION
string	PRODUCT_CODE	PRODUCT_CODE
decimal	MIN_COST_PRICE	min COST_PRICE
decimal	MAX_COST_PRICE	max COST_PRICE
decimal	AVG_SALES_PRICE	mean SALES_PRICE
numeric	_AVG_SALES_QTY	mean SALES_QTY
decimal	SALES_TOTAL	sum SALES_TOTAL
decimal	SALES_TOTAL_2	sum SALES_TOTAL
decimal	RANGE_COST	range COST_PRICE
numeric	MODE_SALES_CODE	mode SALES_CODE
numeric	AVGS	= _AVG_SALES_QTY * 2

6. PEQUEL GENERATED PROGRAM

```
#!/usr/bin/perl
#-----
# vim: syntax=perl ts=4 sw=4
#-----
#Generated By: pequel Version 2.4-5, Build: Wednesday November 16 21:56:42 GMT 2005
#           : http://sourceforge.net/projects/pequel/
#Script Name : aggregates_1.pql
#Created On  : Wed Nov 16 13:25:29 2005
#Perl Version: /usr/bin/perl 5.6.1 on solaris
#For         :
#-----
#Options:
#prefix(examples) directory pathname prefix.
#pequeldoc(pdf) generate pod / pdf pequel script Reference Guide.
#detail(1) Include Pequel Generated Program chapter in Pequeldoc
#script_name(examples/aggregates_1.pql) script filename
#header(1) write header record to output.
#optimize(1) optimize generated code.
#hash(1) Generate in memory. Input data can be unsorted.
#nulls(1) print zero for null numeric/decimal.
#doc_title(Aggregates Example Script) document title.
#doc_email(sample@youraddress.com) document email entry.
#doc_version(2.2) document version for pequel script.
#show_synonyms(0) Show field names in generated code.
#-----
use strict;
use constant _I_PRODUCT_CODE    => int    0;
use constant _I_COST_PRICE      => int    1;
use constant _I_DESCRIPTION     => int    2;
use constant _I_SALES_CODE      => int    3;
use constant _I_SALES_PRICE     => int    4;
use constant _I_SALES_QTY       => int    5;
use constant _I_SALES_DATE      => int    6;
use constant _I_LOCATION        => int    7;
use constant _I_SALES_TOTAL     => int    8;
use constant _O_LOCATION        => int    1;
use constant _O_PRODUCT_CODE    => int    2;
use constant _O_MIN_COST_PRICE  => int    3;
use constant _O_MAX_COST_PRICE  => int    4;
use constant _O_AVG_SALES_PRICE => int    5;
use constant _O_AVG_SALES_QTY   => int    6;
use constant _O_SALES_TOTAL     => int    7;
use constant _O_SALES_TOTAL_2   => int    8;
use constant _O_RANGE_COST      => int    9;
use constant _O_MODE_SALES_CODE => int   10;
use constant _O_AVGS            => int   11;
local $\\ = "\n";
local $, = "|";
print STDERR "[examples/aggregates_1.pql ' . localtime() . "] Init";
use constant VERBOSE => int 10000;
use constant LAST_ICELL => int 8;
my @I_VAL;
my %O_VAL;
my $key;
my $_inprecs=0;
my %AVERAGE;
my %RANGE;
my %MODE;
&PrintHeader();
print STDERR "[examples/aggregates_1.pql ' . localtime() . "] Start";
use Benchmark;
my $benchmark_start = new Benchmark;
while (<STDIN>)
{
    ++$_inprecs;
    print STDERR "[examples/aggregates_1.pql ' . localtime() . "] $_inprecs records." if ($_inprecs % VERBOSE
== 0);
    chomp;
    @I_VAL = split("[|]", $_);
    $key = ( $_I_VAL[7] ) . '|' . ( $_I_VAL[0] );
    $O_VAL{$key}{1} = $_I_VAL[7];
    $O_VAL{$key}{2} = $_I_VAL[0];
    $O_VAL{$key}{3} = $_I_VAL[1]
        if (!defined($O_VAL{$key}{3}) || $_I_VAL[1] < $O_VAL{$key}{3});
    $O_VAL{$key}{4} = $_I_VAL[1]
        if (!defined($O_VAL{$key}{4}) || $_I_VAL[1] > $O_VAL{$key}{4});
    $AVERAGE{$key}{5}{_SUM} += $_I_VAL[4];
    $AVERAGE{$key}{5}{_COUNT}++;
    $AVERAGE{$key}{6}{_SUM} += $_I_VAL[5];
    $AVERAGE{$key}{6}{_COUNT}++;
}
```

```

$I_VAL[8] = $I_VAL[5] * $I_VAL[4];
$O_VAL{$key}{7} += $I_VAL[8] unless ($I_VAL[8] eq '');
$I_VAL[8] = $I_VAL[5] * $I_VAL[4];
$O_VAL{$key}{8} += $I_VAL[8] unless ($I_VAL[8] eq '');
$RANGE{$key}{9}{_MIN} = $I_VAL[1]
if
(
    !defined($RANGE{$key}{9}{_MIN})
    || $I_VAL[1] < $RANGE{$key}{9}{_MIN}
);

$RANGE{$key}{9}{_MAX} = $I_VAL[1]
if
(
    !defined($RANGE{$key}{9}{_MAX})
    || $I_VAL[1] > $RANGE{$key}{9}{_MAX}
);

$MODE{$key}{10}{qq{$I_VAL[3]}}++;
}

foreach $key (sort keys %O_VAL)
{
    $O_VAL{$key}{5} = ($AVERAGE{$key}{5}{_COUNT} == 0 ? 0 : $AVERAGE{$key}{5}{_SUM} / $AVERAGE{$key}{5}{_COUNT});
};
$O_VAL{$key}{6} = ($AVERAGE{$key}{6}{_COUNT} == 0 ? 0 : $AVERAGE{$key}{6}{_SUM} / $AVERAGE{$key}{6}{_COUNT});
};
$O_VAL{$key}{9} = $RANGE{$key}{9}{_MAX} - $RANGE{$key}{9}{_MIN};
$O_VAL{$key}{10} = join(' ', &{sub{my @top; foreach my $k (sort { $MODE{$key}{10}{$b} <=> $MODE{$key}{10}{$a} } keys %{$MODE{$key}{10}} ) { last if ($MODE{$key}{10}{$k} != $MODE{$key}{10}{$_[0]}; push(@top, $k);} @top; }((sort { $MODE{$key}{10}{$b} <=> $MODE{$key}{10}{$a} } keys %{$MODE{$key}{10}} ) [0]));
$O_VAL{$key}{11} = $O_VAL{$key}{6} * 2;
print STDOUT
    $O_VAL{$key}{1},
    $O_VAL{$key}{2},
    $O_VAL{$key}{3},
    $O_VAL{$key}{4},
    $O_VAL{$key}{5},
    $O_VAL{$key}{7},
    $O_VAL{$key}{8},
    $O_VAL{$key}{9},
    $O_VAL{$key}{10},
    $O_VAL{$key}{11}
;
}

close(STDIN);
print STDERR "[examples/aggregates_1.pql ' . localtime() . "] $_inprec records.";
my $benchmark_end = new Benchmark;
my $benchmark_timediff = timediff($benchmark_start, $benchmark_end);
print STDERR "[examples/aggregates_1.pql ' . localtime() . "] Code statistics: @{{timestr($benchmark_timediff)}}";
#-----
sub PrintHeader
{
    local $\\="\\n";
    local $,=" ";
    print STDOUT
        'LOCATION',
        'PRODUCT_CODE',
        'MIN_COST_PRICE',
        'MAX_COST_PRICE',
        'AVG_SALES_PRICE',
        'SALES_TOTAL',
        'SALES_TOTAL_2',
        'RANGE_COST',
        'MODE_SALES_CODE',
        'AVGS'
    ;
}

```

7. ABOUT PEQUEL

This document was generated by Pequel.

<https://sourceforge.net/projects/pequel/>

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