DPercentile

(Q) How can I write a function that computes the value corresponding with a given *percentile* of a range of data ?

tags:
HowTo

(R) A percentile is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations fall. For example, the 20th percentile is the value (or score) below which 20 percent of the observations may be found. For example, if a score is in the 86th percentile, it is higher than 86% of the other scores. (Wikipedia)
Easily feasible with a **Recordset** object.

The function:

```
Public Function DPercentile( _
                                    pdPercentile As Double _
                                    , psField As String _
                                    , psTable As String _
                                    , Optional psWhere As String _
                                    ) As Variant

Dim sSql As String, oRecordset As Object, vValue1 As variant, oField As Object
Const cstQuote = """"

        DPercentile = Null
        If pdPercentile < 0 Or pdPercentile > 1 Then Exit Function

        sSql = "SELECT " _
                    & cstQuote & psField & cstQuote _
                    & " FROM " & cstQuote & psTable & cstQuote _
                    & Iif(IsMissing(psWhere), "", " WHERE " & psWhere) _
                    & " ORDER BY " & cstQuote & psField & cstQuote
        Set oRecordset = Application.CurrentDb().OpenRecordset(sSql)

        With oRecordset
                .MoveLast()                          '       Necessary to know the exact number of
                If pdPercentile < 1 Then        '       Else take current (highest) value
                        If Not .EOF() Then      '       At least 1 record ?
                                .AbsolutePosition = Int(CDbl(.RecordCount * pdPercentile + 0.5
                        Else
                                Exit Function
                        End If
                End If
                DPercentile = .Fields(psField).Value
                .mClose()
        End With

End Function
```

Example

With next table:

- Products table

Fields	Field Type	Primary
CategoryID	BigInt	
ProductName	Text	
QuantityPerUnit	Text	
ReorderLevel	Integer	
SupplierID	BigInt	
UnitPrice	Number	
UnitsInStock	Integer	
UnitsOnOrder	Integer	
Discontinued	Boolean	
ProductID	BigInt	Y
Picture	Image	

```
        MsgBox DPercentile(0.25, "UnitPrice", "Products")
```

computes the 25th percentile of the *UnitPrice* range of values

See also

Move (recordset)
AbsolutePosition

Refer to ...

Basic module
Records

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