
Article

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How to add a parameter to a class programmatically

This sample class will add parameter DSINTERVAL to each class containing the parameter DSTIME

To execute it from a Terminal :

```
SAMPLES>d ##class(adm.param).add(,,1)
[SAMPLES] parameter DSINTERVAL=5 added to class DeepSee.Study.CityRainfall (via adm.p
aram)
[SAMPLES] parameter DSINTERVAL=5 added to class HoleFoods.Transaction (via adm.param)
[SAMPLES] parameter DSINTERVAL=5 added to class News.DeepSee.NewsArticle (via adm.par
am)
DSINTERVAL parameter was added to 3 classes
```

```
Class adm.param [ Abstract ]
{
```

```
/// this class will add DSINTERVAL parameter to each class containing DSTIME
/// in order to synchronize a cube that is based on a source table on a mirror system
/// see: http://docs.intersystems.com/latest/csp/docbook/DocBook.UI.Page.cls?KEY=D2IMP\_ch\_current#D2IMP\_current\_dstime\_enabling
ClassMethod add(name As %String = "DSINTERVAL", value As %String = "5", verbose As %Boolean = 0) As %Status
{
    set sc = $$$OK
    try {
        set statement = ##class(%SQL.Statement).%New()
        // %Dictionary classes are useful to select classes based on their content
        // here we use %Dictionary.ParameterDefinition class which contains all the parameters defined in all classes
        // then we will open the parent class to add the missing parameter
        set query="SELECT a.parent "
            _"FROM %Dictionary.ParameterDefinition a "
            _"WHERE a.name='DSTIME' "
            _"AND substr(a.parent,1,1)<>'%' "
            _"AND NOT EXISTS (SELECT null "
            _"FROM %Dictionary.ParameterDefinition b "
            _"WHERE b.name=''_name_' and b.parent=a.parent)"
        set sc = statement.%Prepare(query)
        quit:$$$ISERR(sc)
        set classes="",nb=0
        set rs = statement.%Execute()
        while (rs.%Next(.sc)) {
            quit:$$$ISERR(sc)
            if (rs.parent ='') {
                // opening of the parent class
                set class = ##class(%Dictionary.ClassDefinition).%OpenId(rs.parent)
```

```
        if $isObject(class) {
            // creating the new parameter
            set param=##class(%Dictionary.ParameterDefinition).%New()
            set param.Name=name
            set param.Default=value
            // adding the parameter to the parent class
            do class.Parameters.Insert(param)
            set sc=class.%Save()
            // if parent class is successfully saved set the following message
e
            set:sc msg=["_$namespace_"] parameter "_name_"="_value_" added t
o class "_rs.parent_" (via "...%ClassName(1)_"),severity=0
            // if parent class is not saved set the following message
            set:'sc msg=["_$namespace_"] ERROR while saving "_rs.parent_" af
ter having added the parameter "_name_"="_value_" (via "...%ClassName(1)_") : "_$system.Status.GetErrorText(sc),severity=1
            // if verbose=1 write the message to the terminal
            write:verbose msg,!
            // write the message to cconsole.log
            do ##class(%SYS.System).WriteToConsoleLog(msg,verbose,severity)
            // add the class name to compile
            set classes(rs.parent)=" ",nb=$increment(nb)
        }
    }
}
set:nb=0 msg=name_" parameter was not added to any class"
set:nb=1 msg=name_" parameter was added to "_nb_" class"
set:nb>1 msg=name_" parameter was added to "_nb_" classes"
write:verbose msg,!
// compile all modified classes
if nb>0 {
    set sc=$system.OBJ.Compile(.classes,"ck"_$select(verbose:"d",1:"-d"))
    set:sc msg=["_$namespace_"] modified "$select(nb=1:"class",1:"classes")
_" successfully compiled",severity=0
    set:'sc msg=["_$namespace_"] ERROR while compiling classes : "$system.S
tatus.GetErrorText(sc),severity=1
    do ##class(%SYS.System).WriteToConsoleLog(msg,verbose,severity)
    write:verbose msg,!
}
}
catch(ex) {
    set sc = ex.AsStatus()
    set msg=["_$namespace_"] error while executing "...%ClassName(1)_":add("_nam
e_", "_value_") : "_ex.DisplayString(),severity=1
    write:verbose msg,!
    do ##class(%SYS.System).WriteToConsoleLog(msg,1,severity)
}
return sc
}
}
```

You can also check the results in the cconsole.log file:

```
10/05/16-19:39:11:250 (5744) 0 [SAMPLES] parameter DSINTERVAL=5 added to class DeepSe
e.Study.CityRainfall (via adm.param)
10/05/16-19:39:11:250 (5744) 0 [SAMPLES] parameter DSINTERVAL=5 added to class HoleFo
```

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```
ods.Transaction (via adm.param)
```

```
10/05/16-19:39:11:250 (5744) 0 [SAMPLES] parameter DSINTERVAL=5 added to class News.D
```

```
eeepSee.NewsArticle (via adm.param)
```

```
10/05/16-19:39:11:515 (5744) 0 [SAMPLES] modified classes successfully compiled
```

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