

RE: 2007 User Level Security

Source:

<http://www.tech-archive.net/Archive/Access/microsoft.public.access.modulesdaovba/2008-05/msg00837.html>

- *From:* Klatuu <Klatuu@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 20 May 2008 09:10:01 -0700
-

You can ignore iSeed. It is used to change the sequence of numbers generated by the random number generator. But, once you use one, you have to stay with that number, so I wouldn't use it.

iToDo tells the function to either encode a plain text string or decode an encrypted string. Pass the function a 1 to encode a plain text string. I usually pass it 0 to decode an encrypted string.

For example

```
encryptcode(1,"dhargis")  
returns:  
ÏÇ×ËÏ
```

```
And encryptcode(0,"ÏÇ×ËÏ")  
returns:  
dhargis
```

So, the way I use it is to encrypt user names and passwords and store the encrypted values in the username/password table. Then when a user logs in, I encrypt the name and password and do a DLookup to see if the user is there and the password matches. I also have start and end dates in the table so users are not deleted, but activated and deactivated based on those dates.

Dave Hargis, Microsoft Access MVP

"Eka1618" wrote:

The properties idea works good, I have a lot of new ideas that will make other forms work real nice!

I am a little confused with the section where you explain the code for encrypting names and passwords.

What do the variables iToDo & iSeed represent?

and

Where should I be using this function?

~Erica~

"Klatuu" wrote:

There is nothing significant about the security property being an integer. It is not native to Access, it was just my own devising based on user requirements for the project for which I originally wrote the security. In that case, a level 10 meant you could only view some data and run some reports. A 20 give additional permissions, and a 40 was full operational admin rights. How you set it up is totally up to you.

If you look at the code, you will see how properties are created and changed. It is nothing magical.

—

Dave Hargis, Microsoft Access MVP

"Eka1618" wrote:

Klatuu,

In your examples, Is there anything significant about using the "Security Level" Property as an integer?

you have :

```
If CurrentDb.Properties("SecurityLevel") < 30 Then
If intSecurityLevel < 40 Then
frm.cmdPrint.Enabled = intSecurityLevel > 9
```

I am just curious as to what these numbers mean, or if it just something that you made up.

I understand how the code should work so far, I'm just not familiar with setting properties.

~Erica~

"Klatuu" wrote:

Okay

--

Dave Hargis, Microsoft Access MVP

"Eka1618" wrote:

Thanks for these
suggestions Klatuu.

I am going to be working
with these example for a
bit...I may have further
questions within then next
couple weeks.

~Erica~

"Klatuu" wrote:

One can
never
totally
protect a
database.
Someone
with the
knowledge
to do
so can get
into
anything;
however,
here are
some
routines that
you may
find
useful.

First, here is
a routine
you can use

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when a user
logs in to
set their
user
name and
password as
application
level
properties.

```
Public  
Function  
SetSecurityProp(UserInitials  
As String,  
SecurityLevel  
As  
Integer) As  
Boolean  
Dim prp As  
Property  
Const  
conPropNotFound  
As Integer  
= 3270
```

```
On Error  
GoTo  
ErrorSetSecurityProp  
' Explicitly  
refer to  
Properties  
collection.  
CurrentDb.Properties("User")  
=  
UserInitials  
CurrentDb.Properties.Refresh  
CurrentDb.Properties("SecurityLevel")  
=  
SecurityLevel  
CurrentDb.Properties.Refresh  
SetSecurityProp  
= True
```

```
ExitSetSecurityProp:  
Exit  
Function
```

```
ErrorSetSecurityProp:  
If Err =  
conPropNotFound  
Then
```

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```
' Create
property,
denote type,
and set
initial
value.
Set prp =
CurrentDb.CreateProperty("User",
dbText,
UserInitials)
' Append
Property
object to
Properties
collection.
CurrentDb.Properties.Append
prp
CurrentDb.Properties.Refresh
Set prp =
CurrentDb.CreateProperty("SecurityLevel",
dbInteger,
SecurityLevel)
' Append
Property
object to
Properties
collection.
CurrentDb.Properties.Append
prp
CurrentDb.Properties.Refresh
SetSecurityProp
= True
Resume
ExitSetSecurityProp
Else
MsgBox Err
& ": " &
vbCrLf &
Err.DESCRPTION
SetSecurityProp
= False
Resume
ExitSetSecurityProp
End If

End
Function
```

Should you
need to

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change the
value of a
property,
Here is a
routine to
do
that:

```
Function  
ChangeProperty(strPropName  
As String,  
varPropType  
As Variant,  
varPropValue  
As Variant)  
As Integer  
Dim dbs As  
Object, prp  
As Variant  
Const  
conPropNotFoundError  
= 3270  
  
Set dbs =  
CurrentDb  
On Error  
GoTo  
Change_Err  
dbs.Properties(strPropName)  
=  
varPropValue  
ChangeProperty  
= True  
  
Change_Bye:  
Exit  
Function  
  
Change_Err:  
If Err =  
conPropNotFoundError  
Then '  
Property not  
found.  
Set prp =  
dbs.CreateProperty(strPropName,  
-  
varPropType,  
varPropValue)  
dbs.Properties.Append  
prp
```

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```
Resume
Next
Else
' Unknown
error.
ChangeProperty
= False
Resume
Change_Bye
End If
End
Function
```

One the properties are set for the application, the idea is when the user opens a form, use the form Load event to set the restrictions applicable to the user. Here is an example:

```
If
CurrentDb.Properties("SecurityLevel")
< 30 Then
Me.cmdCancel.Enabled
= False
Me.cmdInsert.Enabled
= False
Me.cmdSave.Enabled
= False
Me.cmdCLDelete.Enabled
= False
FormSecurity
Me,
CurrentDb.Properties("SecurityLevel"),
True

Else
Me.cmdCancel.Enabled
```

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```
= True
Me.cmdInsert.Enabled
= True
Me.cmdSave.Enabled
= True
Me.cmdCLDelete.Enabled
= True
FormSecurity
Me,
CurrentDb.Properties("SecurityLevel"),
False

End If

Public Sub
FormSecurity(frm
As Form,
intSecurityLevel
As Integer,
bOnOff As
Boolean)

Dim ctl As
Control
Dim li As
Long
On Error
Resume
Next

If
intSecurityLevel
< 40 Then
For Each ctl
In
frm.Controls
If
ctl.ControlType
<>
acCommandButton
Then
ctl.Locked
= bOnOff
End If

Next

frm.cmdExit.Enabled
= True
frm.cmdPrint.Enabled
=
```

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```
intSecurityLevel  
> 9
```

```
End If
```

```
End Sub
```

Another thing you can do is encrypt user names and password in the table so even if a user gets into the back end database, they wont be able to see the actual values:

```
Public  
Function  
EncryptCode(iToDo  
As Integer,  
strPass As  
String, _  
Optional  
iSeed As  
Integer) As  
String  
Dim  
strValue As  
String  
Dim  
lngMxx As  
Long  
Dim  
lngPlace As  
Long  
  
iSeed =  
IIf(iSeed =  
0, 105,  
iSeed + 95)
```

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```
For lngMxx
= 1 To
Len(strPass)
If iToDo =
1 Then
' encode
lngPlace =
(Asc(Mid(strPass,
lngMxx, 1))
+ 2550 +
iSeed -
lngMxx)
Mod 255
Else
' decode
lngPlace =
255 -
(Abs((Asc(Mid(strPass,
lngMxx, 1))
- 2550 -
iSeed +
lngMxx)
Mod 255))
End If
strValue =
strValue +
Chr(lngPlace)
Next
```

```
EncryptCode
= strValue
```

```
End
Function
```

Also, it would be a good idea to password protect the backend database and just as an extra precaution, put an autoexc macro in the backend database

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that just
does a Quit.
It will not
affect it
being used
by the front
end,
but if a user
tries to open
it and
knows the
password, it
will
immediatley
close. They
would have
to know
about the
AllowBypassKey
property
and the
password to
be able to
get into it,
but if you
encrypt the
user names
and
passwords,
they still
cant see
them.

--

Dave
Hargis,
Microsoft
Access
MVP

"Eka1618"
wrote:

Hello,

I
have
created
a
DB

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in
the
new
format.
I
needed
to
use
the
Attachment
datatype
in
some
of
my
tables.

I
also
need
to
have
user
level
security.

If
I
convert,
I
dont
think
the
new
features
in
2007
like
the
Attachment
datatype
will
be
available.

Is
this
only
true
for
those
who
are

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not
using
Access
2007?

I
was
thinking
about
just
creating
user
names,
passwords
and
a
'user
type'
in
my
employee
table,
then
using
this
information
to
enable/disable
objects
on
the
forms.
This
would
take
a
while
to
go
through
all
of
these
forms
though,
but
I
think
it
would
work.

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Does
anyone
have
any
other
suggestions?

~Erica~