

Re: Help with using bits in an integer

Source:

<http://www.tech-archive.net/Archive/DotNet/microsoft.public.dotnet.languages.vb/2006-10/msg00285.html>

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 - *Date:* Mon, 2 Oct 2006 11:39:55 +0100
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Harry,

Is your database schema already decided? I had a look at a similar system and I found myself becoming tied up in knots with my stored procedures. Eventually I went for a table with one bit column for each permission in any given row. Then I explicitly loaded them into boolean variables from the database. My enumeration doesn't have to worry about bit manipulation and neither do my stored procedures. Of course the first idea is always to store a group of permissions in a single integer, but then what happens if you need more than 32 or 64 bits of information here? You will need two, then three, etc. Much better to store this information in a database table explicitly, because you can mix and match types – if for example instead of a permissions bit, you want some number (MAX or MIN) or some other data types.

(Assume an enumeration called PermissionsEnum, that stores the column index for each item in the set of permissions.

Also assume I have just executed a "GetPermissions (name)" stored procedure against the database. Finally, assume a class called DataPermissions that exposes boolean properties for each permission).

```
If DataReader.HasRows = True Then
```

```
DataReader.Read()
```

```
thePermissions = New DataPermissions
```

```
thePermissions.ID =
```

```
DataReader.GetInt32(DataPermissions.PermissionsEnum.ID)
```

```
thePermissions.Name =
```

```
DataReader.GetString(DataPermissions.PermissionsEnum.Name)
```

```
thePermissions.CanReadCritical =
```

```
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanReadCritical)
```

```
thePermissions.CanAddIM =
```

```
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanAddIM)
```

```
thePermissions.CanAddIP =
```

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```
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanAddIP)
thePermissions.CanAddAP =
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanAddAP)
thePermissions.CanAddLP =
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanAddLP)
thePermissions.CanDeleteIM =
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanDeleteLP)
thePermissions.CanDeleteIP =
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanDeleteIP)
thePermissions.CanDeleteAP =
DataReader.GetBoolean(DataPermissions.PermissionsEnum.CanDeleteAP)
....
....
Else

' Failed....

End If
```