

## \* Example With N-Tier Architecture:-

→ Create a NEW Windows forms Application

WA-microproject-PL

→ Select the Solution WA-microproject-PL

Create a NEW Class Library With the Name

CLIB-microproject-DLL Similarly Create two

more class libraries With the Name

CLIB-microproject-DAL And CLIB-microproject-CDL

→ Go to CLIB-microproject-CDL Change the  
ClassName class1.cs to Users.cs. Write the  
following code.

```
namespace CLIB-microproject-CDL
```

```
{
```

```
Public class Users
```

```
{
```

```
Public string username {set; get;}
```

```
    "    " Password    "
```

```
    "    " FirstName    "
```

```
    "    " LastName    "
```

```
    "    " Hint Question    "
```

```
    "    " Hint Answer    "
```

```
}
```

→ Go to Solution explorer, select the project

CLIB-microproject-CDL Create a New class in

this With the Name Global Data.cs and Write

the following code.

```
namespace CLIB-microproject-CDL
```

```
{
```

```
    Public class Global Data
```

```
{
```

```
    Public static string constring="Server=; . . . . .";
```

```
    Public static string uname;
```

```
}
```

→ Go to solution explorer select the class library CLIB-microproject-CDL click with Right Mouse button click on build this will create a dll for common data layer.

→ Go to class library CLIB-microproject-DAL click with Right Mouse button, click on Add, click on References select projects options from left side select the class library CLIB-microproject-CDL click on OK. change the class name from class1.cs to MP-users-dal Write the following code.

~~namespace~~

```
using system.data;
```

```
using system.data.sql client;
```

```
using CLIB-microproject-CDL;
```

```
namespace CLIB-microproject-DAL
```

```
{
```

```
    Public class mp-users-DAL
```

```
{
```

Sql connection con;

Sql command cmd;

Public MP-users-PAL()

{

con = NEW Sql connection (Global Data.con string);

}

Public bool Create user (users NEW user)

{

String query = "Insert into users values (@P<sub>1</sub>, @P<sub>2</sub>,  
@P<sub>3</sub>, @P<sub>4</sub>, @P<sub>5</sub>, @P<sub>6</sub>);

cmd = NEW Sql command (query, con);

cmd.Command Type = Command Type.Text;

cmd.parameters.AddWithValue Value ("@P<sub>1</sub>", NEW user.UserName);

["@P<sub>2</sub>", " . password];

["@P<sub>3</sub>", " . First Name];

["@P<sub>4</sub>", " . Last Name];

["@P<sub>5</sub>", " . Hint question];

["@P<sub>6</sub>", " . Hint Answer];

con.Open();

int i = cmd.ExecuteNonQuery();

con.Close();

if (i == 1)

return true;

else

return false;

}



→ Go to Solution Explorer select the class library CLIB-Microproject-DAL click with Right Mouse button, click on build, this will create DLL for Data Access layer.

→ Go to Solution Explorer select the class library CLIB-Microproject-BLL click with Right Mouse button, click on Add, click on Reference, select Projects from left side select the DLLs, CLIB-Microproject-CDL CLIB-Microproject-DAL, click on OK. change the className to MP-users-BLL Write the following code.

```
Using CLIB-Microproject-DAL;  
Using CLIB-Microproject-CDL;  
Namespace CLIB-Microproject-BLL  
{  
    Public class MP-users-BLL  
    {  
        MP-users-DAL User DAL;  
        Public MP-users-BLL()  
        {  
            User DAL = NEW MP-users-DAL();  
        }  
        Public bool CreateUser (User NEW user)  
        {  
            return User DAL . CreateUser (NEW user);  
        }  
    }  
}
```

→ Go to Solution explorer select the class library  
CLB - Microproject - BLL click With Right Mouse  
button, click on build, This Will create a  
BLL for Business logic Layer.

→ Go to WA - Microproject - PL click With Right  
Mouse button, click on Add, click on Reference.  
Select project from Leftside, select the dlls.  
CLB - Microproject - CDL and CLB - Microproject -  
BLL click on ok. change the form Name from  
form1 to ~~for~~ form - Create user. design the  
form.

Enter userName	<input type="text"/>
Enter passWord	<input type="text"/>
Enter firstName	<input type="text"/>
Enter LastName	<input type="text"/>
Enter passWord	<input type="text"/>
Retype New passWord	<input type="text"/>
Enter HINT Question	<input type="text"/>
Enter HINT Answer	<input type="text"/>
<input type="button" value="Submit"/>	<input type="button" value="close"/>

→ Go to .CS file Write the following code.

Using CLB - Microproject - BLL;

Using CLB - Microproject - CDL;

Namespace WA - Microproject - PL

{

Public partial class Form - CreateUser : Form

{

MP-Users - BLL User BLL = NEW MP-Users - BLL ();

Public Form - CreateUser ()

Private void btnSubmit\_Click ( " " )

{

Users user = NEW Users ();

user.UserName = txtUserName.Text;

user.Password = txtPassword. " ;

" First Name = txtFNAME. " ;

" Last Name = txtLNAME. " ;

" Hint Question = txtHQ. " ;

" Hint Answer = txtHA. " ;

if (UserBLL.CreateUser (user))

MessageBox.Show ("User created successfully")

else

MessageBox.Show ("User creation is not successfully").

}