

Client:

In the client master, we register the clients who come to the library to request a loan. **The clients we register are not the same as users.**

The screenshot shows a Windows application window titled "FormRegistrarCliente". The main area is labeled "Registrar cliente". A grid table displays client information with columns: DNI, Nombre, Apellido, Correo, Dirección, and Teléfono. The first row is highlighted in blue. To the right of the grid are four buttons: "Registrar", "Eliminar", "Modificar", and "Cancelar". Below the grid, there's a section for "Modo: Consulta" with checkboxes for "Desencriptar" and "Serializar Archivo Deserializado". At the bottom are three buttons: "Serializar", "Deserializar", and "Actualizar grilla".

DNI	Nombre	Apellido	Correo	Dirección	Teléfono
40000001	Juan	Pérez	yDiUrXJfwQeMePF1ZhkTXA==	Helguera 4157	011 2233-4455
40000002	Maria	López	A6w4lghgp7Cq9HqbA5Pot9FYGiQT8Yks...	Av. Siempreviva 742	011 9876-5432
40000003	Carlos	Gómez	jqlsoQNW0NC64alod4JAE2zpfTE/RqBop...	San Martín 300	11 4455-6677
40000004	Ana	Martínez	7VzZv7P36Tofep4HJftAqw==	Belgrano 500	011 7778-8899
44111222	David	García	MYc+vBfoaS2b7PvWlv3zB2gUVXvmix4x...	Calle del Sol 1	11 5555-1111
45823327	Lucas	Gallardo	Z4jhUw3e2Th1rhS2FPITiERn/4FNt8/kx...	Pedro moran 2981	11 3061-3554
55222333	Sofia	Rodriguez	QNDCVgAVZkp4QZZvx0Vwd4GnBYgeDSJ...	Rivadavia 450	11 5555-2222

Register, Delete, Modify:

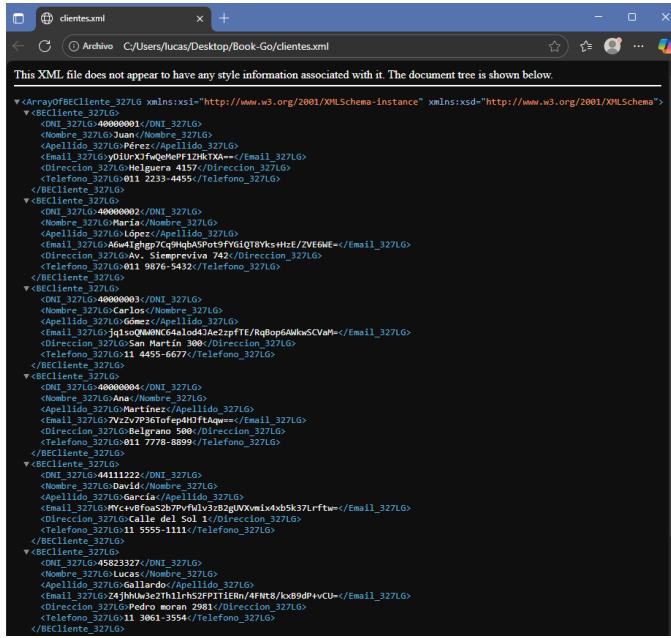
In the form, we will have the Register button, to enter new clients, Delete to deactivate existing ones that we select in the grid, and Modify to change the data of the selected client. To carry out these options, we will have fields that we must fill in:

- DNI: 8 numerical identification characters for the client.
- Name: Client's first name.
- Last Name: Client's last name.
- Email: Client's email address in the format "`<nombreApellido@ejemplo.com>`"
- Address: Client's home address.
- Phone: Client's phone number in the format "`011 1234-5678`"

note: The emails are stored encrypted in the database; we can see the unencrypted content by checking the “decrypt” box.

Serialize, Deserialize:

In addition to the creation, deletion, and modification functions, we can serialize the loaded clients into an XML file and deserialize them to display them on the grid. The **"Update Grid"** button will serve to reload the clients that are in the database.



This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<ArrayOfCliente_327LG xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <cliente>
    <DNI_327LG>4000000001</DNI_327LG>
    <Nombre_327LG>Juan</Nombre_327LG>
    <Apellido_327LG>Pérez</Apellido_327LG>
    <Email_327LG>yHtXwQePF12hKtXa=</Email_327LG>
    <Direccion_327LG>Avda. 123 número 1234</Direccion_327LG>
    <Telefono_327LG>011 2233-4455</Telefono_327LG>
  </cliente>
  <cliente>
    <DNI_327LG>4000000002</DNI_327LG>
    <Nombre_327LG>María</Nombre_327LG>
    <Apellido_327LG>López</Apellido_327LG>
    <Email_327LG>Adw4tghpg7CqMqba59v5fP16gQTBYk+HrE/ZVE6WE=</Email_327LG>
    <Direccion_327LG>Avda. 123 número 1234</Direccion_327LG>
    <Telefono_327LG>011 9876-5432</Telefono_327LG>
  </cliente>
  <cliente>
    <DNI_327LG>4000000003</DNI_327LG>
    <Nombre_327LG>Carlos</Nombre_327LG>
    <Apellido_327LG>Gómez</Apellido_327LG>
    <Email_327LG>jd1sQNWNK64alodJAc2zrFTE/RqBop6AkwsSCVaH=</Email_327LG>
    <Direccion_327LG>Avda. 123 número 1234</Direccion_327LG>
    <Telefono_327LG>011 4455-6677</Telefono_327LG>
  </cliente>
  <cliente>
    <DNI_327LG>4000000004</DNI_327LG>
    <Nombre_327LG>Andrés</Nombre_327LG>
    <Apellido_327LG>Martínez</Apellido_327LG>
    <Email_327LG>7VzZx7P367ofepH0TAtqew</Email_327LG>
    <Direccion_327LG>Belgrano 500</Direccion_327LG>
    <Telefono_327LG>011 7778-8899</Telefono_327LG>
  </cliente>
  <cliente>
    <DNI_327LG>40111222</DNI_327LG>
    <Nombre_327LG>David</Nombre_327LG>
    <Apellido_327LG>Gutiérrez</Apellido_327LG>
    <Email_327LG>4W4hWse7nHlrmv7dRn/4FNt8Ax89dpv+CO=</Email_327LG>
    <Direccion_327LG>Callao del Sol 1</Direccion_327LG>
    <Telefono_327LG>011 5555-1111</Telefono_327LG>
  </cliente>
  <cliente>
    <DNI_327LG>40823327</DNI_327LG>
    <Nombre_327LG>Lucas</Nombre_327LG>
    <Apellido_327LG>Gómez</Apellido_327LG>
    <Email_327LG>2A0hWse7nHlrmv7dRn/4FNt8Ax89dpv+CO=</Email_327LG>
    <Direccion_327LG>Pedro morales 2801</Direccion_327LG>
    <Telefono_327LG>011 3061-3554</Telefono_327LG>
  </cliente>
</ArrayOfCliente_327LG>
```

This is what the file will look like once serialized.