

"Año del Bicentenario del Perú: 200 años de Independencia"

FACULTAD DE INGENIERÍA Y ARQUITECTURA

ESCUELA PROFESIONAL INGENIERÍA DE SISTEMAS



PROYECTO : Prototipos de Software

ASIGNATURA: Desarrollo de Plataforma de Software

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CUSCO-PERÚ

2022

PRESENTACIÓN

El prototipo es un mecanismo para identificar los requisitos del software rápido que esta centrado en la representación de aquellos aspectos del software que serán visibles para el cliente o el usuario final.

En grupo se dio tomando en cuenta la base de datos “**pubs**” en SQL Server, implementamos el modelo de negocio para diferentes tablas, implementando un cliente WPF, implementando un cliente web, implementando un cliente windows y la implementación de un cliente consola.

DESARROLLO

Este trabajo sera programado en “Visual Studio 2019”, el cual tiene un uso sencillo y es la aplicación que actualmente estamos utilizando

SQL Server se usa para implementar las tablas requeridas y almacenar los datos creados. Para el desarrollo de este trabajo se tiene que seguir algunos pasos para construir nuestra aplicación, la cual consta de seleccionar las tablas de la base de datos en SQL Server y utilizar el procedimiento para interconectarlo con Visual Studio y al finalizar se subirá A SOMEE.

-La creación de la Base de datos “**pubs**”



-La codificación de la Base de Datos

The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. The title bar indicates the connection is to BDNorthwind.sql on DESKTOP-7JFNVGQ.pubs (DESKTOP-7JFNVGQ\USUARIO (60)). The Object Explorer sidebar shows the database structure, including Tables, Views, External Resources, Programmability, and Storage. The central pane displays a T-SQL script for creating the Pubs database. The script includes comments about copyright (Microsoft, Inc. 1994 - 2000), all rights reserved, and NOCOUNT ON. It sets the dateformat to mdy, uses master, declares @ttm as varchar(55), and selects @ttm=convert(varchar, getdate(), 113). It then raises an error if the database already exists and drops it. The script then creates the Pubs database with a default size of 1 MB and an autogrowth of 100%. The status bar at the bottom shows the query was executed successfully, with 121 rows affected.

```
-- Copyright Microsoft, Inc. 1994 - 2000
-- All Rights Reserved.

SET NOCOUNT ON
GO

Set nocount on
set dateformat mdy

USE master

declare @ttm varchar(55)
select @ttm=convert(varchar, getdate(), 113)
raiserror('Beginning InstPubs.SQL at %s.....',1,1,@ttm) with nowait
GO

IF EXISTS (SELECT * FROM sysdatabases WHERE name='pubs')
BEGIN
    raiserror('Dropping existing pubs database....',0,1)
    DROP DATABASE pubs
END
GO

CHECKPOINT
GO

raiserror('Creating pubs database....',0,1)
GO
/* Use default size with autogrow */
CREATE DATABASE pubs
GO

CHECKPOINT
GO

USE pubs
GO
```

Results Messages

Index_id	Israng	hirang	rowsize	
84	PS1372	20001	30000	14
85	PS1372	30001	40000	16
86	PS1372	40001	50000	18

Query executed successfully.

LN 2172 Col 21 Ch 21 INS

DESKTOP-7JFNVGQ (15.0 RTM) DESKTOP-7JFNVGQ\USUARIO pubs 00:00:00 121 rows

Ready

Quick Launch (Ctrl+Q)

The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. The title bar indicates the connection is to 'BDNorthwind.sql' on 'DESKTOP-7JFNVGG\pubs' (15.0 RTM). The 'Object Explorer' pane on the left shows the database structure, including tables like 'Authors', 'Books', and 'Titles'. The main 'Results' tab displays the T-SQL code for creating two tables: 'titles' and 'titleauthor'. The 'titles' table has columns for title_id (PK), title, type, pub_id, price, advance, royalty, ytd_sales, and notes. The 'titleauthor' table has columns for au_id and title_id. Both tables have constraints and default values. Below the code, the results show four rows of data for the 'titles' table.

```
CREATE TABLE titles
(
    title_id      tinyint
        CONSTRAINT PKCL_titleid PRIMARY KEY CLUSTERED,
    title          varchar(80)      NOT NULL,
    type           char(12)        NOT NULL
        DEFAULT ('UNDETERMINED'),
    pub_id         char(4)         NULL
        REFERENCES publishers(pub_id),
    price          money           NULL,
    advance        money           NULL,
    royalty        int             NULL,
    ytd_sales      int             NULL,
    notes          varchar(200)    NULL,
    pubdate        datetime        NOT NULL
        DEFAULT (getdate())
)
GO

CREATE TABLE titleauthor
(
    au_id          int
        REFERENCES authors(au_id),
    title_id       tinyint
        REFERENCES titles(title_id),
    rate           money           NULL
)
GO
```

Title ID	Author ID	Commission (%)
84	PS1372	20001
85	PS1372	30001
86	PS1372	40001
88	PS1372	50000

BDNorthwind.sql - DESKTOP-7JFNVGQ.pubs (DESKTOP-7JFNVGQ\USUARIO (60)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Execute New Query Object Explorer Diagrams

pubs

Diagram_0

```
CREATE TABLE titleauthor
(
    au_id      int
        REFERENCES authors(au_id),
    title_id   int
        REFERENCES titles(title_id),
    av_ord     tinyint    NULL,
    royaltyper int       NULL
)
CONSTRAINT UPKCL_taind PRIMARY KEY CLUSTERED(au_id, title_id)
```

GO

```
CREATE TABLE stores
(
    stor_id    char(4)   NOT NULL
        CONSTRAINT UK_storid PRIMARY KEY CLUSTERED,
    stor_name  varchar(40)  NULL,
    stor_address varchar(40)  NULL,
    city       varchar(20)  NULL,
    state      char(2)    NULL,
    zip        char(5)    NULL
)
GO
```

```
CREATE TABLE sales
(
    stor_id    char(4)   NOT NULL
        REFERENCES stores(stor_id),
    title_id   int
        REFERENCES titles(title_id),
    lorange    int        NOT NULL,
    hiredate   date      NOT NULL,
    ord_qty    smallint  NOT NULL,
    payterms   varchar(12) NOT NULL
)
CONSTRAINT UPKCL_sales PRIMARY KEY CLUSTERED (stor_id, ord_num, title_id)
```

GO

Results Messages

title_id	lorange	hiredate	royalty	
84	PS1372	20001	30000	14
85	PS1372	30001	40000	16
86	PS1372	40001	50000	18

Query executed successfully.

LN 146 Col 1 Ch 1 INS

DESKTOP-7JFNVGQ (15.0 RTM) DESKTOP-7JFNVGQ\USUARIO (60) pubs 00:00:00 121 rows

Ready

Windows Taskbar: File Explorer, Mail, Google Chrome, File Manager, Visual Studio, etc.

BDNorthwind.sql - DESKTOP-7JFNVGQ.pubs (DESKTOP-7JFNVGQ\USUARIO (60)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Execute New Query Object Explorer Diagrams

pubs

Diagram_0

```
CREATE TABLE sales
(
    stor_id    char(4)   NOT NULL
        REFERENCES stores(stor_id),
    ord_num    varchar(20)  NOT NULL,
    ord_date   date      NOT NULL,
    ord_qty    smallint  NOT NULL,
    payterms   varchar(12) NOT NULL,
    title_id   int
        REFERENCES titles(title_id),
    lorange    int        NOT NULL,
    hiredate   date      NOT NULL,
    royaltyper int       NULL
)
CONSTRAINT UPKCL_sales PRIMARY KEY CLUSTERED (stor_id, ord_num, title_id)
```

GO

```
CREATE TABLE roysched
(
    title_id   int
        REFERENCES titles(title_id),
    lorange    int        NOT NULL,
    hiredate   int        NOT NULL,
    royaltyper int       NULL
)
GO
```

```
CREATE TABLE discounts
(
    discounttype varchar(40)  NOT NULL,
    stor_id      char(4)    NULL
)
CONSTRAINT UK_discounttype PRIMARY KEY CLUSTERED (discounttype)
```

Results Messages

title_id	lorange	hiredate	royalty	
84	PS1372	20001	30000	14
85	PS1372	30001	40000	16
86	PS1372	40001	50000	18

Query executed successfully.

LN 174 Col 44 Ch 44 INS

DESKTOP-7JFNVGQ (15.0 RTM) DESKTOP-7JFNVGQ\USUARIO (60) pubs 00:00:00 121 rows

Ready

Windows Taskbar: File Explorer, Mail, Google Chrome, File Manager, Visual Studio, etc.

The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. The title bar indicates the connection is to BDNorthwind.sql on DESKTOP-7JFNVGQ.pubs (DESKTOP-7JFNVGQ\USUARIO (60)) - Microsoft SQL Server Management Studio. The Quick Launch (Ctrl+Q) button is visible.

The Object Explorer sidebar on the left lists the database structure, including Tables (e.g., Employees, Customers, Orders), Views, External Resources, Programmability, and Storage.

The main pane displays a Transact-SQL script being executed:

```
CREATE TABLE pub_info
(
    pub_id      char(4)      NOT NULL,
    REFERENCES publishers(pub_id)
    CONSTRAINT UKPCL_pubInfo PRIMARY KEY CLUSTERED,
    logo        image         NULL,
    pr_info     text          NULL
)
GO

CREATE TABLE employee
(
    emp_id      int           NOT NULL,
    CONSTRAINT PK_emp_id PRIMARY KEY NONCLUSTERED
    CONSTRAINT CK_emp_id CHECK (emp_id > 0),
    name        varchar(20)   NOT NULL,
    minit       char(1)       NULL,
    phone       varchar(10)   NOT NULL,
    job_id      smallint      NOT NULL,
    DEFAULT 1
    REFERENCES jobs(job_id),
)
GO
```

The Results tab at the bottom shows the output of the last command:

title_id	loarange	hirerange	royalty	
84	PS1372	20001	30000	14
85	PS1372	30001	40000	16
86	PS1372	40001	50000	18

A status bar at the bottom right shows: DESKTOP-7JFNVGQ (15.0 RTM) | DESKTOP-7JFNVGQ\USUARIO | pubs | 00:00:00 | 121 rows.

-La inserción de datos tabla authors

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'BDNorthwind.sql - DESKTOP-7JFNVVGQ.pubs (DESKTOP-7JFNVVGQ\USUARIO (60)) - Microsoft SQL Server Management Studio'. The 'Object Explorer' sidebar on the left lists various database objects like Tables, Views, and Procedures. The main pane displays a T-SQL script for inserting data into the 'authors' table. The status bar at the bottom shows the query was executed successfully, with details like 'Ln 333', 'Col 24', 'Ch 24', 'INS', and '1040 14/09/2022'. A progress bar at the bottom left shows the script is at 73% completion.

```
GO
insert authors
values('409-56-7008', 'Bennet', 'Abraham', '415 558-9932',
'6223 Bateman St.', 'Berkeley', 'CA', '94705', 1)
insert authors
values('213-40-8915', 'Green', 'Marjorie', '415 986-7030',
'309 63rd St.', 'Oakland', 'CA', '94618', 1)
insert authors
values('239-49-7766', 'Carson', 'Cheryl', '415 548-7723',
'5801 Darwin Ln.', 'Berkeley', 'CA', '94708', 1)
insert authors
values('800-57-3567', 'Singer', 'Albert', '801 826-0752',
'97 Seventh Av.', 'Salt Lake City', 'UT', '84152', 1)
insert authors
values('213-40-2635', 'Singer', 'Anne', '881 826-0752',
'97 Seventh Av.', 'Salt Lake City', 'UT', '84152', 1)
insert authors
values('722-51-5684', 'Defrance', 'Michele', '219 547-9982',
'233 1/2 Main St.', 'Gary', 'IN', '46483', 1)
insert authors
values('891-90-6654', 'Fentley', 'Sylvia', '303 946-8853',
'1000 University Pl.', 'Seattle', 'WA', '20855', 1)
insert authors
values('891-72-1158', 'McAdams', 'Heather',
'707 448-4982', '3901 Putnam, Vacaville', 'CA', '95680', 0)
insert authors
values('724-88-9931', 'Stringer', 'Dirk', '415 843-2991',
'5460 Telegraph Av.', 'Oakland', 'CA', '94609', 0)
insert authors
values('274-80-6301', 'Straight', 'Dean', '415 834-2919',
'5420 College Ave.', 'Oakland', 'CA', '94609', 1)
insert authors
values('724-80-7901', 'Kersten', 'Liva', '415 554-9219,
'5720 McWayne St.', 'Oakland', 'CA', '94609', 1)
insert authors
values('724-80-9301', 'McFeathern', 'Stearns', '415 354-7128',
'44 Upland Hts.', 'Oakland', 'CA', '94612', 1)
insert authors
values('724-80-7219', 'Bull', 'Ann', '415 896-7128',
'3418 Blonde St.', 'Palo Alto', 'CA', '94301', 1)
insert authors
values('672-71-3249', 'Yokomoto', 'Akiko', '415 935-4228'
```

-La inserción de datos a la tabla publishers

```
raiserror('Now at the inserts to publishers ....',0,1)
GO

insert publishers values('0736', 'New Moon Books', 'Boston', 'MA', 'USA')
insert publishers values('0877', 'Binnet & Hardley', 'Washington', 'DC', 'USA')
insert publishers values('1389', 'Algodata Infosystems', 'Berkeley', 'CA', 'USA')
insert publishers values('9952', 'Scootney Books', 'New York', 'NY', 'USA')
insert publishers values('1622', 'Five Lakes Publishing', 'Chicago', 'IL', 'USA')
insert publishers values('1756', 'Ramona Publishers', 'Dallas', 'TX', 'USA')
insert publishers values('9901', 'GNG&G', 'Mnchen', NULL, 'Germany')
insert publishers values('9999', 'Lucerne Publishing', 'Paris', NULL, 'France')
GO
```

-La inserción de datos a la tabla pub-info

-El ingreso de datos a la tabla titles

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left lists various database objects like Tables, Views, and Procedures. The central pane displays a query window with several INSERT statements for the 'titles' table. The results grid shows four rows inserted into the 'titles' table, each with title_id, lorange, hirange, and royalty values. The status bar at the bottom indicates the query executed successfully and returned 121 rows.

```
Insert titles values ('PC8800', 'Secrets of Silicon Valley', 'popular_comp', '1389', '$19.99, $999.99, 10, 4095, 'Hacking reporting on the world's largest computer hardware and software manufacturers.', '98/12/94')  
Insert titles values ('BU1032', 'The Busy Executive''s Database Guide', 'business', '1389', '$19.99, $5999.99, 10, 4095, 'An overview of available database systems with emphasis on common business applications. Illustrated.', '98/12/94')  
Insert titles values ('PS3333', 'Emotional Security: A New Algorithm', 'psychology', '1389', '$7.99, $4999.99, 10, 3395, 'Protecting yourself and your loved ones from undue emotional stress in the modern world. Use of computer and nutritional aids emphasized.', '98/12/91')  
Insert titles values ('PS3333', 'Prolonged Data Deprivation: Four Case Studies', 'psychology', '0785', '$19.99, $2999.99, 10, 4092, 'What happens when the data runs dry? Searching evaluations of information-shortage effects.', '98/12/91')  
Insert titles values ('MC2222', 'Silicon Valley Gastrognomic Treats', 'mod_cook', '0877', '$19.99, $8.00, 12, 2032, 'Favorite recipes for quick, easy, and elegant meals.', '98/09/01')  
Insert titles values ('TC7777', 'Cooking with Computers: Superstitious Balance Sheets', 'cooking', '0877', '$19.99, $11.95, $5999.99, 20, 3079, 'Helpful hints on how to use your electronic resources to the best advantage.', '98/09/01')  
Insert titles values ('MC2222', 'Fifty Years in Buckingham Palace Kitchens', 'trad_cook', '0877', '$19.99, $8.00, 12, 2032, 'More anecdotes from the Queen's favorite cook describing life among English royalty. Recipes, techniques, tender vignettes.', '98/12/91')  
Insert titles values ('TC4203', 'PC9999', 'Net Etiquette', '0877', '$11.95, $4999.99, 14, 15996, 'Now at the inserts to titleauthor ....', 0, 1)  
Insert titles values ('PC9999', 'A must-read for computer conferencing.', '0877', '$11.95, $4999.99, 1, 100)  
raiserror('Now at the inserts to titleauthor ....', 0, 1)  
00  
Insert titleauthor values('409-56-7988', 'BU1032', 1, 60)  
Insert titleauthor values('406-29-1786', 'PC9999', 1, 100)  
Insert titleauthor values('406-29-1786', 'PC9999', 1, 100)  
Insert titleauthor values('172-32-1176', 'PS3333', 1, 100)  
Insert titleauthor values('213-46-8015', 'BU1032', 2, 40)  
Insert titleauthor values('213-46-8015', 'BU1032', 2, 40)  
Insert titleauthor values('213-46-8015', 'BU2075', 1, 100)  
Insert titleauthor values('998-12-5567', 'PS2091', 1, 50)  
Insert titleauthor values('998-12-5567', 'PS2091', 1, 50)  
Insert titleauthor values('998-12-5567', 'PS2108', 1, 100)  
Insert titleauthor values('722-51-0545', 'MC2222', 1, 75)  
Insert titleauthor values('722-51-0545', 'MC2222', 2, 25)  
Insert titleauthor values('987-01-0654', 'TC2181', 1, 100)  
Insert titleauthor values('274-00-0991', 'BU7332', 1, 100)  
Insert titleauthor values('427-77-2159', 'PC8800', 1, 50)  
Insert titleauthor values('427-77-2159', 'PC8800', 1, 50)  
Insert titleauthor values('756-00-7391', 'PS1172', 1, 75)  
Insert titleauthor values('756-00-7391', 'PS1172', 2, 25)  
Insert titleauthor values('207-01-2394', 'BU1111', 2, 40)  
Insert titleauthor values('652-71-2449', 'TC7777', 1, 40)  
Insert titleauthor values('472-77-2349', 'TC7777', 3, 30)  
Insert titleauthor values('648-92-1872', 'TC4203', 1, 100)  
00  
raiserror('Now at the inserts to stores ....', 0, 1)  
00  
Query executed successfully.
```

-El ingreso de datos a la tabla titleauthor

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left lists various database objects. The central pane displays a query window with several INSERT statements for the 'titleauthor' table. The results grid shows four rows inserted into the 'titleauthor' table, each with title_id, lorange, hirange, and royalty values. The status bar at the bottom indicates the query executed successfully and returned 121 rows.

```
Insert titles values ('PC8800', 'Secrets of Silicon Valley', 'popular_comp', '1389', '$19.99, $999.99, 10, 4095, 'Hacking reporting on the world's largest computer hardware and software manufacturers.', '98/12/94')  
Insert titles values ('BU1032', 'The Busy Executive''s Database Guide', 'business', '1389', '$19.99, $5999.99, 10, 4095, 'An overview of available database systems with emphasis on common business applications. Illustrated.', '98/12/94')  
Insert titles values ('PS3333', 'Emotional Security: A New Algorithm', 'psychology', '1389', '$7.99, $4999.99, 10, 3395, 'Protecting yourself and your loved ones from undue emotional stress in the modern world. Use of computer and nutritional aids emphasized.', '98/12/91')  
Insert titles values ('PS3333', 'Prolonged Data Deprivation: Four Case Studies', 'psychology', '0785', '$19.99, $2999.99, 10, 4092, 'What happens when the data runs dry? Searching evaluations of information-shortage effects.', '98/12/91')  
Insert titles values ('MC2222', 'Silicon Valley Gastrognomic Treats', 'mod_cook', '0877', '$19.99, $8.00, 12, 2032, 'Favorite recipes for quick, easy, and elegant meals.', '98/09/01')  
Insert titles values ('TC7777', 'Cooking with Computers: Superstitious Balance Sheets', 'cooking', '0877', '$19.99, $11.95, $5999.99, 20, 3079, 'Helpful hints on how to use your electronic resources to the best advantage.', '98/09/01')  
Insert titles values ('MC2222', 'Fifty Years in Buckingham Palace Kitchens', 'trad_cook', '0877', '$19.99, $8.00, 12, 2032, 'More anecdotes from the Queen's favorite cook describing life among English royalty. Recipes, techniques, tender vignettes.', '98/12/91')  
Insert titles values ('TC4203', 'PC9999', 'Net Etiquette', '0877', '$11.95, $4999.99, 14, 15996, 'Now at the inserts to titleauthor ....', 0, 1)  
Insert titles values ('PC9999', 'A must-read for computer conferencing.', '0877', '$11.95, $4999.99, 1, 100)  
raiserror('Now at the inserts to titleauthor ....', 0, 1)  
00  
Insert titleauthor values('409-56-7988', 'BU1032', 1, 60)  
Insert titleauthor values('406-29-1786', 'PC9999', 1, 100)  
Insert titleauthor values('406-29-1786', 'PC9999', 1, 100)  
Insert titleauthor values('172-32-1176', 'PS3333', 1, 100)  
Insert titleauthor values('213-46-8015', 'BU1032', 2, 40)  
Insert titleauthor values('213-46-8015', 'BU1032', 2, 40)  
Insert titleauthor values('213-46-8015', 'BU2075', 1, 100)  
Insert titleauthor values('998-12-5567', 'PS2091', 1, 50)  
Insert titleauthor values('998-12-5567', 'PS2091', 1, 50)  
Insert titleauthor values('998-12-5567', 'PS2108', 1, 100)  
Insert titleauthor values('722-51-0545', 'MC2222', 1, 75)  
Insert titleauthor values('722-51-0545', 'MC2222', 2, 25)  
Insert titleauthor values('987-01-0654', 'TC2181', 1, 100)  
Insert titleauthor values('274-00-0991', 'BU7332', 1, 100)  
Insert titleauthor values('427-77-2159', 'PC8800', 1, 50)  
Insert titleauthor values('427-77-2159', 'PC8800', 1, 50)  
Insert titleauthor values('756-00-7391', 'PS1172', 1, 75)  
Insert titleauthor values('756-00-7391', 'PS1172', 2, 25)  
Insert titleauthor values('207-01-2394', 'BU1111', 2, 40)  
Insert titleauthor values('652-71-2449', 'TC7777', 1, 40)  
Insert titleauthor values('472-77-2349', 'TC7777', 3, 30)  
Insert titleauthor values('648-92-1872', 'TC4203', 1, 100)  
00  
raiserror('Now at the inserts to stores ....', 0, 1)  
00  
Query executed successfully.
```

-El ingreso de datos a la tabla stores

```
raiserror('Now at the inserts to stores ....',0,1)
GO

insert stores values('7066','Barnum''s','567 Pasadena Ave.','Tustin','CA','92789')
insert stores values('7067','News & Brews','577 First St.','Los Gatos','CA','96745')
insert stores values('7131','Doc-U-Mat: Quality Laundry and Books',
'24-A Avogadro Way','Remulade','WA','98014')
insert stores values('8042','Bookbeat','679 Carson St.','Portland','OR','89076')
insert stores values('6380','Eric the Read Books','788 Catawauus Ave.',
'Seattle','WA','98056')
insert stores values('7896','Fricative Bookshop','89 Madison St.','Fremont','CA','90019')

GO
```

-El ingreso de datos a la tabla sales

```
raiserror('Now at the inserts to sales ....',0,1)
GO

insert sales values('7066','QA7442.3','09/13/94', 75, 'ON invoice','PS2091')
insert sales values('7067','D4482','09/14/94', 10, 'Net 60','PS2091')
insert sales values('7131','N914008','09/14/94', 20, 'Net 30','PS2091')
insert sales values('7131','N914014','09/14/94', 25, 'Net 30','MC3021')
insert sales values('8042','423LL922','09/14/94', 15, 'ON invoice','MC3021')
insert sales values('8042','423LL930','09/14/94', 10, 'ON invoice','BU1032')
insert sales values('6380','722a','09/13/94', 3, 'Net 60','PS2091')
insert sales values('6380','6871','09/14/94', 5, 'Net 60','BU1032')
insert sales values('8042','P723','03/11/93', 25, 'Net 30','BU1111')
insert sales values('7896','X999','02/21/93', 35, 'ON invoice','BU2075')
insert sales values('7896','QQ2299','10/28/93', 15, 'Net 60','BU7832')
insert sales values('7896','TQ456','12/12/93', 10, 'Net 60','MC2222')
insert sales values('8042','QAB79.1','5/22/93', 30, 'Net 30','PC1035')
insert sales values('7066','A2976','5/24/93', 50, 'Net 30','PC8888')
insert sales values('7131','P3087a','5/29/93', 20, 'Net 60','PS1372')
insert sales values('7131','P3087a','5/29/93', 25, 'Net 60','PS2106')
insert sales values('7131','P3087a','5/29/93', 15, 'Net 60','PS3333')
insert sales values('7131','P3087a','5/29/93', 25, 'Net 60','PS7777')
insert sales values('7067','P2121','6/15/92', 40, 'Net 30','TC3218')
insert sales values('7067','P2121','6/15/92', 20, 'Net 30','TC4203')
insert sales values('7067','P2121','6/15/92', 20, 'Net 30','TC7777')
```

-El ingreso de datos a la tabla roysched

BDNorthwind.sql - DESKTOP-7JFNVGQ.pubs (DESKTOP-7JFNVGQ\USUARIO (60)) - Microsoft SQL Server Management Studio

```

raiserror('Now at the inserts to roysched ....',0,1)
GO
Insert roysched values('B1032', 0, 5000, 10)
Insert roysched values('B1032', 5001, 50000, 12)
Insert roysched values('C1035', 0, 2000, 10)
Insert roysched values('C1035', 5001, 50000, 12)
Insert roysched values('C1035', 5001, 4000, 14)
Insert roysched values('C1035', 4001, 10000, 16)
Insert roysched values('C1035', 10001, 50000, 18)
Insert roysched values('B2075', 0, 1000, 10)
Insert roysched values('B2075', 1001, 3000, 12)
Insert roysched values('B2075', 3001, 5000, 14)
GO
Insert roysched values('B2075', 5001, 7000, 16)
Insert roysched values('B2075', 7001, 10000, 18)
Insert roysched values('B2075', 10001, 12000, 20)
Insert roysched values('B2075', 12001, 15000, 22)
Insert roysched values('B2075', 14001, 50000, 24)
Insert roysched values('P52091', 0, 1000, 10)
Insert roysched values('P52091', 1001, 5000, 12)
Insert roysched values('P52091', 3000, 10000, 14)
Insert roysched values('P52091', 10001, 50000, 16)
Insert roysched values('P52106', 0, 2000, 10)
GO
Insert roysched values('P52106', 2001, 5000, 12)
Insert roysched values('P52106', 5001, 10000, 14)
Insert roysched values('P52106', 10001, 50000, 16)
Insert roysched values('NC3021', 0, 1000, 10)
Insert roysched values('NC3021', 20001, 30000, 12)
Insert roysched values('NC3021', 40001, 4000, 14)
Insert roysched values('NC3021', 4001, 6000, 16)
Insert roysched values('NC3021', 60001, 10000, 18)
Insert roysched values('NC3021', 80001, 10000, 20)
Insert roysched values('NC3021', 10001, 12000, 22)
GO

```

Results Messages

title_id	lorange	hirange	royalty
P51372	20001	30000	14
P51372	30001	40000	16
P51372	40001	50000	18

Query executed successfully.

-El ingreso de datos a la tabla discounts

```

GO
raiserror('Now at the inserts to discounts ....',0,1)
GO
insert discounts values('Initial Customer', NULL, NULL, NULL, 10.5)
insert discounts values('Volume Discount', NULL, 100, 1000, 6.7)
insert discounts values('Customer Discount', '8042', NULL, NULL, 5.0)
GO

```

-El ingreso de datos a la tabla jobs

```

raiserror('Now at the inserts to jobs ....',0,1)
GO
insert jobs values ('New Hire - Job not specified', 10, 10)
insert jobs values ('Chief Executive Officer', 200, 250)
insert jobs values ('Business Operations Manager', 175, 225)
insert jobs values ('Chief Financial Officer', 175, 250)
insert jobs values ('Publisher', 150, 250)
insert jobs values ('Managing Editor', 140, 225)
insert jobs values ('Marketing Manager', 120, 200)
insert jobs values ('Public Relations Manager', 100, 175)
insert jobs values ('Acquisitions Manager', 75, 175)
insert jobs values ('Productions Manager', 75, 165)
insert jobs values ('Operations Manager', 75, 150)
insert jobs values ('Editor', 25, 100)
insert jobs values ('Sales Representative', 25, 100)
insert jobs values ('Designer', 25, 100)
GO

```

-El ingreso de datos a la tabla employee

DBNorthwind.sql - DESKTOP-7JFNVGQ.pubs (DESKTOP-7JFNVGQ\USUARIO (60)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Quick Launch (Ctrl+Q) Close

pubs

Execute Save Print Copy Paste Find Replace Help

Object Explorer

Connect New Connection

Tables
System Tables
External Tables
FileTables
Graph Tables
dbo.authors
dbo.discounts
dbo.employee
dbo.jobs
dbo.pub_info
dbo.publishers
dbo.royched
dbo.sales
dbo.stores
dbo.siteauthor
dbo.sites
Views
External Resources
Synonyms
Permissions
Triggers
Stored Procedures
Functions
Table-valued Functions
Scalar-valued Functions
Aggregate Functions
System Functions
Database Triggers
Assemblies
Types
Rules
Defaults
Plan Guides
Sequences
Service Broker
Storage

Results

73 %

73 %

Query executed successfully.

DBNorthwind.sql (~.VQGU.USUARIO (60)) DESKTOP-7JFNVGQ.pubs - Diagram_0*

```
raiserror('Now at the inserts to employee ....',0,1)

GO

--insert employee values ('PTC11962M', 'Phillip', 'T', 'Cramer', 2, 215, '9982', '11/11/89')
--insert employee values ('AV01543SP', 'Ann', 'M', 'Devon', 3, 200, '9952', '09/16/89')
--insert employee values ('Y-CU1351P', 'Francisco', 'L', 'Cheng', 4, 227, '9952', '11/03/89')
--insert employee values ('S-AU01234P', 'Michael', 'M', 'Hilborn', 5, 150, '9952', '07/15/89')
--insert employee values ('SK022250M', 'Paul', 'X', 'Henist', 5, 159, '8877', '08/19/93')
--insert employee values ('SK02242P', 'Sven', 'K', 'Ottile', 5, 158, '1389', '04/05/91')
--insert employee values ('SK02242P', 'Kathleen', 'F', 'Patterson', 5, 158, '1389', '04/05/91')
--insert employee values ('PM025399M', 'Maria', 'Z', 'Porter', 5, 246, '1758', '03/03/90')
--insert employee values ('YJL2618P', 'Janine', 'V', 'LeBreton', 5, 172, '9981', '05/26/91')
--insert employee values ('YJL2618P', 'Natalia', 'M', 'Montgomery', 5, 172, '9981', '05/26/91')
--insert employee values ('VAP38899P', 'Victoria', 'R', 'Ashworth', 6, 140, '8877', '09/13/98')
--insert employee values ('L-831547P', 'Lesley', 'L', 'Brown', 7, 120, '8877', '02/13/91')
--insert employee values ('L-831547P', 'Adrienne', 'R', 'Dongeling', 8, 180, '8877', '01/27/93')
--insert employee values ('L-831547P', 'John', 'M', 'Fay', 9, 130, '8877', '02/05/93')
--insert employee values ('W-83854SP', 'Peter', 'M', 'Franken', 10, 75, '8877', '05/17/92')
--insert employee values ('QBT3944SP', 'Quelbel', 'B', 'Tonti', 11, 75, '8877', '01/01/90')
--insert employee values ('QBT3944SP', 'Quelbel', 'B', 'Tonti', 11, 75, '8877', '01/01/90')
--insert employee values ('PA42628P', 'Paolo', 'M', 'Acciari', 13, 35, '8877', '08/27/92')
--insert employee values ('ENL44273P', 'Elizabeth', 'N', 'Lincoln', 14, 35, '8877', '07/24/98)
GO

--insert employee values ('WNB44480P', 'Matti', 'B', 'Karttunen', 6, 220, '9736', '05/01/94')
--insert employee values ('P014737P', 'Palle', 'D', 'Iszen', 7, 195, '9736', '01/09/93')
--insert employee values ('WNS54964SP', 'Mary', 'M', 'Savile', 8, 175, '9736', '06/29/93')
--insert employee values ('WNS54964SP', 'Mary', 'M', 'Savile', 8, 175, '9736', '06/29/93')
--insert employee values ('WNS54964SP', 'Mervin', 'F', 'Sommer', 9, 160, '9736', '04/13/98')
--insert employee values ('R-033550P', 'Roland', 'L', 'Mendel', 11, 150, '0736', '09/05/91')
--insert employee values ('R-033550P', 'Howard', 'L', 'Sorenson', 12, 180, '0736', '11/15/88')
--insert employee values ('R-033550P', 'Howard', 'L', 'Sorenson', 12, 180, '0736', '11/15/88')
--insert employee values ('YK164388P', 'Karin', 'B', 'Josephs', 14, 100, '0736', '10/17/92')
--insert employee values ('DWA65330P', 'Diego', 'W', 'Arol', 6, 192, '1389', '12/16/91')
--insert employee values ('DWA65330P', 'Diego', 'W', 'Arol', 6, 192, '1389', '12/16/91')
--insert employee values ('PS96866SP', 'Paula', 'S', 'Parente', 8, 125, '1389', '01/19/94')
--insert employee values ('WES70874P', 'Margaret', 'A', 'Smith', 9, 78, '1389', '09/29/88')
--insert employee values ('A-CI7379P', 'Aria', 'A', 'Cruz', 10, 67, '1389', '02/09/91')
--insert employee values ('WMP77738P', 'Hannah', 'A', 'Pealine', 11, 112, '1389', '12/07/92')
```

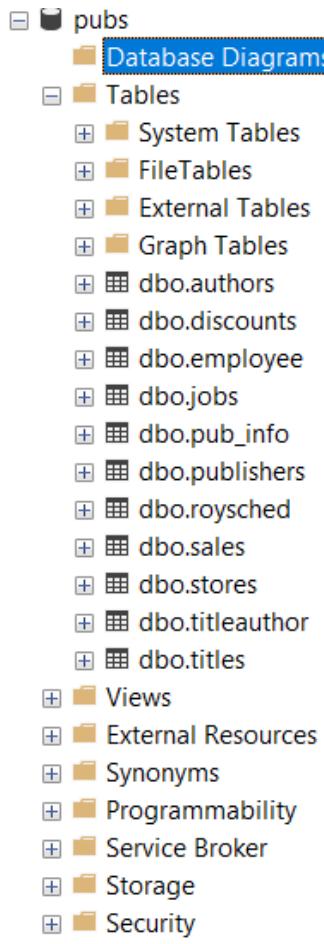
LN 2010 Col 41 Ch 41 INS

DESKTOP-7JFNVGQ (15.0 RTM) DESKTOP-7JFNVGQ\USUARIO... pubs 00:00:00 121 rows

Lluvia ahora Close

1048 ESP 14/09/2022 18

-La creación de las Tablas de “pubs”



-Las atributos de la Tabla **authors**

□	█	dbo.authors
□	█	Columns
☛	au_id	(PK, id(varchar(11)), not null)
☛	au_lname	(varchar(40), not null)
☛	au_fname	(varchar(20), not null)
☛	phone	(char(12), not null)
☛	address	(varchar(40), null)
☛	city	(varchar(20), null)
☛	state	(char(2), null)
☛	zip	(char(5), null)
☛	contract	(bit, not null)
□	█	Keys

-Los atributos de la Tabla **discounts**

□	█	dbo.discounts
□	█	Columns
☛	discounttype	(varchar(40), not null)
☛	stor_id	(FK, char(4), null)
☛	lowqty	(smallint, null)
☛	highqty	(smallint, null)
☛	discount	(decimal(4,2), not null)

-Los atributos de la Tabla **employee**

□	█	dbo.employee
□	█	Columns
☛	emp_id	(PK, empid(char(9)), not null)
☛	fname	(varchar(20), not null)
☛	minit	(char(1), null)
☛	lname	(varchar(30), not null)
☛	job_id	(FK, smallint, not null)
☛	job_lvl	(tinyint, null)
☛	pub_id	(FK, char(4), not null)
☛	hire_date	(datetime, not null)
□	█	Keys

-Los atributos de la Tabla **jobs**

□	▀	dbo.jobs
□	▀	Columns
└─	▀	job_id (PK, smallint, not null)
└─	▀	job_desc (varchar(50), not null)
└─	▀	min_lvl (tinyint, not null)
└─	▀	max_lvl (tinyint, not null)

-Los atributos de la Tabla **pub_info**

□	▀	dbo.pub_info
□	▀	Columns
└─	▀	pub_id (PK, FK, char(4), not null)
└─	▀	logo (image, null)
└─	▀	pr_info (text, null)

-Los atributos de la Tabla **publishers**

□	▀	dbo.publishers
□	▀	Columns
└─	▀	pub_id (PK, char(4), not null)
└─	▀	pub_name (varchar(40), null)
└─	▀	city (varchar(20), null)
└─	▀	state (char(2), null)
└─	▀	country (varchar(30), null)

-Los atributos de la Tabla **roysched**

□	▀	dbo.roysched
□	▀	Columns
└─	▀	title_id (FK, tid(varchar(6)), not null)
└─	▀	lorange (int, null)
└─	▀	hirange (int, null)
└─	▀	royalty (int, null)
└─	▀	Kevc

-Los atributos de la Tabla **sales**

			dbo.sales
			Columns
			stor_id (PK, FK, char(4), not null)
			ord_num (PK, varchar(20), not null)
			ord_date (datetime, not null)
			qty (smallint, not null)
			payterms (varchar(12), not null)
			title_id (PK, FK, tid(varchar(6)), not null)

-Los atributos de la Tabla **stores**

		dbo.stores
		Columns
		stor_id (PK, char(4), not null)
		stor_name (varchar(40), null)
		stor_address (varchar(40), null)
		city (varchar(20), null)
		state (char(2), null)
		zip (char(5), null)

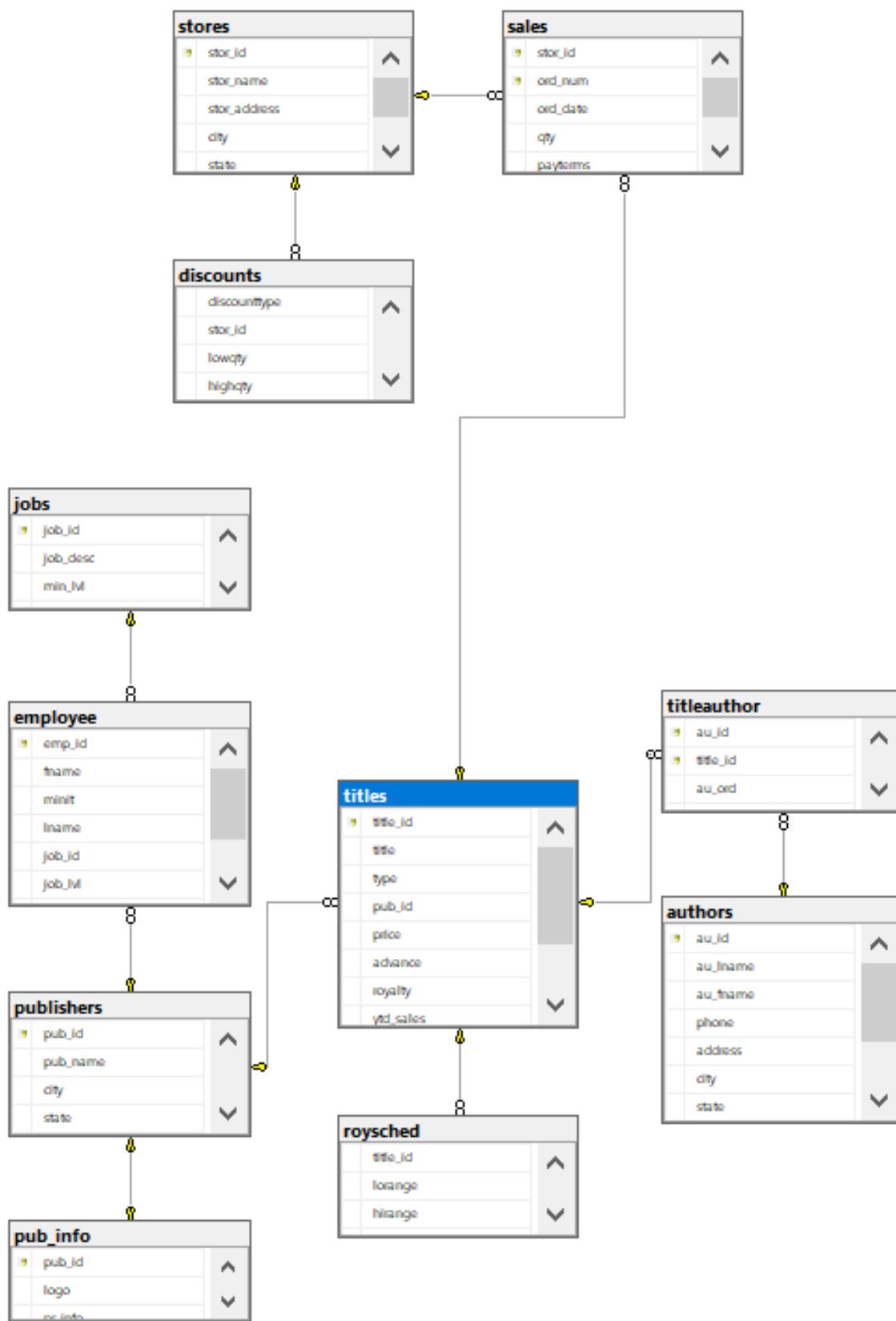
-Los atributos de la Tabla **titleautor**

dbo.titleauthor
Columns
au_id (PK, FK, id(varchar(11)), not null)
title_id (PK, FK, tid(varchar(6)), not null)
au_ord (tinyint, null)
royaltyper (int, null)

-Los atributos de la Tabla **titles**

dbo	titles
Columns	
PK	title_id (PK, tid(varchar(6)), not null)
	title (varchar(80), not null)
	type (char(12), not null)
FK	pub_id (FK, char(4), null)
	price (money, null)
	advance (money, null)
	royalty (int, null)
	ytd_sales (int, null)
	notes (varchar(200), null)
	pubdate (datetime, not null)

-Diagrama de la Base de Datos



- Los datos registrados de la BD de las Clases

The screenshot shows a SSMS results grid with the following data extracted from different tables:

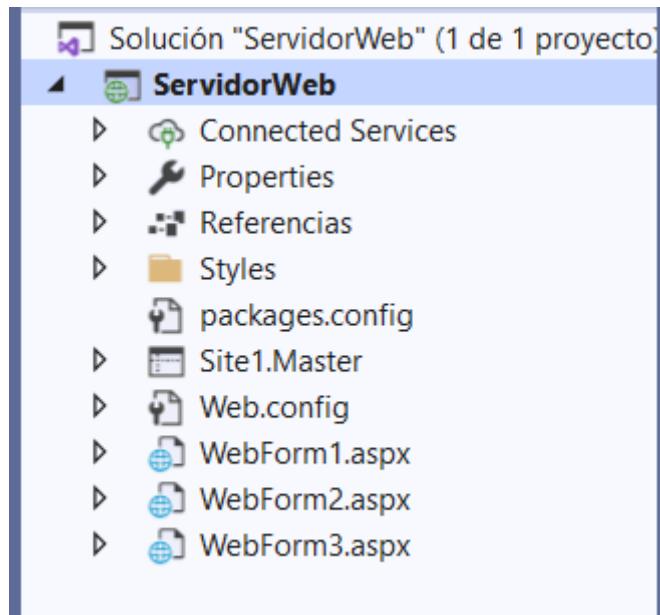
	title_id	lorange	hirange	royalty
84	PS1372	20001	30000	14
85	PS1372	30001	40000	16
86	PS1372	40001	50000	18

	discounttype	stor_id	lowqty	highqty	discount
1	Initial Customer	NULL	NULL	NULL	10.50
2	Volume Discount	NULL	100	1000	6.70
3	Customer Discount	8042	NULL	NULL	5.00

	job_id	job_desc	min_lvl	max_lv
7	7	Marketing Manager	120	200
8	8	Public Relations Manager	100	175
9	9	Acquisitions Manager	75	175
10	10	Productions Manager	75	165
11	11	Operations Manager	75	150
12	12	Editor	25	100
13	13	Sales Representative	25	100
14	14	Designer	25	100

	title_id	title	type	pub_id	price	advance	royalty	ytd_sales	notes	pubdate
2	BU1111	Cooking with Computers: Surreptitious Balance Sh...	business	1389	11.95	5000.00	10	3876	Helpful hints on how to use your electronic resourc...	1991-06-09 00:00:00.000
3	BU2075	You Can Combat Computer Stress!	business	0736	2.99	10125...	24	18722	The latest medical and psychological techniques f...	1991-06-30 00:00:00.000
4	BU7322	Straight Talk About Computers	business	1389	19.99	5000.00	10	4095	Annotated analysis of what computers can do for y...	1991-06-22 00:00:00.000
5	MC2222	Silicon Valley Gastronomic Treats	mod_c...	0877	19.99	0.00	12	2032	Favorite recipes for quick, easy, and elegant meals.	1991-06-09 00:00:00.000
6	MC3021	The Gourmet Microwave	mod_c...	0877	2.99	15000...	24	22246	Traditional French gourmet recipes adapted for m...	1991-06-18 00:00:00.000
7	MC3026	The Psychology of Computer Cooking	UNDE...	0877	NULL	NULL	NULL	NULL		2022-09-14 09:54:44.257
8	PC1035	But Is It User Friendly?	popula...	1389	22.95	7000.00	16	8780	A survey of software for the naive user, focusing on ...	1991-06-30 00:00:00.000
9	PC8888	Secrets of Silicon Valley	popula...	1389	20.00	8000.00	10	4095	Muckraking reporting on the world's largest comp...	1994-06-12 00:00:00.000
10	PC9999	Net Etiquette	popula...	1389	NULL	NULL	NULL	NULL	A must-read for computer conferencing.	2022-09-14 09:54:47.150
11	PS1372	Computer Phobic AND Non-Phobic Individuals: Beh...	psychol...	0877	21.59	7000.00	10	375	A must for the specialist, this book examines the di...	1991-10-21 00:00:00.000
12	PS2091	Is Anger the Enemy?	psychol...	0736	10.95	2275.00	12	2045	Carefully researched study of the effects of strong e...	1991-06-15 00:00:00.000
13	PS2106	Life Without Fear	psychol...	0736	7.00	6000.00	10	111	New exercise, meditation, and nutritional techniqu...	1991-10-15 00:00:00.000
14	PS3333	Prolonged Data Deprivation: Four Case Studies	psychol...	0736	19.99	2000.00	10	4072	What happens when the data runs dry? Searching...	1991-06-12 00:00:00.000
15	PS7777	Emotional Security: A New Algorithm	psychol...	0736	7.99	4000.00	10	3336	Protecting yourself and your loved ones from undu...	1991-06-12 00:00:00.000
16	TC3218	Onions, Leeks, and Garlic: Cooking Secrets of the ...	trad_co...	0877	20.95	7000.00	10	375	Profusely illustrated in color, this makes a wonderf...	1991-10-21 00:00:00.000
17	TC4203	Fifty Years in Buckingham Palace Kitchens	trad_co...	0877	11.95	4000.00	14	15096	More anecdotes from the Queen's favorite cook de...	1991-06-12 00:00:00.000
18	TC7777	Sushi, Anyone?	trad_co...	0877	14.99	8000.00	10	4095	Detailed instructions on how to make authentic Ja...	1991-06-12 00:00:00.000

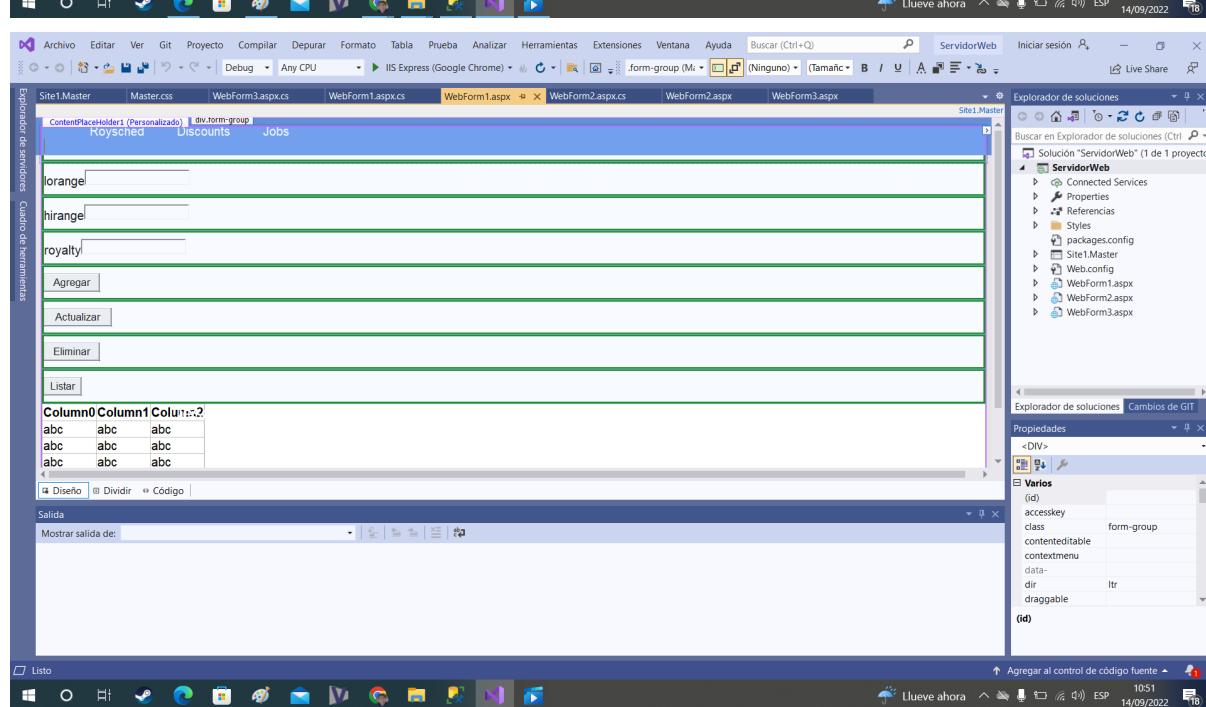
-La creación de un proyecto de solución en Visual Studio “ServicioWeb”



-El Formulario de la primera Web

The screenshot shows the Microsoft Visual Studio interface. The top menu bar includes Archivo, Editar, Ver, Git, Proyecto, Compilar, Depurar, Formato, Prueba, Analizar, Herramientas, Extensiones, Ventana, Ayuda, and Buscar (Ctrl+Q). The title bar says "ServidorWeb". The code editor window displays the C# code for WebForm1.aspx.cs, which contains ASP.NET controls like labels, text boxes, and buttons. The Solution Explorer on the right shows the project structure for "ServidorWeb" with files like Site1.Master, WebForm1.aspx, and WebForm2.aspx. The Properties window is also visible.

```
1 <%@ Page Title="<asp:ContentPlaceHolder ID="ContentPlaceHolder1" runat="server" %></%>%>
2 <asp:Content ID="Content1" ContentPlaceHolderID="ContentPlaceHolder1" runat="server" %>
3 </asp:Content>
4 <div class="container">
5   <div class="form-group">
6     <label for="title_id" runat="server" Text="<asp:Label ID="txtTitle_1" runat="server" />"></label>
7     <input type="text" ID="txtTitle_1d" runat="server" /></div>
8   <div class="form-group">
9     <label ID="Label12" runat="server" Text="<asp:Label ID="txtOrange" runat="server" />"></label>
10    <input type="text" ID="txtOrange" runat="server" /></div>
11  <div class="form-group">
12    <label for="royalty_id" runat="server" Text="<asp:Label ID="txtRoyalty" runat="server" />"></label>
13    <input type="text" ID="txtRoyalty" runat="server" /></div>
14  <div class="form-group">
15    <label for="Agregar_id" runat="server" Text="<asp:Label ID="txtAgregar" runat="server" />"></label>
16    <input type="button" ID="btngregar" runat="server" class="btn btn-primary" Text="Agregar" OnClick="btngregar_Click" />
17  </div>
18  <div class="form-group">
19    <label for="Actualizar_id" runat="server" Text="<asp:Label ID="txtActualizar" runat="server" />"></label>
20    <input type="button" ID="btndactualizar" runat="server" Text="Actualizar" OnClick="btndactualizar_Click" />
21  </div>
22  <div class="form-group">
23    <input type="button" ID="btndelete" runat="server" Text="<asp:Button ID="btndelete" runat="server" />"></input>
24  </div>
25  <div class="form-group">
26    <input type="button" ID="btncargar" runat="server" Text="<asp:Button ID="btncargar" runat="server" />"></input>
27  </div>
28  <div class="form-group">
29    <input type="button" ID="btncargar" runat="server" Text="<asp:Button ID="btncargar" runat="server" />"></input>
30  </div>
31  <div class="form-group">
32    <input type="button" ID="btncargar" runat="server" Text="<asp:Button ID="btncargar" runat="server" />"></input>
33  </div>
34  <div class="form-group">
35    <input type="button" ID="btncargar" runat="server" Text="<asp:Button ID="btncargar" runat="server" />"></input>
36  </div>
37  <div class="form-group">
38    <input type="button" ID="btncargar" runat="server" Text="<asp:Button ID="btncargar" runat="server" />"></input>
39  </div>
40</div>
41</div>
42</div>
43</div>
44</div>
```



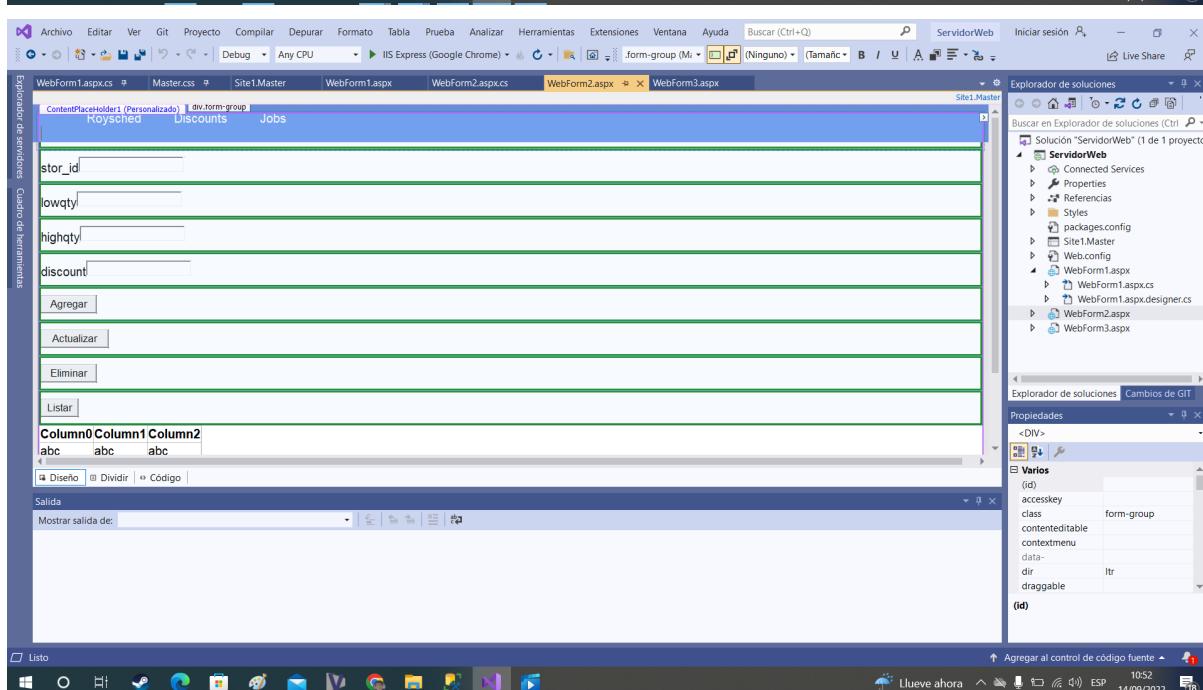
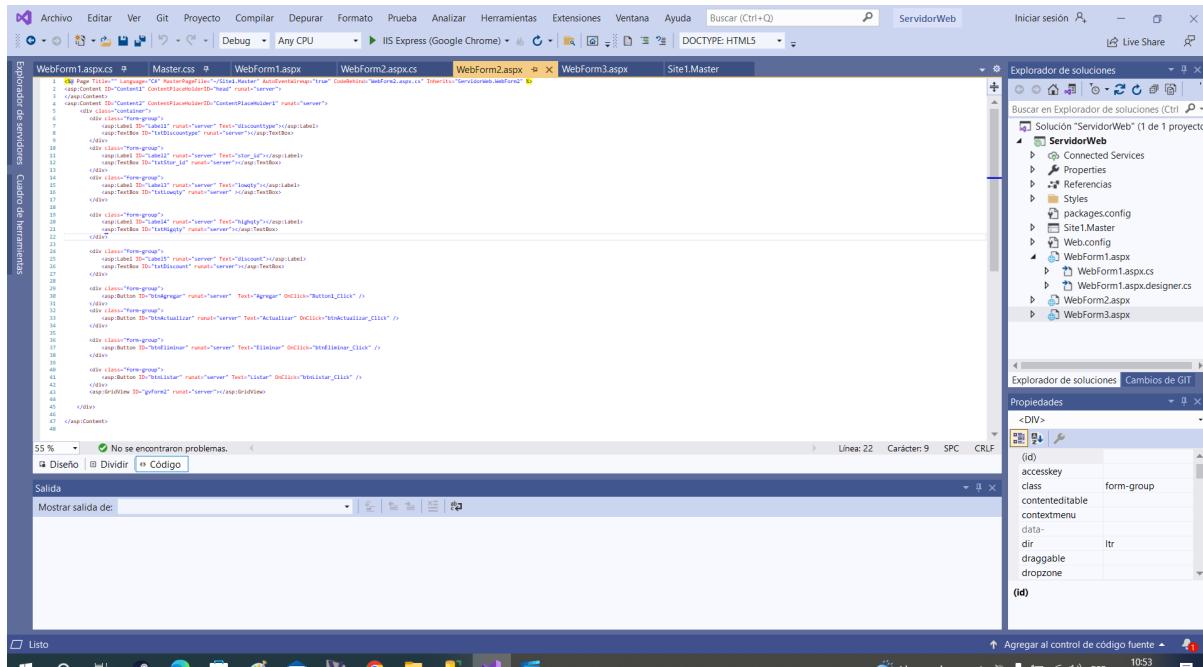
```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.UI;
6  using System.Web.UI.WebControls;
7
8  namespace ServidorWeb
9  {
10    public partial class webForm1 : System.Web.UI.Page
11    {
12      private static ServiceReference1.WebServiceSoap servicio = new ServiceReference1.WebServiceSoapClient();
13
14      protected void listar()
15      {
16        gvForm1.DataSource = servicio.listar().Tables[0];
17        gvForm1.DataBind();
18      }
19
20      protected void btnAgregar_Click(object sender, EventArgs e)
21      {
22      }
23
24      protected void btnActualizar_Click(object sender, EventArgs e)
25      {
26        string title_id = txtTitle_id.Text.Trim();
27        int lorange = Convert.ToInt16(txtLorange.Text.Trim());
28        int hirange = Convert.ToInt16(txtHirange.Text.Trim());
29        int royalty = Convert.ToInt16(txtRoyalty.Text.Trim());
30        servicio.actualizar(title_id, lorange, hirange, royalty);
31        listar();
32      }
33
34      protected void btnEliminar_Click(object sender, EventArgs e)
35      {
36        string title_id = txtTitle_id.Text.ToString();
37        servicio.eliminar(title_id);
38        gvForm1.DataBind();
39      }
40
41      protected void btnListar_Click(object sender, EventArgs e)
42      {
43        gvForm1.DataSource = servicio.listar().Tables[0];
44        gvForm1.DataBind();
45      }
46
47      protected void button1_Click(object sender, EventArgs e)
48      {
49        string title_id = txtTitle_id.Text.Trim();
50        gvForm1.DataSource = servicio.listar().Tables[0];
51        gvForm1.DataBind();
52      }
53
54      protected void btnActualizar_Click(object sender, EventArgs e)
55      {
56        string title_id = txtTitle_id.Text.Trim();
57        int lorange = Convert.ToInt16(txtLorange.Text.Trim());
58        int hirange = Convert.ToInt16(txtHirange.Text.Trim());
59        int royalty = Convert.ToInt16(txtRoyalty.Text.Trim());
60        servicio.actualizar(title_id, lorange, hirange, royalty);
61        listar();
62      }
63
64    }
65  }
```

No se encontraron problemas.

```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.UI;
6  using System.Web.UI.WebControls;
7
8  namespace ServidorWeb
9  {
10    public partial class webForm1 : System.Web.UI.Page
11    {
12      private static ServiceReference1.WebServiceSoap servicio = new ServiceReference1.WebServiceSoapClient();
13
14      protected void listar()
15      {
16        gvForm1.DataSource = servicio.listar().Tables[0];
17        gvForm1.DataBind();
18      }
19
20      protected void btnAgregar_Click(object sender, EventArgs e)
21      {
22        string title_id = txtTitle_id.Text.Trim();
23        int lorange = Convert.ToInt16(txtLorange.Text.Trim());
24        int hirange = Convert.ToInt16(txtHirange.Text.Trim());
25        int royalty = Convert.ToInt16(txtRoyalty.Text.Trim());
26        servicio.agregar(title_id, lorange, hirange, royalty);
27        listar();
28      }
29
30      protected void btnActualizar_Click(object sender, EventArgs e)
31      {
32        string title_id = txtTitle_id.Text.Trim();
33        int lorange = Convert.ToInt16(txtLorange.Text.Trim());
34        int hirange = Convert.ToInt16(txtHirange.Text.Trim());
35        int royalty = Convert.ToInt16(txtRoyalty.Text.Trim());
36        servicio.actualizar(title_id, lorange, hirange, royalty);
37        listar();
38      }
39
40      protected void btnEliminar_Click(object sender, EventArgs e)
41      {
42        string title_id = txtTitle_id.Text.ToString();
43        servicio.eliminar(title_id);
44        gvForm1.DataBind();
45      }
46
47      protected void btnListar_Click(object sender, EventArgs e)
48      {
49        gvForm1.DataSource = servicio.listar().Tables[0];
50        gvForm1.DataBind();
51      }
52
53      protected void button1_Click(object sender, EventArgs e)
54      {
55        gvForm1.DataSource = servicio.listar().Tables[0];
56        gvForm1.DataBind();
57      }
58
59      protected void btnActualizar_Click(object sender, EventArgs e)
60      {
61        string title_id = txtTitle_id.Text.Trim();
62        int lorange = Convert.ToInt16(txtLorange.Text.Trim());
63        int hirange = Convert.ToInt16(txtHirange.Text.Trim());
64        int royalty = Convert.ToInt16(txtRoyalty.Text.Trim());
65        servicio.actualizar(title_id, lorange, hirange, royalty);
66        listar();
67      }
68
69    }
70  }
```

No se encontraron problemas.

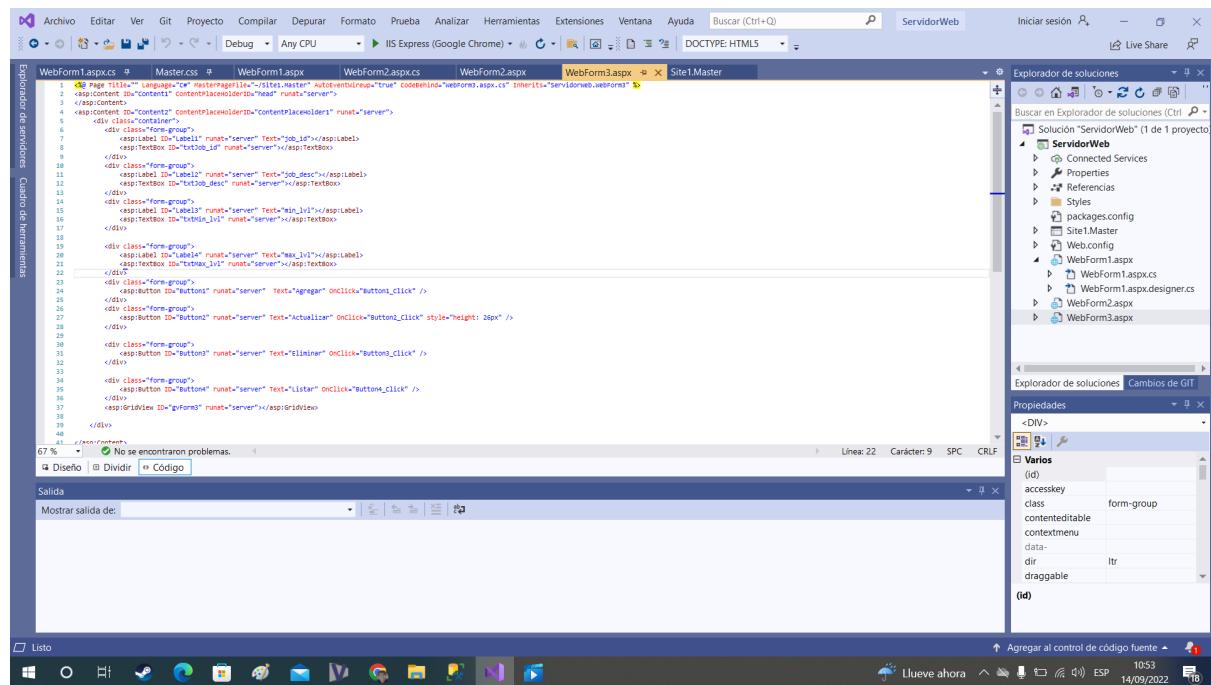
-El Formulario de la segunda Web



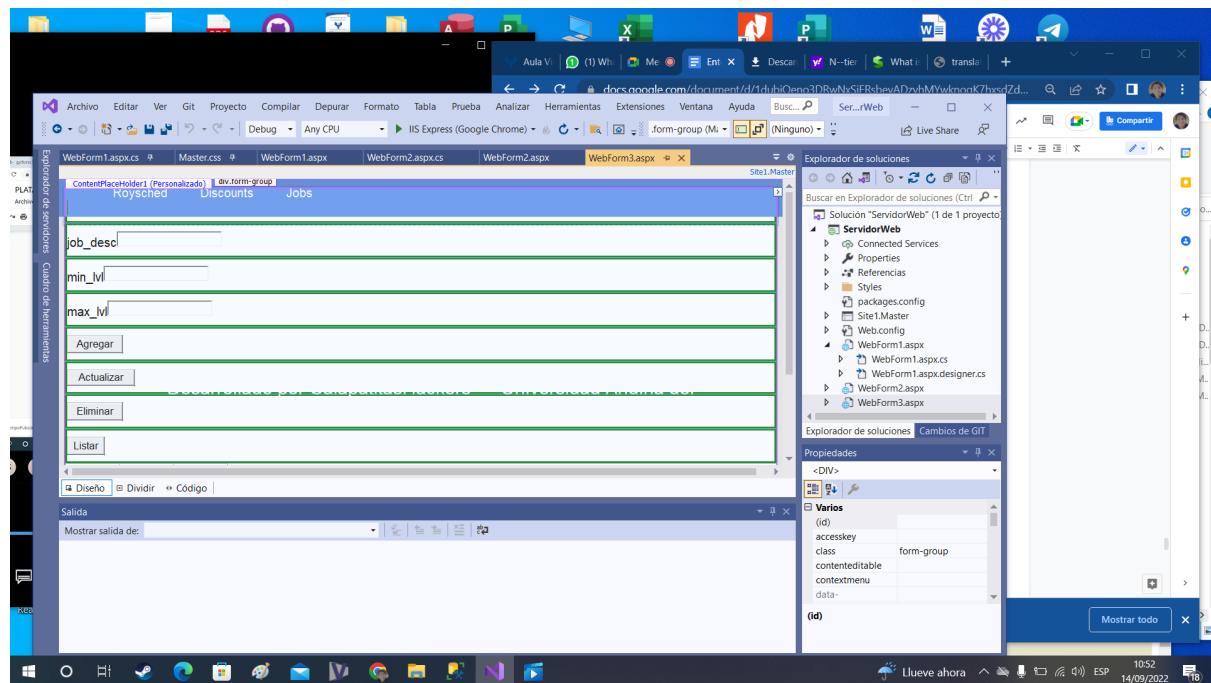
```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.UI;
6  using System.Web.UI.WebControls;
7
8  namespace ServidorWeb
9  {
10    public partial class WebForm2 : System.Web.UI.Page
11    {
12      private static ServiceReference1.Service1SoapClient servicio = new ServiceReference1.Service1SoapClient();
13
14      protected void Page_Load(object sender, EventArgs e)
15      {
16        if (!IsPostBack)
17        {
18          gvForm2.DataSource = servicio.Listar();
19          gvForm2.DataBind();
20        }
21      }
22
23      protected void button1_Click(object sender, EventArgs e)
24      {
25        string discounttype = txtDiscountType.Text.Trim();
26        string id = txtForm2_id.Text.Trim();
27        int lowqty = Convert.ToInt32(txtLowQty.Text.Trim());
28        int highqty = Convert.ToInt32(txtHighQty.Text.Trim());
29        double discount = double.Parse(txtDiscount.Text.Trim());
30
31        servicio.Actualizar(discounttype, id, lowqty, highqty, discount);
32        gvForm2.DataBind();
33      }
34
35      protected void button2_Click(object sender, EventArgs e)
36      {
37        string discounttype = txtDiscountType.Text.Trim();
38        string id = txtForm2_id.Text.Trim();
39        int lowqty = Convert.ToInt32(txtLowQty.Text.Trim());
40        int highqty = Convert.ToInt32(txtHighQty.Text.Trim());
41        double discount = double.Parse(txtDiscount.Text.Trim());
42
43        servicio.Eliminar(discounttype, id);
44        gvForm2.DataBind();
45      }
46
47
48      protected void btnListar_Click(object sender, EventArgs e)
49      {
50        string discounttype = txtDiscountType.Text.Trim();
51        gvForm2.DataSource = servicio.Listar();
52        gvForm2.DataBind();
53      }
54
55
56
57
58    }
59  }
```

```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.UI;
6  using System.Web.UI.WebControls;
7
8  namespace ServidorWeb
9  {
10    public partial class WebForm2 : System.Web.UI.Page
11    {
12      private static ServiceReference1.Service1SoapClient servicio = new ServiceReference1.Service1SoapClient();
13
14      protected void Page_Load(object sender, EventArgs e)
15      {
16        if (!IsPostBack)
17        {
18          string discounttype = txtDiscountType.Text.Trim();
19          string id = txtForm2_id.Text.Trim();
20          int lowqty = Convert.ToInt32(txtLowQty.Text.Trim());
21          int highqty = Convert.ToInt32(txtHighQty.Text.Trim());
22          double discount = double.Parse(txtDiscount.Text.Trim());
23
24          servicio.Insertar(discounttype, id, lowqty, highqty, discount);
25        }
26      }
27
28      protected void btnActualizar_Click(object sender, EventArgs e)
29      {
30        string discounttype = txtDiscountType.Text.Trim();
31        string id = txtForm2_id.Text.Trim();
32        int lowqty = Convert.ToInt32(txtLowQty.Text.Trim());
33        int highqty = Convert.ToInt32(txtHighQty.Text.Trim());
34        double discount = double.Parse(txtDiscount.Text.Trim());
35
36        servicio.Actualizar(discounttype, id, lowqty, highqty, discount);
37        gvForm2.DataBind();
38      }
39
40      protected void btnEliminar_Click(object sender, EventArgs e)
41      {
42        string discounttype = txtDiscountType.Text.ToString();
43        servicio.Eliminar(discounttype);
44        gvForm2.DataBind();
45      }
46
47
48      protected void btnListar_Click(object sender, EventArgs e)
49      {
50        string discounttype = txtDiscountType.Text.Trim();
51        gvForm2.DataSource = servicio.Listar();
52        gvForm2.DataBind();
53      }
54
55
56
57
58    }
59  }
```

-El Formulario de la tercera Web



```
<%@ PAGE TITLE="<asp:Label ID="Label1" runat="server" Text="ServidorWeb">" %>
<%@ MasterPageFile="~/Site1.Master" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs" Inherit="<%=ServerName%>.WebForm1" %>
<%@ Content %>
<div class="container">
    <div class="form-group">
        <asp:Label ID="Label1" runat="server" Text="Job_ID"></asp:Label>
        <asp:TextBox ID="txtJob_ID" runat="server" type="text" />
    </div>
    <div class="form-group">
        <asp:Label ID="Label2" runat="server" Text="Job_desc"></asp:Label>
        <asp:TextBox ID="txtJob_Desc" runat="server" type="text" />
    </div>
    <div class="form-group">
        <asp:Label ID="Label3" runat="server" Text="Min_lvl"></asp:Label>
        <asp:TextBox ID="txtMin_Lvl" runat="server" type="text" />
    </div>
    <div class="form-group">
        <asp:Label ID="Label4" runat="server" Text="Max_lvl"></asp:Label>
        <asp:TextBox ID="txtMax_Lvl" runat="server" type="text" />
    </div>
    <div class="form-group">
        <asp:Button ID="Button1" runat="server" Text="Añadir" OnClick="Button1_Click" />
    </div>
    <div class="form-group">
        <asp:Button ID="Button2" runat="server" Text="Actualizar" OnClick="Button2_Click" style="height: 20px;" />
    </div>
    <div class="form-group">
        <asp:Button ID="Button3" runat="server" Text="Eliminar" OnClick="Button3_Click" />
    </div>
    <div class="form-group">
        <asp:Button ID="Button4" runat="server" Text="Listar" OnClick="Button4_Click" />
    </div>
    <asp:GridView ID="gvForm3" runat="server" />
</div>
```



```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.UI;
6  using System.Web.UI.WebControls;
7
8  namespace ServidorWeb
9  {
10
11     public partial class webForm3 : System.Web.UI.Page
12     {
13         private static ServicioReference.servicioSoapClient servicio = new ServicioReference.servicioSoapClient();
14
15         protected void listar()
16         {
17             gvForm3.DataSource = servicio.Listar();
18             gvForm3.DataBind();
19         }
20
21         protected void Button1_Click(object sender, EventArgs e)
22         {
23             string job_desc = txtJob_desc.Text.Trim();
24             int min_lv1 = Convert.ToInt32(txtMin_lv1.Text.Trim());
25             int max_lv1 = Convert.ToInt32(txtMax_lv1.Text.Trim());
26             servicio.actualizar(job_desc, min_lv1, max_lv1);
27             listar();
28         }
29
30         protected void Button2_Click(object sender, EventArgs e)
31         {
32             int job_id = Convert.ToInt32(txtJob_id.Text.Trim());
33             string job_desc = txtJob_desc.Text.Trim();
34             int min_lv1 = Convert.ToInt32(txtMin_lv1.Text.Trim());
35             int max_lv1 = Convert.ToInt32(txtMax_lv1.Text.Trim());
36             servicio.actualizar(job_id, job_desc, min_lv1, max_lv1);
37             listar();
38         }
39
40         protected void Button3_Click(object sender, EventArgs e)
41         {
42             int job_id = Convert.ToInt32(txtJob_id.Text.Trim());
43             servicio.Borrar(job_id);
44             listar();
45         }
46
47         protected void Button4_Click(object sender, EventArgs e)
48         {
49             gvForm3.DataSource = servicio.listar();
50             gvForm3.DataBind();
51         }
52     }
53 }
```

```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.UI;
6  using System.Web.UI.WebControls;
7
8  namespace ServidorWeb
9  {
10
11     public partial class webForm3 : System.Web.UI.Page
12     {
13         private static ServicioReference.servicioSoapClient servicio = new ServicioReference.servicioSoapClient();
14
15         protected void listar()
16         {
17             int job_id = Convert.ToInt32(txtJob_id.Text.Trim());
18             string job_desc = txtJob_desc.Text.Trim();
19             int min_lv1 = Convert.ToInt32(txtMin_lv1.Text.Trim());
20             int max_lv1 = Convert.ToInt32(txtMax_lv1.Text.Trim());
21             servicio.actualizar(job_id, job_desc, min_lv1, max_lv1);
22             listar();
23         }
24
25         protected void Button1_Click(object sender, EventArgs e)
26         {
27             int job_id = Convert.ToInt32(txtJob_id.Text.Trim());
28             servicio.actualizar(job_id);
29             listar();
30         }
31
32         protected void Button2_Click(object sender, EventArgs e)
33         {
34             int job_id = Convert.ToInt32(txtJob_id.Text.Trim());
35             servicio.Borrar(job_id);
36             listar();
37         }
38
39         protected void Button3_Click(object sender, EventArgs e)
40         {
41             int job_id = Convert.ToInt32(txtJob_id.Text.Trim());
42             servicio.Borrar(job_id);
43             listar();
44         }
45
46         protected void Button4_Click(object sender, EventArgs e)
47         {
48             gvForm3.DataSource = servicio.listar();
49             gvForm3.DataBind();
50         }
51     }
52 }
```

CONCLUSIÓN

En el desarrollo de prototipo de software las etapas de análisis de requerimientos y diseño toma gran parte del tiempo del proyecto. El modelo planteado en este proyecto pretende establecer unos parámetros de diseño generales que permitan agilizar la implementación de proyectos tipo sistemas de control por software, cuya base común es el procesamiento de señales digitales en busca de comportamiento de interés.

SUGERENCIAS

- El CRUD tiene que ser dinámico y versátil a la hora de su uso
- Es muy práctico usar procedimientos almacenados ya que estos ahorra mucho espacio y código en la implementación de clientes.