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C# for WPF - Final Project  
Contact Management System

## **Contact Manager Pro - Contact Management System**

### **OVERVIEW**

*The Contact Manager Pro was developed as a WPF application using an N-Tier application architecture. A Business Logic Layer, Entities Layer, and Data Context Layer have been developed as dependencies within the application.*

### **INCLUDED FILES**

1. README.pdf
2. ContactManagementSystem (Project Directory including Visual Studio Solution files)
  - a. CHECKSUM
    - i. CRC-32 (For Data): F015A1DC
    - ii. CRC-32 (For Data and Names): C145889B
    - iii. Size: 36MB
3. ContactManagementSystemDB.bak
  - a. CHECKSUM
    - i. CRC-32: 1AB50A34
    - ii. SHA-1: 8CCC7DB4B30D60AADD462B1304A4537DA5F34A60
    - iii. Size: 2MB
4. ContactManagementSystem\_SQL\_Queries.sql
  - a. CHECKSUM
    - i. CRC-32: 1F9878D0
    - ii. SHA-1: 40567041A252A3A21EC5B8E70CC13D42EF242171
    - iii. Size: 3984 bytes

### **FEATURES**

*The Contact Manager Pro includes the following features:*

1. Front Page
  - a. Add Contact Button and Label
  - b. View All Contacts Button and Label
  - c. Label and Logo
2. Menu "Ribbon"
  - a. File
    - i. View All Contacts
      1. Opens "View All Contacts" window
    - ii. Add Contact
      1. Opens "Add Contact" window
  - b. About

- i. Opens an About Box integrated through Windows Forms inheritances
- 3. Add Contact Window
  - a. Add contacts via assembled form
  - b. Double Click argument passed from XAML to set TextBox strings to empty
  - c. Save Button Method
    - i. Conditional properties to do a light check for default TextBox properties and null values -- not perfect as it fails the E-Mail.Text = String.Empty test
    - ii. Passes TextBox properties into a Contact object
    - iii. Calls Reset method to reset data to default "Masked" properties
    - iv. Calls saveDataMessageBox() that appears when the Save Button is clicked
      - 1. Shows a Windows Forms(inherits WAF instead of WPF) MessageBox
        - a. MessageBox is assigned the type of DialogResult with saveDataMessageBoxResult as variable
        - b. DialogResult is checked in a conditional
        - c. Conditional is checked against saveDataMessageBoxResult and a DialogResult value ("Yes" or "No")
        - d. DialogResult Yes value instantiates variable of the type ViewAllContactsWindow and displays View All Contacts Window
        - e. DialogResult No value calls this.show() where "this" is the Add Contact Window
- 4. View All Contacts Window
  - a. Similar UI elements as the rest of the application
  - b. DataGrid present in the View All Contacts Window is bound to the ContactManagementSystemDB data

## DEPENDENCIES

*The Contact Manager Pro was developed against several N-Tier Application libraries:*

- 1. Dependencies/References:
  - a. ContactManagementSystemBL

*This layer contains Business Logic for the application. In this layer, the Contact object is passed to the database for processing. The grid that is bound to the data is also updated accordingly (i.e. save events).*

    - i. Depends on:
      - 1. ContactManagementSystemDL
      - 2. ContactManagementSystemEntities
  - b. ContactManagementSystemEntities

*This layer defines get and set properties as well as base Contact properties for the application.*

    - i. No N-Tier architecture related Dependencies/References

- c. ContactManagementSystemDL  
*This layer contains the DatabaseContext files for the application. In this layer, Lists are casted as contacts in order to bind data to the grid and the appropriate database context objects are accessed and turned into implementations.*
  - i. Depends on:
    - 1. ContactManagementSystemEntities
- d. ContactManagementSystem  
*This layer contains the XAML and CS code behind files. This is the startup project for the Contact Management System.*
  - i. Depends on:
    - 1. ContactManagementSystemBL
    - 2. ContactManagementSystemEntities
  - ii. Contains:
    - 1. ContactManagementSystem.Entities
      - a. The Entities folder houses UI based files such as images

### SQL Queries

*A collection of SQLServer queries that include: Database Creation, Table Creation, Procedure Creation for both Insert and Get Contact database objects, Insert of auto-generated data for testing purposes, and the deletion of application test data (ContactID Auto Increment numbering has been affected by the removal of the test data).*

```
CREATE DATABASE ContactManagementSystemDB;
```

```
USE ContactManagementSystemDB;
```

```
CREATE TABLE Contacts
```

```
(  
    ContactID int PRIMARY KEY IDENTITY(1,1),  
    FirstName varchar(20) NOT NULL,  
    LastName varchar(30) NOT NULL,  
    Title varchar(30) NULL,  
    Company varchar(50) NULL,  
    Email varchar(50) NOT NULL,  
    Telephone varchar(20) NULL  
);
```

```
CREATE PROCEDURE [dbo].[InsertContact]  
    @FirstName VARCHAR(20),  
    @LastName VARCHAR(30),  
    @Title VARCHAR(30),  
    @Company VARCHAR(50),  
    @Email VARCHAR(50),
```

```
        @Telephone VARCHAR(20)
AS
    INSERT INTO Contacts (FirstName,LastName,Title,Company,Email,Telephone)
    VALUES (@FirstName,@LastName,@Title,@Company,@Email,@Telephone)*

CREATE PROCEDURE [dbo].[GetContacts]
AS
BEGIN
    SELECT
        ContactID,
        FirstName,
        LastName,
        Title,
        Company,
        Email,
        Telephone
        FROM Contacts
END
GO
```

```
DELETE FROM Contacts WHERE FirstName = 'Test';
```

```
SELECT * FROM Contacts;
```

```
DELETE FROM Contacts WHERE FirstName = 'Enter First Name';
```

```
//Mockaroo Data
```

```
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Kathy',
'Ferguson', 'Civil Engineer', 'Sauer, Huel and Haley', 'kferguson0@hostgator.com',
'33-(472)338-9235');
```

```
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Harold',
'Day', 'Quality Engineer', 'Feeney, Mraz and Keeling', 'hday1@mapquest.com',
'351-(481)766-3966');
```

```
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Earl',
'Wallace', 'Design Engineer', 'Will-Toy', 'ewallace2@prweb.com', '62-(486)241-4133');
```

```
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Rose',
'Gibson', 'Compensation Analyst', 'Toy, Gorczany and Cummerata', 'rgibson3@desdev.cn',
'976-(811)840-4295');
```

```
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values
('Matthew', 'Morales', 'Help Desk Technician', 'Armstrong-Schultz', 'mmorales4@phpbb.com',
'48-(985)604-2765');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values
('Theresa', 'Mitchell', 'Accounting Assistant II', 'Emard and Sons',
'tmitchell5@constantcontact.com', '62-(187)265-7080');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values
('Catherine', 'Graham', 'Chief Design Engineer', 'Gleason-Trantow', 'cgraham6@ucoz.ru',
'86-(729)229-2108');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Cheryl',
'Hawkins', 'Accounting Assistant IV', 'Moore, Bogan and Anderson', 'chawkins7@digg.com',
'52-(175)931-4717');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Billy',
'Phillips', 'Research Associate', 'Bartoletti LLC', 'bphillips8@unblog.fr', '976-(553)952-2778');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Arthur',
'Phillips', 'Electrical Engineer', 'Upton, Pfannerstill and Brown', 'aphillips9@domainmarket.com',
'33-(331)147-3016');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Russell',
'Nichols', 'Dental Hygienist', 'Schuster-Ward', 'rnicholsa@ustream.tv', '55-(148)332-1880');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Maria',
'Bowman', 'Clinical Specialist', 'Durgan-Stiedemann', 'mbowmanb@phoca.cz',
'86-(481)199-0446');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Jerry',
'Hart', 'Staff Accountant III', 'Heidenreich-Rath', 'jhartc@google.cn', '993-(448)222-3293');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Carl',
'Schmidt', 'Associate Professor', 'Ruecker and Sons', 'cschmidt@goo.gl', '62-(640)277-2033');
insert into Contacts (FirstName, LastName, Title, Company, Email, Telephone) values ('Janet',
'Moore', 'Systems Administrator I', 'Trantow, Wunsch and Kling', 'jmooree@sohu.com',
'58-(215)579-8043');
```