

Database Application Design Document

Project Name:
**Newspaper/Magazines Delivery Management
Program**

Project Team Members:

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Creation Date:
5/19/2016

Revision History:

1. Introduction

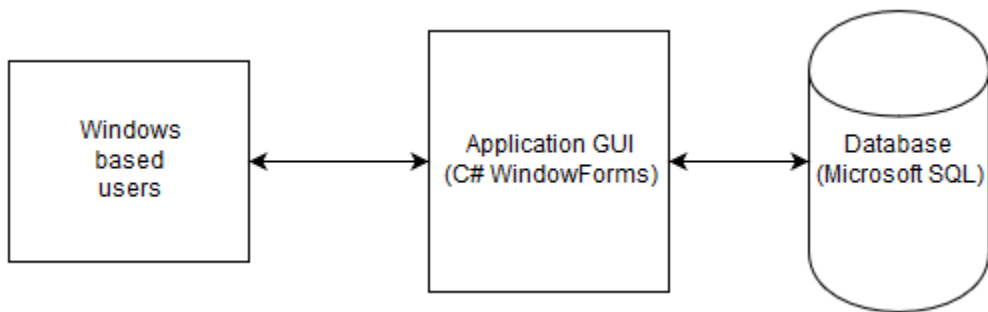
Purpose of this document

This is a design document...

It was realized by Wei Wu for Project Newspaper Delivery System

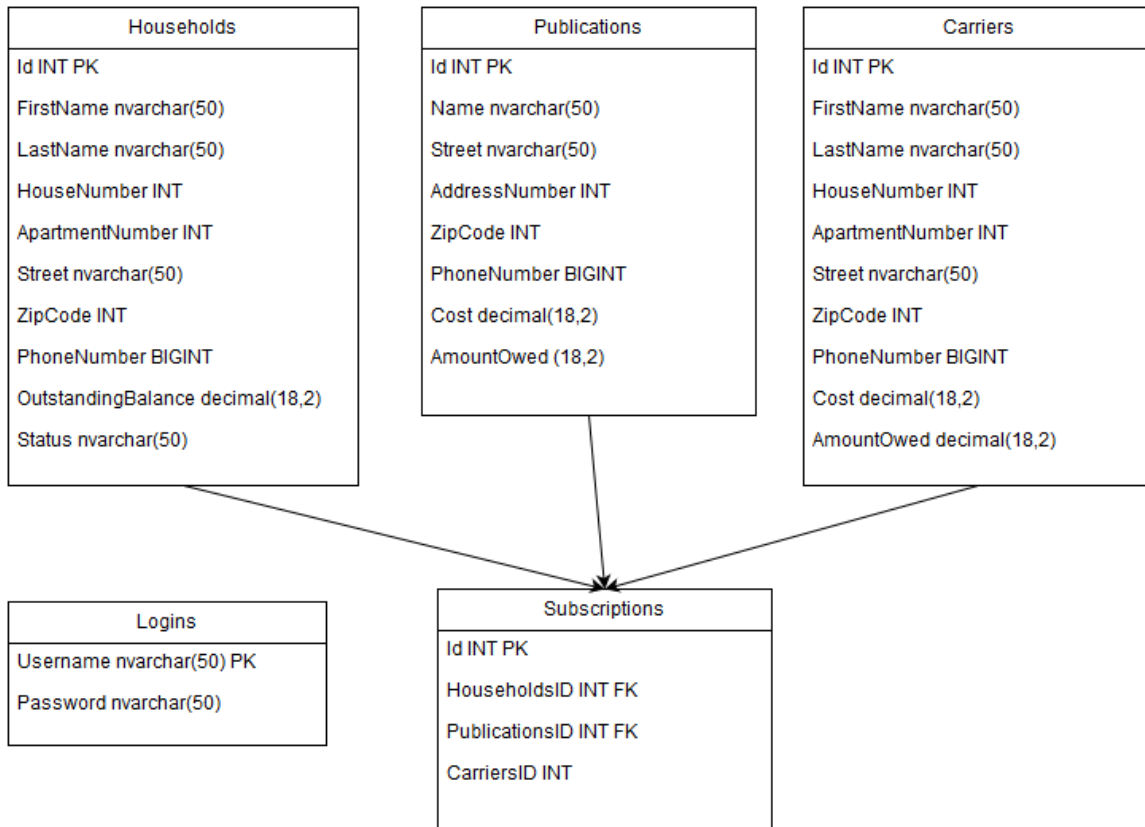
The program allows a business to keep track of households (customers), publications (The newspaper company), and carriers (the delivery guy).

2. Architecture Design

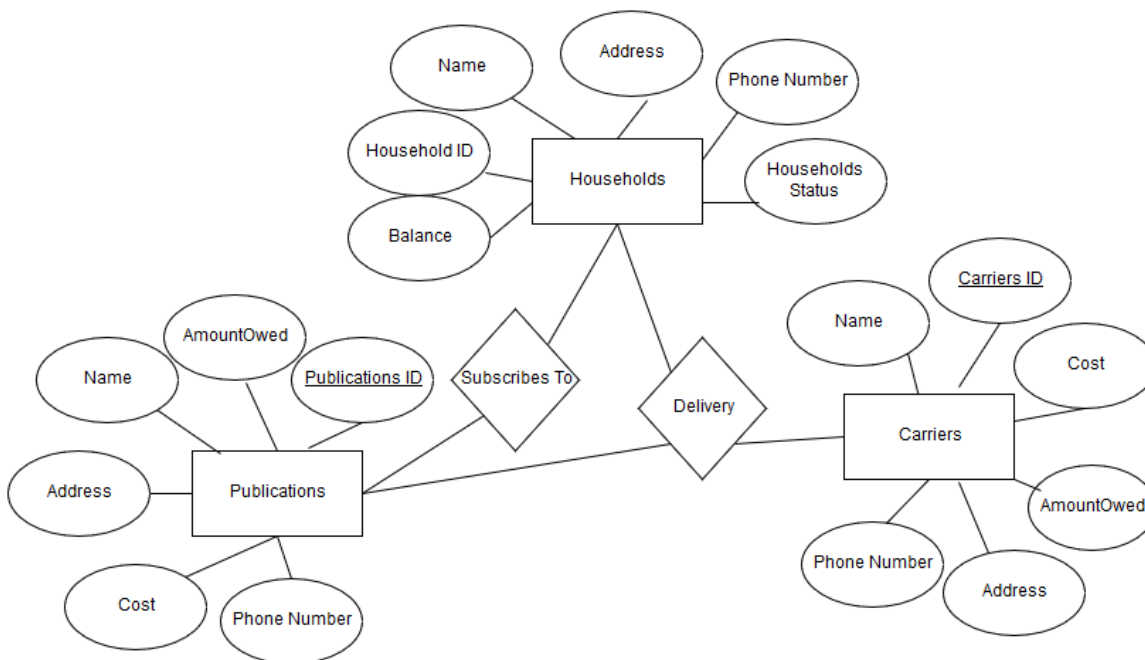


3. Database Design

The data used by the software will be stored in the local Microsoft SQL Database



3.1 Entity-Relationship Diagram – Business Data Model



3.2 Relational Data Model

Households (Id, FirstName, LastName, HouseNumber, ApartmentNumber, Street, ZipCode, PhoneNumber, OutstandingBalance, Status)

Publications (Id, Name, Street, AddressNumber, ZipCode, PhoneNumber, Cost, AmountOwed)

Carriers (Id, FirstName, LastName, Street, HouseNumber, ApartmentNumber, ZipCode, PhoneNumber, Cost, AmountOwed)

Subscriptions (HouseholdsID, PublicationsID, CarriersID)

3.3 Logical Schemas

Households			
Description	This table describes a households information		
Attribute	Description	Type	Examples of values
Id	The Id of the household in the database	Integer	9 digit between 000000001 and 999999999
FirstName	The First name of the head of the household	String	Bob
LastName	The Last name of the head of the household	String	Tom
HouseNumber	The address number	Integer	9 digit between 000000001 and 999999999
ApartmentNumber	The apartment number if there is one	Integer	9 digit between 000000001 and 999999999

Street	The street of the address	String	Castle Ave
ZipCode	The zip code of the address	Interger	103001
PhoneNumber	The houses phone number	Interger	9179991111
OutstandingBalance	The amount the household owns to the company	Double (precision 2)	23,345.00
Status	The current status of the households account	String	Active/Suspended
Primary Key	Id		
Foreign Keys			
Sample SQL Code			

Publications			
Description	This table describes a publications information ex: New York Times		
Attribute	Description	Type	Examples of values
Id	The Id of the publication in the database	Integer	9 digit between 000000001 and 999999999
Name	The name of the publication	String	New York Times
AddressNumber	The address number	String	9 digit between 000000001 and 999999999
Street	The street of the address	String	Castle Ave
ZipCode	The zip code of the address	Interger	103001
PhoneNumber	The publications phone number	Interger	9179991111

Cost	The price of subscribing to the publication	Double (precision 2)	23,345.00
AmountOwed	The amount the delivery company owes to the publication	Double (precision 2)	23,345.00
Primary Key	Id		
Foreign Keys			
Sample SQL Code			

Carriers			
Description	This table describes a carriers information Ex: UPS, USPS, FedEx		
Attribute	Description	Type	Examples of values
Id	The Id of the carrier in the database	Integer	9 digit between 000000001 and 999999999
FirstName	The First name of the carrier	String	Bob
LastName	The Last name of the carrier	String	Tom
HouseNumber	The address number	Integer	9 digit between 000000001 and 999999999
ApartmentNumber	The apartment number if there is one	Integer	9 digit between 000000001 and 999999999

Street	The street of the address	String	Castle Ave
ZipCode	The zip code of the address	Interger	103001
PhoneNumber	The phone number of the carrier	Interger	9179991111
Cost	The Amount the carrier will charge for delivery	Double (precision 2)	23,345.00
AmountOwed	The amount the delivery company owes to the carrier	Double (precision 2)	23,345.00
Primary Key	Id		
Foreign Keys			
Sample SQL Code			

Subscriptions			
Description	This table describes the subscriptions.		
Attribute	Description	Type	Examples of values
Id	The Id of the subscription in the database	Integer	9 digit between 000000001 and 999999999
HouseholdsID	A FK to the householdsID	Integer	9 digit between 000000001 and 999999999
PublicationsID	A FK to the PublicationsID	Integer	9 digit between 000000001 and 999999999
CarriersID	The CarriersID	Integer	9 digit between 000000001 and 999999999

Primary Key	Id
Foreign Keys	HouseholdsID, PublicationsID
Sample SQL Code	

Logins			
Description	This table describes login accounts		
Attribute	Description	Type	Examples of values
Username	The accounts username	String	Admin
Password	The accounts password	String	Password1
Primary Key	Username		
Foreign Keys			
Sample SQL Code			

4. Graphical User Interface

Login Window

User Name

Password

Signup

User Name

Password

Confirm Password

Households Publications Carriers Subscriptions Billing/Summary

First Name

Last Name

House Number

Apartment Number

Street Name

Zip Code

Phone Number

Outstanding Balance

ID

Status

Add

Delete

Update

Activate/Suspend

ID	First Name	Last Name	House Number	Apartment Number	Street Name
3	Wei	Wu	999	0	North Lake
4	Bob	John	555	1	Castlton