**Solution Development Plan**

Solution: NorthwindClinics

Owner: RRoot

Date: 01/01/2020

Change Log

|  |  |  |
| --- | --- | --- |
| Who | When | What |
|  |  |  |
|  |  |  |

# **Summary**

The Northwest Clinics company wants a data solution that will provide help track appointments for their patients.

# **Expectations**

1. The solution will store and present verified data.
2. The solution will allow for simple ad hoc queries.
3. The solution must include reports and a data entry application that is easy to use.
4. The solution should be simple to keep development and maintenance costs at a minimum.
5. A working prototype should be available in a short period of time.

OpenIssues

|  |  |  |
| --- | --- | --- |
| Who | When | What |
|  |  |  |
|  |  |  |

Closed Issues

|  |  |  |
| --- | --- | --- |
| Who | When | What |
|  |  |  |
|  |  |  |

# **Solution Naming Conventions**

## *Database (SQL Server)*

|  |  |  |  |
| --- | --- | --- | --- |
| Object Type | Convention | Example | Description |
| Table | TableName | Customers | A table used to hold data |
| View | vTableName | vCustomers | A saved select statement that presents data |
| Stored Procedure | pTransactionTableName | pInsCustomers | A set of saved statements that process data |
| Function | fDescriptionOfResult | fLookMaxIDInTable | A saved select statement that provides data |

## *ETL Processing Objects*

|  |  |  |  |
| --- | --- | --- | --- |
| Object Type | Convention | Example | Description |
| Table | ETLTableNameStaging | ETLCustomersStaging | Table used to hold staging data |
| View | vETLTableName | vCustomers | View with transformation logic |
| Stored Procedure | pETLDescription | pETLFillCustomers | Procedure with processing and transformation logic |
| Function | fETLDescriptionOfResult | fLookMaxIDInTable | Function with transformation logic |

## *Report Objects*

|  |  |  |  |
| --- | --- | --- | --- |
| Object Type | Convention | Example | Description |
| Data Source | ObjectTypeNameOfSource | DataSourceNorthwind | A DataSource that is part on a individual report |
| Report Component | ObjectTypeNameOfSubject | TableOrdersByCustomers | A Table like report component |

# Data Objects

This is a list of all the known data objects

## Data Files

### File Name: CustomerData.csv

Description: Contains customer data in a comma separated values format. To be used for importing new data.

## OLTP Database Tables

### Table Name: Customers

Description: Contains customer data

|  |  |  |  |
| --- | --- | --- | --- |
| Column Name | Data Type | Example | Notes |
| CustomerID | nchar(5) | ALFKI | Identity |
| CompanyName | nvarchar(40) | Alfreds Futterkiste |  |
| Address | nvarchar(60) | Obere Str. 57 |  |
| City | nvarchar(15) | Berlin |  |
| Region | nvarchar(15) | NULL |  |
| PostalCode | nvarchar(10) | 12209 |  |
| Country | nvarchar(15) | Germany |  |
| Phone | nvarchar(24) | 030-0074321 |  |

Constraints

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Primary Key | Foreign Key | Not Null | Check | Unique | Default |
| CustomerID | Yes | No | Yes | No | Yes | Yes |
| CompanyName | No | No | Yes | No | No | No |
| Address | No | No | No | No | No | No |
| City | No | No | No | No | No | No |
| Region | No | No | No | No | No | No |
| PostalCode | No | No | No | No | No | No |
| Country | No | No | No | No | No | No |
| Phone | No | No | No | No | No | No |

## *OLTP Views*

### View Name: vCustomers

Description: Abstracts data from the customers table

|  |  |  |  |
| --- | --- | --- | --- |
| Column Name | Data Type | Example | Notes |
| CustomerID | nchar(5) | ALFKI |  |
| CompanyName | nvarchar(40) | Alfreds Futterkiste |  |
| Address | nvarchar(60) | Obere Str. 57 |  |
| City | nvarchar(15) | Berlin |  |
| Region | nvarchar(15) | NULL |  |
| PostalCode | nvarchar(10) | 12209 |  |
| Country | nvarchar(15) | Germany |  |
| Phone | nvarchar(24) | 030-0074321 |  |

## *OLTP Stored Procedures*

### Procedure Name: pInsCustomers

Description: Abstracts data inserts for the customers table

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter Name | Data Type | Example | Direction |
| CustomerID | nchar(5) | @NewID | Output |
| CompanyName | nvarchar(40) | Alfreds Futterkiste | Input |
| Address | nvarchar(60) | Obere Str. 57 | Input |
| City | nvarchar(15) | Berlin | Input |
| Region | nvarchar(15) | NULL | Input |
| PostalCode | nvarchar(10) | 12209 | Input |
| Country | nvarchar(15) | Germany | Input |
| Phone | nvarchar(24) | 030-0074321 | Input |

Return Codes:

1 = Insert succeeded

-1 = Insert failed

### Procedure Name: pUpdCustomers

Description: Abstracts data updates for the customers table

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter Name | Data Type | Example | Direction |
| CustomerID | nchar(5) | 1 | Input |
| CompanyName | nvarchar(40) | Alfreds Futterkiste | Input |
| Address | nvarchar(60) | Obere Str. 57 | Input |
| City | nvarchar(15) | Berlin | Input |
| Region | nvarchar(15) | NULL | Input |
| PostalCode | nvarchar(10) | 12209 | Input |
| Country | nvarchar(15) | Germany | Input |
| Phone | nvarchar(24) | 030-0074321 | Input |

Return Codes:

1 = Insert succeeded

-1 = Insert failed

### Procedure Name: pDelCustomers

Description: Abstracts data deletes for the customers table

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter Name | Data Type | Example | Direction |
| CustomerID | nchar(5) | 1 | Input |

Return Codes:

1 = Insert succeeded

-1 = Insert failed

## *OLTP Functions*

None required

# **ETL Objects**

This is a list of all the known ETL objects

## *ETL Staging Tables*

### Table Name: StagingCustomers

Description: Contains customer data

|  |  |  |  |
| --- | --- | --- | --- |
| Column Name | Data Type | Example | Notes |
| CustomerID | nvarchar(100) | ALFKI |  |
| CompanyName | nvarchar(100) | Alfreds Futterkiste |  |
| Address | nvarchar(100) | Obere Str. 57 |  |
| City | nvarchar(100) | Berlin |  |
| Region | nvarchar(100) | NULL |  |
| PostalCode | nvarchar(100) | 12209 |  |
| Country | nvarchar(100) | Germany |  |
| Phone | nvarchar(100) | 030-0074321 |  |

Constraints

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column Name | Primary Key | Foreign Key | Not Null | Check | Unique | Default |
| CustomerID | No | No | No | No | No | No |
| CompanyName | No | No | No | No | No | No |
| Address | No | No | No | No | No | No |
| City | No | No | No | No | No | No |
| Region | No | No | No | No | No | No |
| PostalCode | No | No | No | No | No | No |
| Country | No | No | No | No | No | No |
| Phone | No | No | No | No | No | No |

## *ETL Views*

None required

## *ETL Stored Procedures*

### Procedure Name: pETLFillCustomersFromStaging

Description: inserts data from StagingCustomers table into the Customers table

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter Name | Data Type | Example | Direction |

Return Codes:

1 = Insert succeeded

-1 = Insert failed

## *ETL Functions*

None required

# Reporting Objects

This is a list of all the known Report objects

## Excel Reports

### Report Name: CustomerSales.xlsx

Description: Contains customer sales data

|  |  |  |
| --- | --- | --- |
| Column | Example | Description |
|  |  |  |
|  |  |  |

## Reporting Server Reports

### Report Name: CustomerSales.rdl

Description: Contains customer sales data

|  |  |  |
| --- | --- | --- |
| Column | Example | Description |
|  |  |  |
|  |  |  |

## Power BI Reports

### Report Name: CustomerSales.pbi

Description: Contains customer sales data

|  |  |  |
| --- | --- | --- |
| Column | Example | Description |
|  |  |  |
|  |  |  |