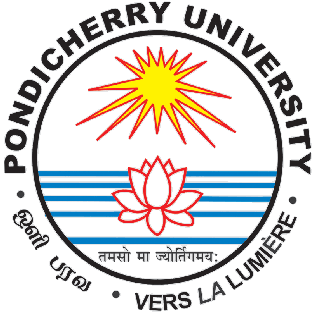
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**PONDICHERRY UNIVERISTY**

**Department of  
Computer Science**

M.Sc. 1st Year

**Designing XML Schema for Company Database**

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**Software and Tools used:**

1. **Visual Studio 2017 with .NET framework 4.6.1**  
   - used to create Windows forms
2. **Oracle Database 10g express edition**  
   - used to create an Oracle database
3. **ODP.NET Managed Driver**  
   - used to create a database connection to the windows forms
4. **EDraw Max**  
   - used to create the ER Diagram
5. **Notepad**

-Used to write xml code

**System requirements:**

1. **Visual Studio 2017 with .NET framework 4.6.1**

**Supported Operating Systems:** Visual Studio 2017 will install and run on the following operating systems:

* Windows 10 version 1507 or higher: Home, Professional, Education, and
* Enterprise (LTSC and S are not supported)
* Windows Server 2016: Standard and Datacentre
* Windows 8.1 (with Update 2919355): Core, Professional, and Enterprise
* Windows Server 2012 R2 (with Update 2919355): Essentials, Standard, Datacentre
* Windows 7 SP1 (with latest Windows Updates): Home Premium, Professional, Enterprise, Ultimate

**Hardware:**

* 1.8 GHz or faster processor. Dual-core or better recommended
* 2 GB of RAM; 4 GB of RAM recommended (2.5 GB minimum if running on a virtual machine)
* Hard disk space: up to 130 GB of available space, depending on features installed; typical installations require 20-50 GB of free space.
* Hard disk speed: to improve performance, install Windows and Visual Studio on a solid-state drive (SSD).
* Video card that supports a minimum display resolution of 720p (1280 by 720); Visual Studio will work best at a resolution of WXGA (1366 by 768) or higher.

**Additional Requirements:**

* .NET Framework 4.5.2 or above is required to **install** Visual Studio. Visual Studio requires .NET Framework 4.7.2 to run, but this will be installed during setup.

**Operating system general requirements:** Oracle Database for Windows x64 is supported on the following operating system versions:

* Windows 7 x64 - Professional, Enterprise, and Ultimate editions
* Windows 8 x64 and Windows 8.1 x64 - Pro and Enterprise editions
* Windows 8.1 x64 - Pro and Enterprise editions
* Windows 10 x64 - Pro, Enterprise, and Education editions
* Windows Server 2012 x64 - Standard, Datacentre, Essentials, and Foundation editions
* Windows Server 2012 R2 x64 - Standard, Datacentre, Essentials, and Foundation editions
* Windows Server 2016 x64 - Standard, Datacentre, and Essentials editions

**HARDWARE SPECIFICATION:**

* **Main Memory (RAM):** 4GB or above
* **Secondary Storage:** 200GB or above
* **Monitor:** Any colour Monitor of 24bit Resolution
* **Mouse:** General Windows supported
* **Keyboard:** General Multimedia Windows/Linux supported
* **Processor:** Intel® Core™ i5- 8250U CPU @ 1.60GHz 1.80GHz
* **Model used:** Aspire A515-51G

**Oracle Database 12c Release 2 (12.1.0.2):**

### Hardware Component Requirements for Windows x64

The following table lists the hardware components that are required for Oracle Database on Windows x64.

Table 2-1 Windows x64 Minimum Hardware Requirements

| **Requirement** | **Value** |
| --- | --- |
| System Architecture | Processor: AMD64 and Intel EM64T |
| Physical memory (RAM) | 2 GB minimum |
| Virtual memory (swap) | * If physical memory is between 2 GB and 16 GB, then set virtual memory to 1 times the size of the RAM * If physical memory is more than 16 GB, then set virtual memory to 16 GB |
| Disk space | * Typical Install Type total: 10 GB * Advanced Install Types total: 10 GB   See [Table C-1](https://docs.oracle.com/en/database/oracle/oracle-database/12.2/ntdbi/advance.html#GUID-CEF225E9-9600-4E01-AC6F-402B562385F8__BABIICFE) for details. |
| Video adapter | 256 colors |
| Screen Resolution | 1024 X 768 minimum |

## Oracle Database Software Requirements

The following table lists the software requirements for Oracle Database on Windows x64:

Table 2-3 Windows x64 Software Requirements

| **Requirement** | **Value** |
| --- | --- |
| Operating System | Oracle Database for Windows x64 is supported on the following operating systems:   * Windows 7 x64 - Professional, Enterprise, and Ultimate editions * Windows 8 x64 and Windows 8.1 x64 - Core, Pro, and Enterprise editions * Windows 8.1 x64 - Pro and Enterprise editions * Windows 10 x64 - Pro, Enterprise, and Education editions * Windows Server 2012 x64 - Standard, Datacenter, Essentials, and Foundation editions * Windows Server 2012 R2 x64 - Standard, Datacenter, Essentials, and Foundation editions * Windows Server 2016 x64 - Standard, Datacenter, and Essentials editions   **Note:**   * Windows Multilingual User Interface Pack is supported. * The Server Core option is not supported. |
| Compiler | The following components are supported with the Microsoft Visual C++ 2013 Update 4, Microsoft Visual C++ 2015 Update 3, and Intel 14.0 C compilers:   * Oracle Call Interface * External callouts * Pro\*C/C++ * Oracle XML Developer's Kit (XDK)   Oracle C++ Call Interface supports:   * Microsoft Visual C++ 2013 Update 4 * Microsoft Visual C++ 2015 Update 3 - OCCI libraries are installed under ORACLE\_HOME\oci\lib\msvc\vc14. When developing OCCI applications with MSVC++ 2015, ensure that the OCCI libraries are correctly selected from this directory for linking and executing. * Intel 14.0 C compilers with Microsoft Visual Studio 2013 STLs   Pro\*COBOL supports:   * Micro Focus Visual COBOL 2.2 - Update 2 |
| Network Protocol | The Oracle Net foundation layer uses Oracle protocol support to communicate with the following industry-standard network protocols:   * TCP/IP * TCP/IP with SSL * Named Pipes |
| Oracle Database Client | To connect to Oracle Database 12c Release 2 (12.2), the following are required:   * Oracle Database Client is version 10.2.0.5 or higher. * If the earlier Oracle Database Client is running on the same computer as Oracle Database 12*c* Release 2 (12.2), then you cannot use a bequeath connection.   Oracle recommends upgrading Oracle Database Client to the latest patchset (10.2.0.5, or 11.2.0.4 or later). You can download the patchset from the Patches and Updates section of My Oracle Support at  [https://support.oracle.com](https://support.oracle.com/) |

**E-R Diagram:**

An **entity–relationship model** (or **ER model**) describes interrelated things of interest in a specific domain of knowledge. A basic ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between [entities](https://en.wiktionary.org/wiki/entity) (instances of those entity types).

In [software engineering](https://en.wikipedia.org/wiki/Software_engineering), an ER model is commonly formed to represent things a business needs to remember in order to perform business processes. Consequently, the ER model becomes an abstract [data model](https://en.wikipedia.org/wiki/Data_modeling), that defines a data or information structure which can be implemented in a [database](https://en.wikipedia.org/wiki/Database), typically a [relational database](https://en.wikipedia.org/wiki/Relational_database).

Entity–relationship modeling was developed for database and design by [Peter Chen](https://en.wikipedia.org/wiki/Peter_Chen) and published in a 1976 paper.[[1]](https://en.wikipedia.org/wiki/Entity%E2%80%93relationship_model#cite_note-Chen-1) However, variants of the idea existed previously.[[2]](https://en.wikipedia.org/wiki/Entity%E2%80%93relationship_model#cite_note-2) Some ER models show super and subtype entities connected by generalization-specialization relationships,[[3]](https://en.wikipedia.org/wiki/Entity%E2%80%93relationship_model#cite_note-3) and an ER model can be used also in the specification of domain-specific [ontologies](https://en.wikipedia.org/wiki/Ontology_(computer_science)).

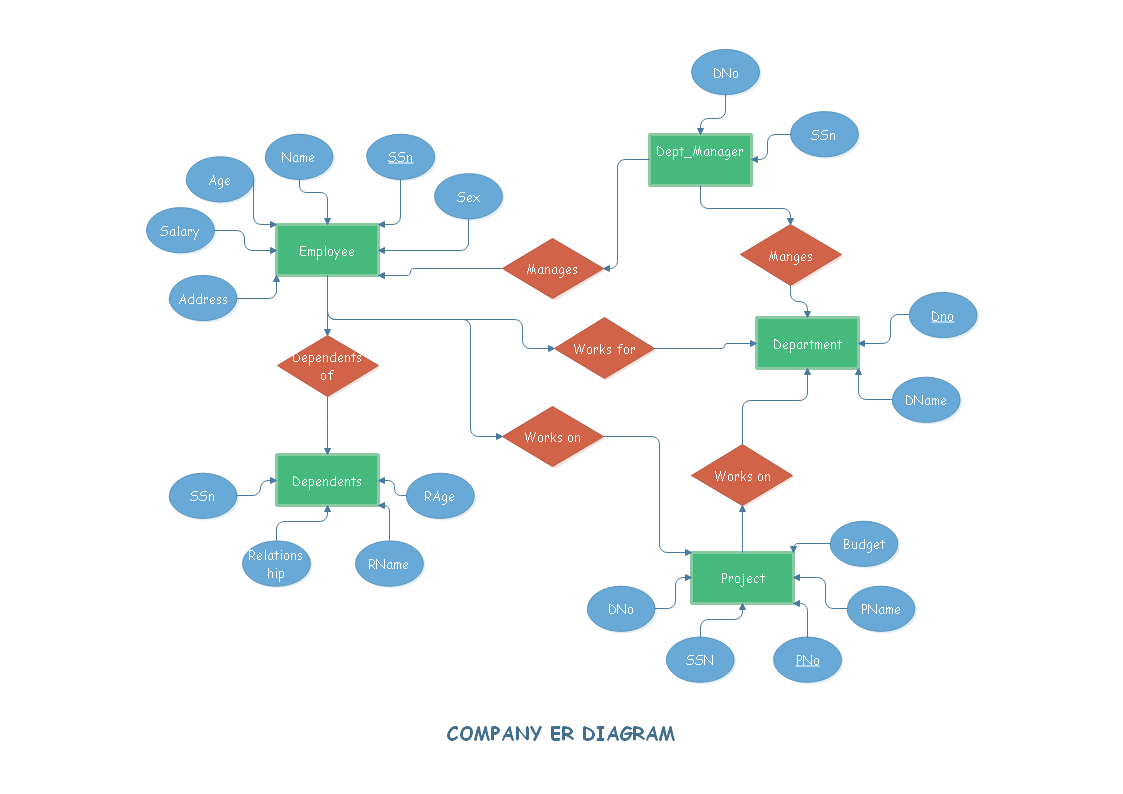
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Fig 1: Company Database ER Diagram

**Connection:**

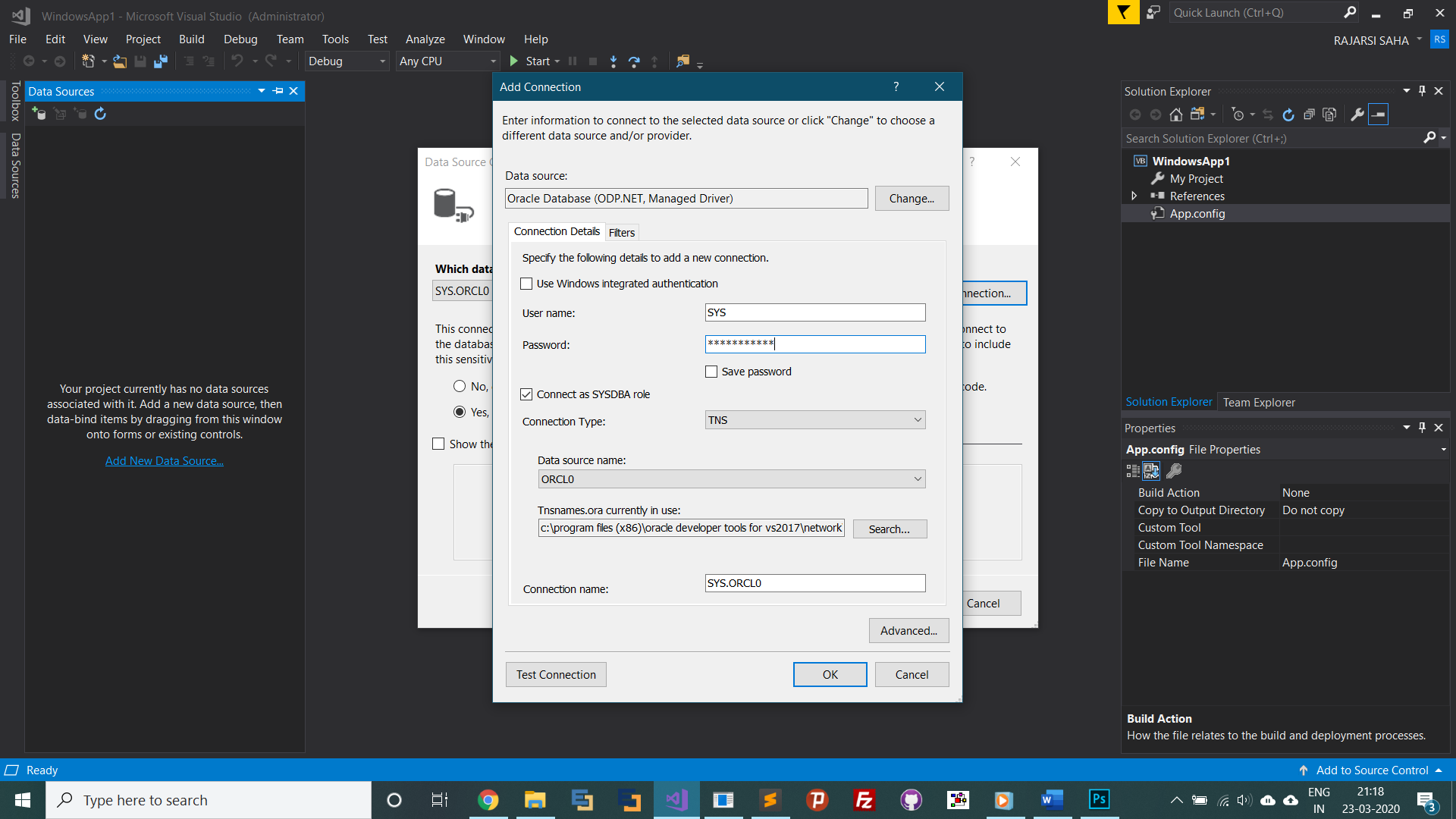


Fig 2: Add Connection Dialog Box

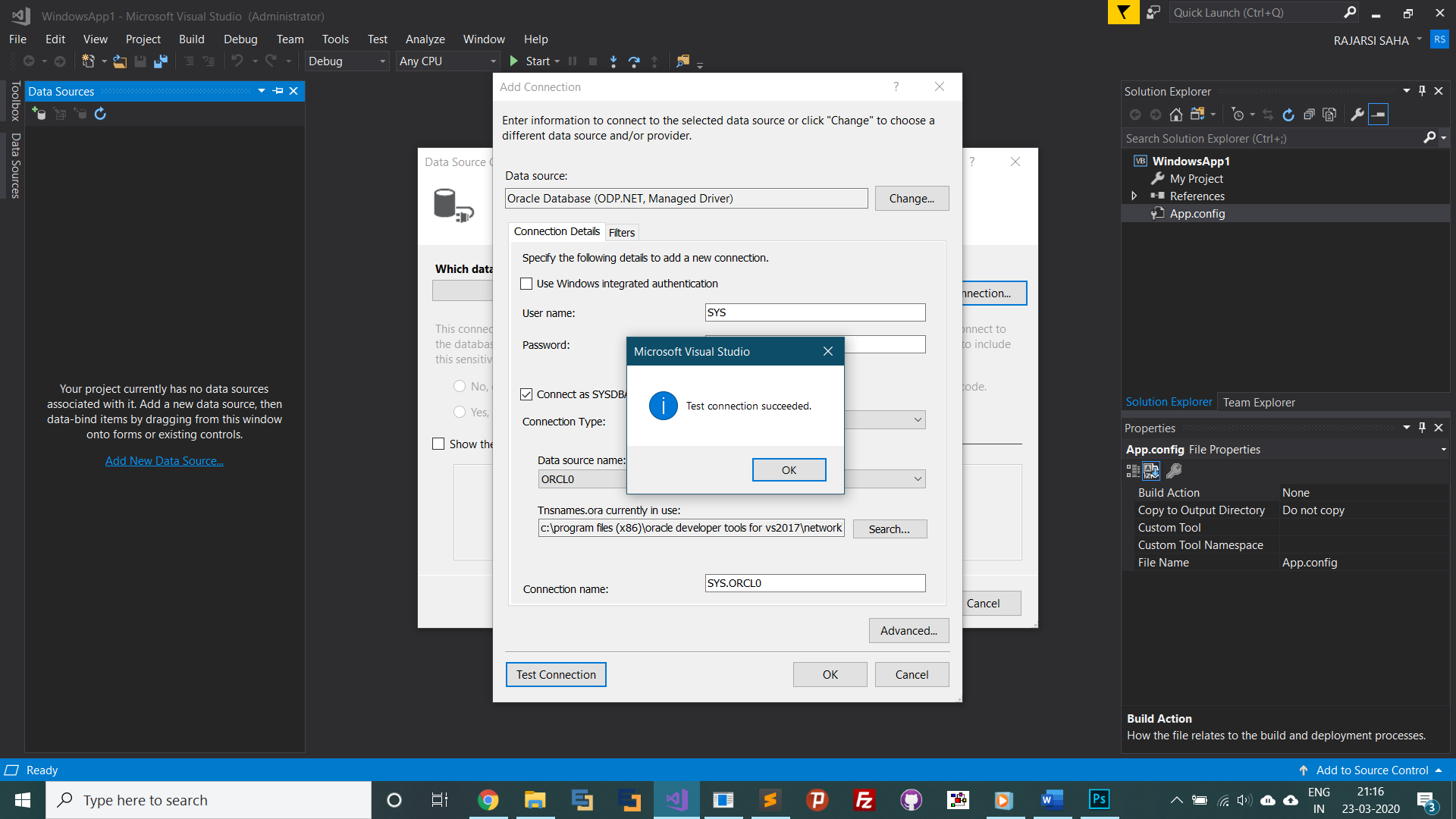


Fig 3: Connection Successful

**Dataset Diagram:**

A DataSet object is an in-memory object that is essentially a mini-database. It contains DataTable, DataColumn, and DataRow objects in which you can store and modify data from one or more databases without having to maintain an open connection. The dataset maintains information about changes to its data, so updates can be tracked and sent back to the database when your application becomes reconnected.

Datasets and related classes are defined in the System.Data namespace in the .NET API. You can create and modify datasets dynamically in code using ADO.NET. The documentation in this section shows how to work with datasets by using Visual Studio designers. Datasets that are created through designers use TableAdapter objects to interact with the database. Datasets that are created programmatically use DataAdapter objects. For information about creating datasets programmatically, see DataAdapters and DataReaders.

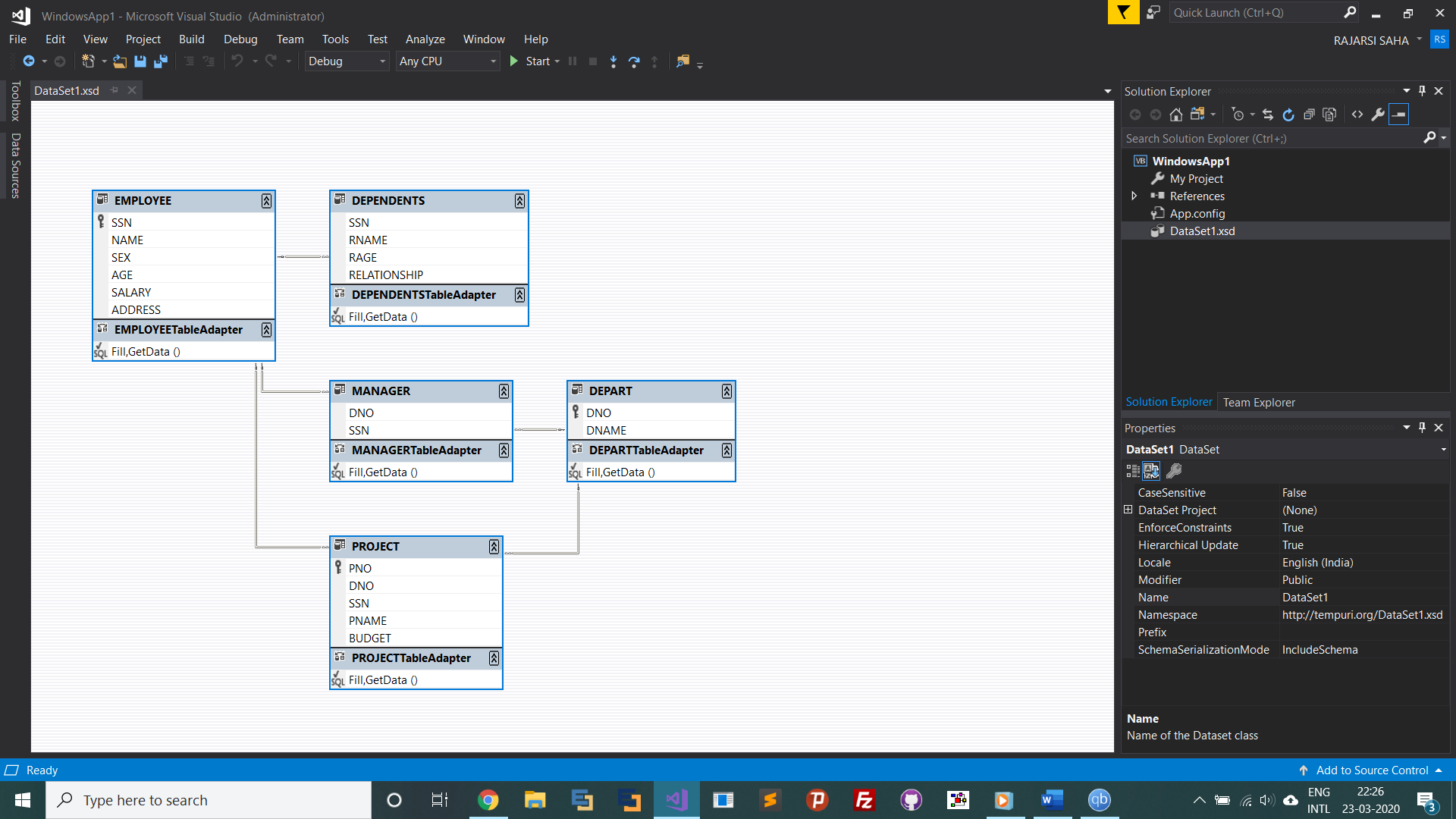


Fig 4: Visual Studio Dataset diagram

**XML Schema:**

<?xml version="1.0" encoding="utf-8"?>

<xs:schema id="DataSet1" targetNamespace="http://tempuri.org/DataSet1.xsd" xmlns:mstns="http://tempuri.org/DataSet1.xsd" xmlns="http://tempuri.org/DataSet1.xsd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-com:xml-msprop" attributeFormDefault="qualified" elementFormDefault="qualified">

<xs:annotation>

<xs:appinfo source="urn:schemas-microsoft-com:xml-msdatasource">

<DataSource DefaultConnectionIndex="0" FunctionsComponentName="QueriesTableAdapter" Modifier="AutoLayout, AnsiClass, Class, Public" SchemaSerializationMode="IncludeSchema" xmlns="urn:schemas-microsoft-com:xml-msdatasource">

<Connections>

<Connection AppSettingsObjectName="MySettings" AppSettingsPropertyName="ConnectionString" ConnectionStringObject="" IsAppSettingsProperty="true" Modifier="Assembly" Name="ConnectionString (MySettings)" ParameterPrefix=":" PropertyReference="ApplicationSettings.Company\_Database.My.MySettings.GlobalReference.Default.ConnectionString" Provider="Oracle.ManagedDataAccess.Client" />

</Connections>

<Tables>

<TableAdapter BaseClass="System.ComponentModel.Component" DataAccessorModifier="AutoLayout, AnsiClass, Class, Public" DataAccessorName="DEPARTTableAdapter" GeneratorDataComponentClassName="DEPARTTableAdapter" Name="DEPART" UserDataComponentName="DEPARTTableAdapter">

<MainSource>

<DbSource ConnectionRef="ConnectionString (MySettings)" DbObjectName="SYS.DEPART" DbObjectType="Table" FillMethodModifier="Public" FillMethodName="Fill" GenerateMethods="Both" GenerateShortCommands="true" GeneratorGetMethodName="GetData" GeneratorSourceName="Fill" GetMethodModifier="Public" GetMethodName="GetData" QueryType="Rowset" ScalarCallRetval="System.Object, mscorlib, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" UseOptimisticConcurrency="true" UserGetMethodName="GetData" UserSourceName="Fill">

<DeleteCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>DELETE FROM "SYS"."DEPART" WHERE (("DNO" = :Original\_DNO) AND ((:IsNull\_DNAME = 1 AND "DNAME" IS NULL) OR ("DNAME" = :Original\_DNAME)))</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_DNAME" Precision="0" ProviderType="Int32" Scale="0" Size="15" SourceColumn="DNAME" SourceColumnNullMapping="true" SourceVersion="Original" />

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</Parameters>

</DbCommand>

</DeleteCommand>

<InsertCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>INSERT INTO "SYS"."DEPART" ("DNO", "DNAME") VALUES (:DNO, :DNAME)</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="DNAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="15" SourceColumn="DNAME" SourceColumnNullMapping="false" SourceVersion="Current" />

</Parameters>

</DbCommand>

</InsertCommand>

<SelectCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>SELECT DNO, DNAME FROM SYS.DEPART</CommandText>

<Parameters />

</DbCommand>

</SelectCommand>

<UpdateCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>UPDATE "SYS"."DEPART" SET "DNO" = :DNO, "DNAME" = :DNAME WHERE (("DNO" = :Original\_DNO) AND ((:IsNull\_DNAME = 1 AND "DNAME" IS NULL) OR ("DNAME" = :Original\_DNAME)))</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Current" />

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<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_DNAME" Precision="0" ProviderType="Int32" Scale="0" Size="15" SourceColumn="DNAME" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_DNAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="15" SourceColumn="DNAME" SourceColumnNullMapping="false" SourceVersion="Original" />

</Parameters>

</DbCommand>

</UpdateCommand>

</DbSource>

</MainSource>

<Mappings>

<Mapping SourceColumn="DNO" DataSetColumn="DNO" />

<Mapping SourceColumn="DNAME" DataSetColumn="DNAME" />

</Mappings>

<Sources />

</TableAdapter>

<TableAdapter BaseClass="System.ComponentModel.Component" DataAccessorModifier="AutoLayout, AnsiClass, Class, Public" DataAccessorName="DEPENDENTSTableAdapter" GeneratorDataComponentClassName="DEPENDENTSTableAdapter" Name="DEPENDENTS" UserDataComponentName="DEPENDENTSTableAdapter">

<MainSource>

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<InsertCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>INSERT INTO "SYS"."DEPENDENTS" ("SSN", "RNAME", "RAGE", "RELATIONSHIP") VALUES (:SSN, :RNAME, :RAGE, :RELATIONSHIP)</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="RNAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="25" SourceColumn="RNAME" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="RAGE" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="RAGE" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="RELATIONSHIP" Precision="0" ProviderType="Varchar2" Scale="0" Size="15" SourceColumn="RELATIONSHIP" SourceColumnNullMapping="false" SourceVersion="Current" />

</Parameters>

</DbCommand>

</InsertCommand>

<SelectCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>SELECT SSN, RNAME, RAGE, RELATIONSHIP FROM SYS.DEPENDENTS</CommandText>

<Parameters />

</DbCommand>

</SelectCommand>

</DbSource>

</MainSource>

<Mappings>

<Mapping SourceColumn="SSN" DataSetColumn="SSN" />

<Mapping SourceColumn="RNAME" DataSetColumn="RNAME" />

<Mapping SourceColumn="RAGE" DataSetColumn="RAGE" />

<Mapping SourceColumn="RELATIONSHIP" DataSetColumn="RELATIONSHIP" />

</Mappings>

<Sources />

</TableAdapter>

<TableAdapter BaseClass="System.ComponentModel.Component" DataAccessorModifier="AutoLayout, AnsiClass, Class, Public" DataAccessorName="EMPLOYEETableAdapter" GeneratorDataComponentClassName="EMPLOYEETableAdapter" Name="EMPLOYEE" UserDataComponentName="EMPLOYEETableAdapter">

<MainSource>

<DbSource ConnectionRef="ConnectionString (MySettings)" DbObjectName="SYS.EMPLOYEE" DbObjectType="Table" FillMethodModifier="Public" FillMethodName="Fill" GenerateMethods="Both" GenerateShortCommands="true" GeneratorGetMethodName="GetData" GeneratorSourceName="Fill" GetMethodModifier="Public" GetMethodName="GetData" QueryType="Rowset" ScalarCallRetval="System.Object, mscorlib, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" UseOptimisticConcurrency="true" UserGetMethodName="GetData" UserSourceName="Fill">

<DeleteCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>DELETE FROM "SYS"."EMPLOYEE" WHERE (("SSN" = :Original\_SSN) AND ((:IsNull\_NAME = 1 AND "NAME" IS NULL) OR ("NAME" = :Original\_NAME)) AND ((:IsNull\_SEX = 1 AND "SEX" IS NULL) OR ("SEX" = :Original\_SEX)) AND ((:IsNull\_AGE = 1 AND "AGE" IS NULL) OR ("AGE" = :Original\_AGE)) AND ((:IsNull\_SALARY = 1 AND "SALARY" IS NULL) OR ("SALARY" = :Original\_SALARY)) AND ((:IsNull\_ADDRESS = 1 AND "ADDRESS" IS NULL) OR ("ADDRESS" = :Original\_ADDRESS)))</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_NAME" Precision="0" ProviderType="Int32" Scale="0" Size="25" SourceColumn="NAME" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_NAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="25" SourceColumn="NAME" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_SEX" Precision="0" ProviderType="Int32" Scale="0" Size="1" SourceColumn="SEX" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_SEX" Precision="0" ProviderType="Varchar2" Scale="0" Size="1" SourceColumn="SEX" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_AGE" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="AGE" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_AGE" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="AGE" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_SALARY" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="SALARY" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="Original\_SALARY" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="SALARY" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_ADDRESS" Precision="0" ProviderType="Int32" Scale="0" Size="50" SourceColumn="ADDRESS" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_ADDRESS" Precision="0" ProviderType="Varchar2" Scale="0" Size="50" SourceColumn="ADDRESS" SourceColumnNullMapping="false" SourceVersion="Original" />

</Parameters>

</DbCommand>

</DeleteCommand>

<InsertCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>INSERT INTO "SYS"."EMPLOYEE" ("SSN", "NAME", "SEX", "AGE", "SALARY", "ADDRESS") VALUES (:SSN, :NAME, :SEX, :AGE, :SALARY, :ADDRESS)</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="NAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="25" SourceColumn="NAME" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="SEX" Precision="0" ProviderType="Varchar2" Scale="0" Size="1" SourceColumn="SEX" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="AGE" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="AGE" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="SALARY" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="SALARY" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="ADDRESS" Precision="0" ProviderType="Varchar2" Scale="0" Size="50" SourceColumn="ADDRESS" SourceColumnNullMapping="false" SourceVersion="Current" />

</Parameters>

</DbCommand>

</InsertCommand>

<SelectCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>SELECT SSN, "NAME", SEX, AGE, SALARY, ADDRESS FROM SYS.EMPLOYEE</CommandText>

<Parameters />

</DbCommand>

</SelectCommand>

<UpdateCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>UPDATE "SYS"."EMPLOYEE" SET "SSN" = :SSN, "NAME" = :NAME, "SEX" = :SEX, "AGE" = :AGE, "SALARY" = :SALARY, "ADDRESS" = :ADDRESS WHERE (("SSN" = :Original\_SSN) AND ((:IsNull\_NAME = 1 AND "NAME" IS NULL) OR ("NAME" = :Original\_NAME)) AND ((:IsNull\_SEX = 1 AND "SEX" IS NULL) OR ("SEX" = :Original\_SEX)) AND ((:IsNull\_AGE = 1 AND "AGE" IS NULL) OR ("AGE" = :Original\_AGE)) AND ((:IsNull\_SALARY = 1 AND "SALARY" IS NULL) OR ("SALARY" = :Original\_SALARY)) AND ((:IsNull\_ADDRESS = 1 AND "ADDRESS" IS NULL) OR ("ADDRESS" = :Original\_ADDRESS)))</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="NAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="25" SourceColumn="NAME" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="SEX" Precision="0" ProviderType="Varchar2" Scale="0" Size="1" SourceColumn="SEX" SourceColumnNullMapping="false" SourceVersion="Current" />

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<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="SALARY" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="SALARY" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="ADDRESS" Precision="0" ProviderType="Varchar2" Scale="0" Size="50" SourceColumn="ADDRESS" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_NAME" Precision="0" ProviderType="Int32" Scale="0" Size="25" SourceColumn="NAME" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_NAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="25" SourceColumn="NAME" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_SEX" Precision="0" ProviderType="Int32" Scale="0" Size="1" SourceColumn="SEX" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_SEX" Precision="0" ProviderType="Varchar2" Scale="0" Size="1" SourceColumn="SEX" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_AGE" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="AGE" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_AGE" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="AGE" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_SALARY" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="SALARY" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="Original\_SALARY" Precision="0" ProviderType="Int32" Scale="0" Size="22" SourceColumn="SALARY" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_ADDRESS" Precision="0" ProviderType="Int32" Scale="0" Size="50" SourceColumn="ADDRESS" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_ADDRESS" Precision="0" ProviderType="Varchar2" Scale="0" Size="50" SourceColumn="ADDRESS" SourceColumnNullMapping="false" SourceVersion="Original" />

</Parameters>

</DbCommand>

</UpdateCommand>

</DbSource>

</MainSource>

<Mappings>

<Mapping SourceColumn="SSN" DataSetColumn="SSN" />

<Mapping SourceColumn="NAME" DataSetColumn="NAME" />

<Mapping SourceColumn="SEX" DataSetColumn="SEX" />

<Mapping SourceColumn="AGE" DataSetColumn="AGE" />

<Mapping SourceColumn="SALARY" DataSetColumn="SALARY" />

<Mapping SourceColumn="ADDRESS" DataSetColumn="ADDRESS" />

</Mappings>

<Sources />

</TableAdapter>

<TableAdapter BaseClass="System.ComponentModel.Component" DataAccessorModifier="AutoLayout, AnsiClass, Class, Public" DataAccessorName="MANAGERTableAdapter" GeneratorDataComponentClassName="MANAGERTableAdapter" Name="MANAGER" UserDataComponentName="MANAGERTableAdapter">

<MainSource>

<DbSource ConnectionRef="ConnectionString (MySettings)" DbObjectName="SYS.MANAGER" DbObjectType="Table" FillMethodModifier="Public" FillMethodName="Fill" GenerateMethods="Both" GenerateShortCommands="true" GeneratorGetMethodName="GetData" GeneratorSourceName="Fill" GetMethodModifier="Public" GetMethodName="GetData" QueryType="Rowset" ScalarCallRetval="System.Object, mscorlib, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" UseOptimisticConcurrency="true" UserGetMethodName="GetData" UserSourceName="Fill">

<InsertCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>INSERT INTO "SYS"."MANAGER" ("DNO", "SSN") VALUES (:DNO, :SSN)</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Current" />

</Parameters>

</DbCommand>

</InsertCommand>

<SelectCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>SELECT DNO, SSN FROM SYS.MANAGER</CommandText>

<Parameters />

</DbCommand>

</SelectCommand>

</DbSource>

</MainSource>

<Mappings>

<Mapping SourceColumn="DNO" DataSetColumn="DNO" />

<Mapping SourceColumn="SSN" DataSetColumn="SSN" />

</Mappings>

<Sources />

</TableAdapter>

<TableAdapter BaseClass="System.ComponentModel.Component" DataAccessorModifier="AutoLayout, AnsiClass, Class, Public" DataAccessorName="PROJECTTableAdapter" GeneratorDataComponentClassName="PROJECTTableAdapter" Name="PROJECT" UserDataComponentName="PROJECTTableAdapter">

<MainSource>

<DbSource ConnectionRef="ConnectionString (MySettings)" DbObjectName="SYS.PROJECT" DbObjectType="Table" FillMethodModifier="Public" FillMethodName="Fill" GenerateMethods="Both" GenerateShortCommands="true" GeneratorGetMethodName="GetData" GeneratorSourceName="Fill" GetMethodModifier="Public" GetMethodName="GetData" QueryType="Rowset" ScalarCallRetval="System.Object, mscorlib, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" UseOptimisticConcurrency="true" UserGetMethodName="GetData" UserSourceName="Fill">

<DeleteCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>DELETE FROM "SYS"."PROJECT" WHERE (("PNO" = :Original\_PNO) AND ("DNO" = :Original\_DNO) AND ("SSN" = :Original\_SSN) AND ((:IsNull\_PNAME = 1 AND "PNAME" IS NULL) OR ("PNAME" = :Original\_PNAME)) AND ((:IsNull\_BUDGET = 1 AND "BUDGET" IS NULL) OR ("BUDGET" = :Original\_BUDGET)))</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_PNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="PNO" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_PNAME" Precision="0" ProviderType="Int32" Scale="0" Size="15" SourceColumn="PNAME" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_PNAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="15" SourceColumn="PNAME" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_BUDGET" Precision="0" ProviderType="Int32" Scale="0" Size="8" SourceColumn="BUDGET" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_BUDGET" Precision="0" ProviderType="Varchar2" Scale="0" Size="8" SourceColumn="BUDGET" SourceColumnNullMapping="false" SourceVersion="Original" />

</Parameters>

</DbCommand>

</DeleteCommand>

<InsertCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>INSERT INTO "SYS"."PROJECT" ("PNO", "DNO", "SSN", "PNAME", "BUDGET") VALUES (:PNO, :DNO, :SSN, :PNAME, :BUDGET)</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="PNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="PNO" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="PNAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="15" SourceColumn="PNAME" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="BUDGET" Precision="0" ProviderType="Varchar2" Scale="0" Size="8" SourceColumn="BUDGET" SourceColumnNullMapping="false" SourceVersion="Current" />

</Parameters>

</DbCommand>

</InsertCommand>

<SelectCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>SELECT PNO, DNO, SSN, PNAME, BUDGET FROM SYS.PROJECT</CommandText>

<Parameters />

</DbCommand>

</SelectCommand>

<UpdateCommand>

<DbCommand CommandType="Text" ModifiedByUser="false">

<CommandText>UPDATE "SYS"."PROJECT" SET "PNO" = :PNO, "DNO" = :DNO, "SSN" = :SSN, "PNAME" = :PNAME, "BUDGET" = :BUDGET WHERE (("PNO" = :Original\_PNO) AND ("DNO" = :Original\_DNO) AND ("SSN" = :Original\_SSN) AND ((:IsNull\_PNAME = 1 AND "PNAME" IS NULL) OR ("PNAME" = :Original\_PNAME)) AND ((:IsNull\_BUDGET = 1 AND "BUDGET" IS NULL) OR ("BUDGET" = :Original\_BUDGET)))</CommandText>

<Parameters>

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="PNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="PNO" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="PNAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="15" SourceColumn="PNAME" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="BUDGET" Precision="0" ProviderType="Varchar2" Scale="0" Size="8" SourceColumn="BUDGET" SourceColumnNullMapping="false" SourceVersion="Current" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_PNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="PNO" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_DNO" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="DNO" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="false" AutogeneratedName="" DataSourceName="" DbType="Int16" Direction="Input" ParameterName="Original\_SSN" Precision="0" ProviderType="Int16" Scale="0" Size="22" SourceColumn="SSN" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_PNAME" Precision="0" ProviderType="Int32" Scale="0" Size="15" SourceColumn="PNAME" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_PNAME" Precision="0" ProviderType="Varchar2" Scale="0" Size="15" SourceColumn="PNAME" SourceColumnNullMapping="false" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="Int32" Direction="Input" ParameterName="IsNull\_BUDGET" Precision="0" ProviderType="Int32" Scale="0" Size="8" SourceColumn="BUDGET" SourceColumnNullMapping="true" SourceVersion="Original" />

<Parameter AllowDbNull="true" AutogeneratedName="" DataSourceName="" DbType="String" Direction="Input" ParameterName="Original\_BUDGET" Precision="0" ProviderType="Varchar2" Scale="0" Size="8" SourceColumn="BUDGET" SourceColumnNullMapping="false" SourceVersion="Original" />

</Parameters>

</DbCommand>

</UpdateCommand>

</DbSource>

</MainSource>

<Mappings>

<Mapping SourceColumn="PNO" DataSetColumn="PNO" />

<Mapping SourceColumn="DNO" DataSetColumn="DNO" />

<Mapping SourceColumn="SSN" DataSetColumn="SSN" />

<Mapping SourceColumn="PNAME" DataSetColumn="PNAME" />

<Mapping SourceColumn="BUDGET" DataSetColumn="BUDGET" />

</Mappings>

<Sources />

</TableAdapter>

</Tables>

<Sources />

</DataSource>

</xs:appinfo>

</xs:annotation>

<xs:element name="DataSet1" msdata:IsDataSet="true" msdata:UseCurrentLocale="true" msprop:EnableTableAdapterManager="True" msprop:Generator\_DataSetName="DataSet1" msprop:Generator\_UserDSName="DataSet1">

<xs:complexType>

<xs:choice minOccurs="0" maxOccurs="unbounded">

<xs:element name="DEPART" msprop:Generator\_TableClassName="DEPARTDataTable" msprop:Generator\_TableVarName="tableDEPART" msprop:Generator\_TablePropName="DEPART" msprop:Generator\_RowDeletingName="DEPARTRowDeleting" msprop:Generator\_RowChangingName="DEPARTRowChanging" msprop:Generator\_RowEvHandlerName="DEPARTRowChangeEventHandler" msprop:Generator\_RowDeletedName="DEPARTRowDeleted" msprop:Generator\_UserTableName="DEPART" msprop:Generator\_RowChangedName="DEPARTRowChanged" msprop:Generator\_RowEvArgName="DEPARTRowChangeEvent" msprop:Generator\_RowClassName="DEPARTRow">

<xs:complexType>

<xs:sequence>

<xs:element name="DNO" msprop:Generator\_ColumnVarNameInTable="columnDNO" msprop:Generator\_ColumnPropNameInRow="DNO" msprop:Generator\_ColumnPropNameInTable="DNOColumn" msprop:Generator\_UserColumnName="DNO" type="xs:short" />

<xs:element name="DNAME" msprop:Generator\_ColumnVarNameInTable="columnDNAME" msprop:Generator\_ColumnPropNameInRow="DNAME" msprop:Generator\_ColumnPropNameInTable="DNAMEColumn" msprop:Generator\_UserColumnName="DNAME" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="15" />

</xs:restriction>

</xs:simpleType>

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</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="DEPENDENTS" msprop:Generator\_TableClassName="DEPENDENTSDataTable" msprop:Generator\_TableVarName="tableDEPENDENTS" msprop:Generator\_TablePropName="DEPENDENTS" msprop:Generator\_RowDeletingName="DEPENDENTSRowDeleting" msprop:Generator\_RowChangingName="DEPENDENTSRowChanging" msprop:Generator\_RowEvHandlerName="DEPENDENTSRowChangeEventHandler" msprop:Generator\_RowDeletedName="DEPENDENTSRowDeleted" msprop:Generator\_UserTableName="DEPENDENTS" msprop:Generator\_RowChangedName="DEPENDENTSRowChanged" msprop:Generator\_RowEvArgName="DEPENDENTSRowChangeEvent" msprop:Generator\_RowClassName="DEPENDENTSRow">

<xs:complexType>

<xs:sequence>

<xs:element name="SSN" msprop:Generator\_ColumnVarNameInTable="columnSSN" msprop:Generator\_ColumnPropNameInRow="SSN" msprop:Generator\_ColumnPropNameInTable="SSNColumn" msprop:Generator\_UserColumnName="SSN" type="xs:short" />

<xs:element name="RNAME" msprop:Generator\_ColumnVarNameInTable="columnRNAME" msprop:Generator\_ColumnPropNameInRow="RNAME" msprop:Generator\_ColumnPropNameInTable="RNAMEColumn" msprop:Generator\_UserColumnName="RNAME" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="25" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="RAGE" msprop:Generator\_ColumnVarNameInTable="columnRAGE" msprop:Generator\_ColumnPropNameInRow="RAGE" msprop:Generator\_ColumnPropNameInTable="RAGEColumn" msprop:Generator\_UserColumnName="RAGE" type="xs:short" minOccurs="0" />

<xs:element name="RELATIONSHIP" msprop:Generator\_ColumnVarNameInTable="columnRELATIONSHIP" msprop:Generator\_ColumnPropNameInRow="RELATIONSHIP" msprop:Generator\_ColumnPropNameInTable="RELATIONSHIPColumn" msprop:Generator\_UserColumnName="RELATIONSHIP" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="15" />

</xs:restriction>

</xs:simpleType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="EMPLOYEE" msprop:Generator\_TableClassName="EMPLOYEEDataTable" msprop:Generator\_TableVarName="tableEMPLOYEE" msprop:Generator\_TablePropName="EMPLOYEE" msprop:Generator\_RowDeletingName="EMPLOYEERowDeleting" msprop:Generator\_RowChangingName="EMPLOYEERowChanging" msprop:Generator\_RowEvHandlerName="EMPLOYEERowChangeEventHandler" msprop:Generator\_RowDeletedName="EMPLOYEERowDeleted" msprop:Generator\_UserTableName="EMPLOYEE" msprop:Generator\_RowChangedName="EMPLOYEERowChanged" msprop:Generator\_RowEvArgName="EMPLOYEERowChangeEvent" msprop:Generator\_RowClassName="EMPLOYEERow">

<xs:complexType>

<xs:sequence>

<xs:element name="SSN" msprop:Generator\_ColumnVarNameInTable="columnSSN" msprop:Generator\_ColumnPropNameInRow="SSN" msprop:Generator\_ColumnPropNameInTable="SSNColumn" msprop:Generator\_UserColumnName="SSN" type="xs:short" />

<xs:element name="NAME" msprop:Generator\_ColumnVarNameInTable="columnNAME" msprop:Generator\_ColumnPropNameInRow="NAME" msprop:Generator\_ColumnPropNameInTable="NAMEColumn" msprop:Generator\_UserColumnName="NAME" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="25" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="SEX" msprop:Generator\_ColumnVarNameInTable="columnSEX" msprop:Generator\_ColumnPropNameInRow="SEX" msprop:Generator\_ColumnPropNameInTable="SEXColumn" msprop:Generator\_UserColumnName="SEX" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="1" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="AGE" msprop:Generator\_ColumnVarNameInTable="columnAGE" msprop:Generator\_ColumnPropNameInRow="AGE" msprop:Generator\_ColumnPropNameInTable="AGEColumn" msprop:Generator\_UserColumnName="AGE" type="xs:short" minOccurs="0" />

<xs:element name="SALARY" msprop:Generator\_ColumnVarNameInTable="columnSALARY" msprop:Generator\_ColumnPropNameInRow="SALARY" msprop:Generator\_ColumnPropNameInTable="SALARYColumn" msprop:Generator\_UserColumnName="SALARY" type="xs:int" minOccurs="0" />

<xs:element name="ADDRESS" msprop:Generator\_ColumnVarNameInTable="columnADDRESS" msprop:Generator\_ColumnPropNameInRow="ADDRESS" msprop:Generator\_ColumnPropNameInTable="ADDRESSColumn" msprop:Generator\_UserColumnName="ADDRESS" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="50" />

</xs:restriction>

</xs:simpleType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="MANAGER" msprop:Generator\_TableClassName="MANAGERDataTable" msprop:Generator\_TableVarName="tableMANAGER" msprop:Generator\_TablePropName="MANAGER" msprop:Generator\_RowDeletingName="MANAGERRowDeleting" msprop:Generator\_RowChangingName="MANAGERRowChanging" msprop:Generator\_RowEvHandlerName="MANAGERRowChangeEventHandler" msprop:Generator\_RowDeletedName="MANAGERRowDeleted" msprop:Generator\_UserTableName="MANAGER" msprop:Generator\_RowChangedName="MANAGERRowChanged" msprop:Generator\_RowEvArgName="MANAGERRowChangeEvent" msprop:Generator\_RowClassName="MANAGERRow">

<xs:complexType>

<xs:sequence>

<xs:element name="DNO" msprop:Generator\_ColumnVarNameInTable="columnDNO" msprop:Generator\_ColumnPropNameInRow="DNO" msprop:Generator\_ColumnPropNameInTable="DNOColumn" msprop:Generator\_UserColumnName="DNO" type="xs:short" />

<xs:element name="SSN" msprop:Generator\_ColumnVarNameInTable="columnSSN" msprop:Generator\_ColumnPropNameInRow="SSN" msprop:Generator\_ColumnPropNameInTable="SSNColumn" msprop:Generator\_UserColumnName="SSN" type="xs:short" />

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="PROJECT" msprop:Generator\_TableClassName="PROJECTDataTable" msprop:Generator\_TableVarName="tablePROJECT" msprop:Generator\_TablePropName="PROJECT" msprop:Generator\_RowDeletingName="PROJECTRowDeleting" msprop:Generator\_RowChangingName="PROJECTRowChanging" msprop:Generator\_RowEvHandlerName="PROJECTRowChangeEventHandler" msprop:Generator\_RowDeletedName="PROJECTRowDeleted" msprop:Generator\_UserTableName="PROJECT" msprop:Generator\_RowChangedName="PROJECTRowChanged" msprop:Generator\_RowEvArgName="PROJECTRowChangeEvent" msprop:Generator\_RowClassName="PROJECTRow">

<xs:complexType>

<xs:sequence>

<xs:element name="PNO" msprop:Generator\_ColumnVarNameInTable="columnPNO" msprop:Generator\_ColumnPropNameInRow="PNO" msprop:Generator\_ColumnPropNameInTable="PNOColumn" msprop:Generator\_UserColumnName="PNO" type="xs:short" />

<xs:element name="DNO" msprop:Generator\_ColumnVarNameInTable="columnDNO" msprop:Generator\_ColumnPropNameInRow="DNO" msprop:Generator\_ColumnPropNameInTable="DNOColumn" msprop:Generator\_UserColumnName="DNO" type="xs:short" />

<xs:element name="SSN" msprop:Generator\_ColumnVarNameInTable="columnSSN" msprop:Generator\_ColumnPropNameInRow="SSN" msprop:Generator\_ColumnPropNameInTable="SSNColumn" msprop:Generator\_UserColumnName="SSN" type="xs:short" />

<xs:element name="PNAME" msprop:Generator\_ColumnVarNameInTable="columnPNAME" msprop:Generator\_ColumnPropNameInRow="PNAME" msprop:Generator\_ColumnPropNameInTable="PNAMEColumn" msprop:Generator\_UserColumnName="PNAME" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="15" />

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="BUDGET" msprop:Generator\_ColumnVarNameInTable="columnBUDGET" msprop:Generator\_ColumnPropNameInRow="BUDGET" msprop:Generator\_ColumnPropNameInTable="BUDGETColumn" msprop:Generator\_UserColumnName="BUDGET" minOccurs="0">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:maxLength value="8" />

</xs:restriction>

</xs:simpleType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:choice>

</xs:complexType>

<xs:unique name="Constraint1" msdata:PrimaryKey="true">

<xs:selector xpath=".//mstns:DEPART" />

<xs:field xpath="mstns:DNO" />

</xs:unique>

<xs:unique name="EMPLOYEE\_Constraint1" msdata:ConstraintName="Constraint1" msdata:PrimaryKey="true">

<xs:selector xpath=".//mstns:EMPLOYEE" />

<xs:field xpath="mstns:SSN" />

</xs:unique>

<xs:unique name="PROJECT\_Constraint1" msdata:ConstraintName="Constraint1" msdata:PrimaryKey="true">

<xs:selector xpath=".//mstns:PROJECT" />

<xs:field xpath="mstns:PNO" />

</xs:unique>

</xs:element>

<xs:annotation>

<xs:appinfo>

<msdata:Relationship name="SYS\_C0013031" msdata:parent="EMPLOYEE" msdata:child="DEPENDENTS" msdata:parentkey="SSN" msdata:childkey="SSN" msprop:Generator\_UserChildTable="DEPENDENTS" msprop:Generator\_ChildPropName="GetDEPENDENTSRows" msprop:Generator\_UserRelationName="SYS\_C0013031" msprop:Generator\_RelationVarName="relationSYS\_C0013031" msprop:Generator\_UserParentTable="EMPLOYEE" msprop:Generator\_ParentPropName="EMPLOYEERow" />

<msdata:Relationship name="SYS\_C0013034" msdata:parent="DEPART" msdata:child="MANAGER" msdata:parentkey="DNO" msdata:childkey="DNO" msprop:Generator\_UserChildTable="MANAGER" msprop:Generator\_ChildPropName="GetMANAGERRows" msprop:Generator\_UserRelationName="SYS\_C0013034" msprop:Generator\_ParentPropName="DEPARTRow" msprop:Generator\_RelationVarName="relationSYS\_C0013034" msprop:Generator\_UserParentTable="DEPART" />

<msdata:Relationship name="SYS\_C0013035" msdata:parent="EMPLOYEE" msdata:child="MANAGER" msdata:parentkey="SSN" msdata:childkey="SSN" msprop:Generator\_UserChildTable="MANAGER" msprop:Generator\_ChildPropName="GetMANAGERRows" msprop:Generator\_UserRelationName="SYS\_C0013035" msprop:Generator\_ParentPropName="EMPLOYEERow" msprop:Generator\_RelationVarName="relationSYS\_C0013035" msprop:Generator\_UserParentTable="EMPLOYEE" />

<msdata:Relationship name="SYS\_C0013040" msdata:parent="DEPART" msdata:child="PROJECT" msdata:parentkey="DNO" msdata:childkey="DNO" msprop:Generator\_UserChildTable="PROJECT" msprop:Generator\_ChildPropName="GetPROJECTRows" msprop:Generator\_UserRelationName="SYS\_C0013040" msprop:Generator\_ParentPropName="DEPARTRow" msprop:Generator\_RelationVarName="relationSYS\_C0013040" msprop:Generator\_UserParentTable="DEPART" />

<msdata:Relationship name="SYS\_C0013041" msdata:parent="EMPLOYEE" msdata:child="PROJECT" msdata:parentkey="SSN" msdata:childkey="SSN" msprop:Generator\_UserChildTable="PROJECT" msprop:Generator\_ChildPropName="GetPROJECTRows" msprop:Generator\_UserRelationName="SYS\_C0013041" msprop:Generator\_ParentPropName="EMPLOYEERow" msprop:Generator\_RelationVarName="relationSYS\_C0013041" msprop:Generator\_UserParentTable="EMPLOYEE" />

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