# Software Release Notes for STORET v2.0 Data Definition Language

...when IT really counts!

United States Environmental
Protection Agency

Office of Wetlands, Oceans and
Watersheds

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# SOFTWARE RELEASE NOTES
# FOR
# STORET V2.0 DATA DEFINITION LANGUAGE

**CONTRACT NO. 68-W-99-002**
**TASK ORDER NO. 014**

**Prepared for:**

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## 1.0 INTRODUCTION

The instructions in this package serve to create an empty, standalone STORET v2.0 database and associated Data Definition Language (DDL). The DDL is derived from an Oracle Designer 9i STORET 2.0 data model.

These release notes provide an overview of the database objects and privileges created by executing these instructions. The instructions are provided in Appendix A. This version of the STORET v2.0 DDL is identified and tracked under the configuration identifier L2.0, and is being provided to the Office of Wetlands, Oceans, and Watersheds (OWOW), Assessment and Watershed Protection Division (AWPD), Monitoring Branch, STORET Task Order Project Officer (TOPO).

Note: The resulting database is not intended for use with the STORET Data Entry Module. The STORET v2.0 database should be created using the STORET v2.0 Compact Disk (CD) for proper operation of the STORET Data Entry Module.

## 2.0 REFERENCES

The STORET Project Plan dated September 17, 2003 was the basis for assembling the DDL files and developing the associated scripts. The Attribute Definition Report and Data Structure List from COOL:Gen were used to verify the content of the generated database objects.

## 3.0 SUMMARY OF FUNCTIONALITY

The database objects and associated privileges created by executing the files generated through Oracle Designer 9i are listed below. All the functionality is considered new.

C      STORET Database.
C      Tables.
C      Indexes.
C      TSMDBUSR View.
C      Rollback Segments.
C      Tablespaces.
C      Roles.
C      Users.
C      Constraints (i.e., Primary Keys, Check Constraints, and Foreign Keys).
C      Grants.
C      Synonyms.

C  Database-specific Packages.
C  Database-specific Triggers.


**4.0  DEGREE OF FUNCTIONALITY BEING PROVIDED**

The software provided by this release fulfills the requirements agreed to with the TOPO.  No unresolved discrepancies are known to exist between the database created via the DDL in this package, and the STORET v2.0 production system.

# APPENDIX A

Execution Instructions

## 1.0    INTRODUCTION

The instructions in this package serve to create a STORET v2.0 database and associated Data Definition Language (DDL).  The package includes an export of an Oracle Designer 9i application with STORET v2.0 objects required to perform this operation.  These instructions provide the steps necessary to generate the required files, perform follow-up actions to identify proper locations and connections in the generated files, and run the generated files.

## 2.0    LIMITATIONS AND ASSUMPTIONS

The following should be known regarding execution of the instructions:

C      The executor of the instructions should have a general understanding of Oracle Designer 9i.

C      The resulting database does not include objects for STORET v2.0 Report Module.

C      The resulting database does not include objects for STORET v2.0 Database Views.

C      The resulting database does not include objects required for STORET v2.0 Data Entry Module.

## 3.0    PREREQUISITES

The following prerequisites must be adhered to for proper execution of the instructions:

C      The application STORET_DDL_P20 contained in the STORET20.DMP file provided with these instructions must be imported into Oracle Designer 9i.

C      All tablespace datafile properties and target path names should be reviewed and modified as needed.  Be sure all referenced paths exist.

## 4.0    GENERATE DDL FILES IN DESIGNER

The following sections provide the steps necessary to generate the required STORET v2.0 DDL files using Oracle Designer 9i. This consists of generating database and user files. Follow-up actions are required after file generation before using the generated DDL files.

**4.1    Oracle Database**

Perform the following steps to generate the required database files.
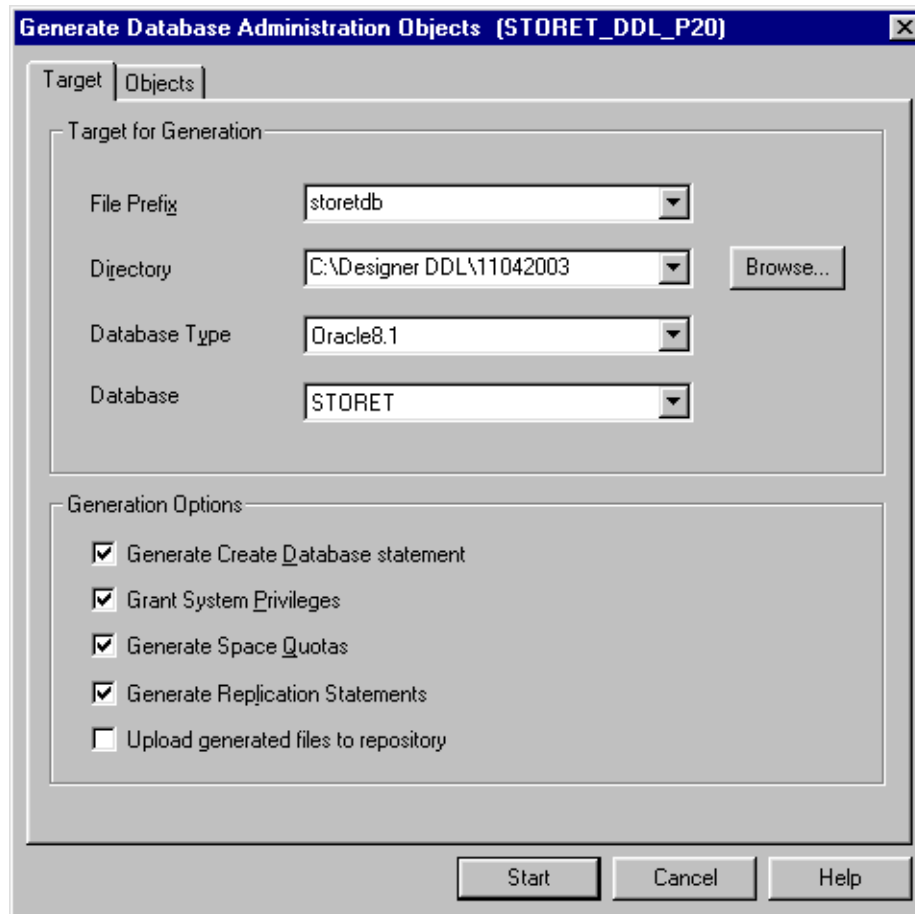
1.      From the Design Editor, highlight the application to be generated (i.e.,
        STORET_DDL_P20).

2.      Select the "DB Admin" tab.

3.      Open the "Database Administration Guide" from the Tools menu.

4.      Select "Create and Edit Databases".

5.      Select "Oracle Databases".

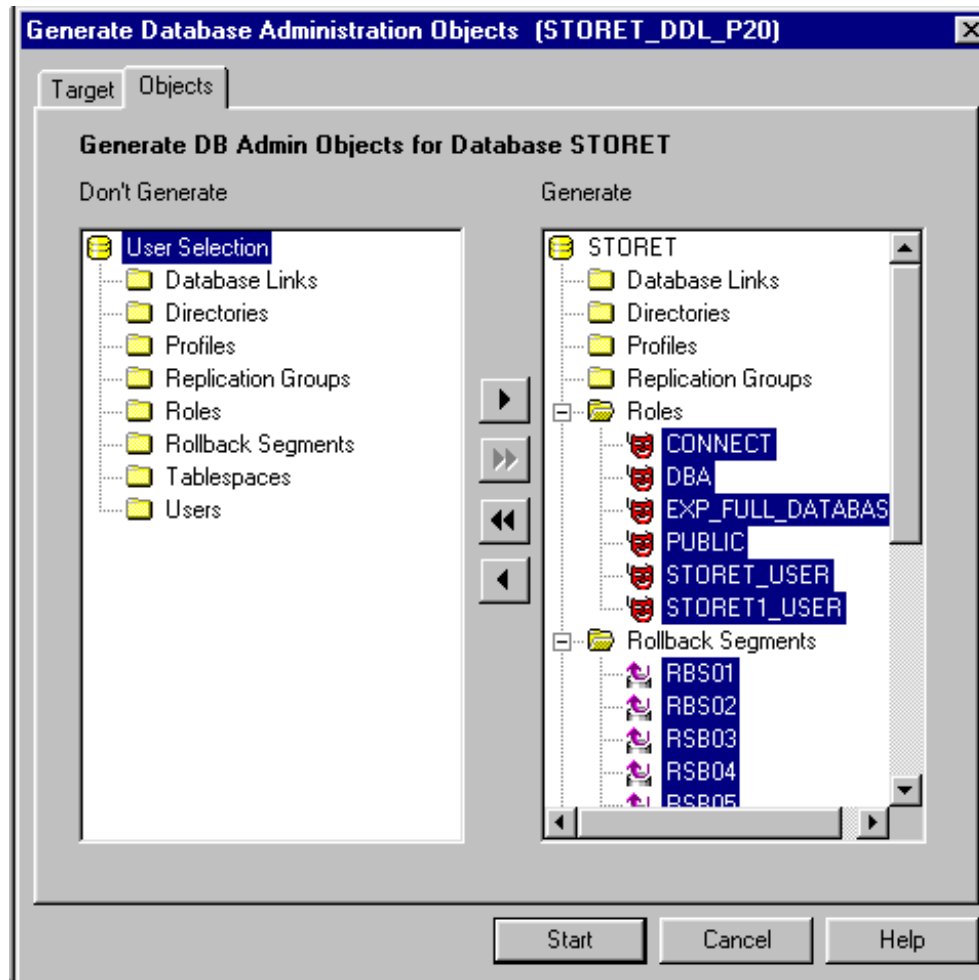6.      Select "Show Map".
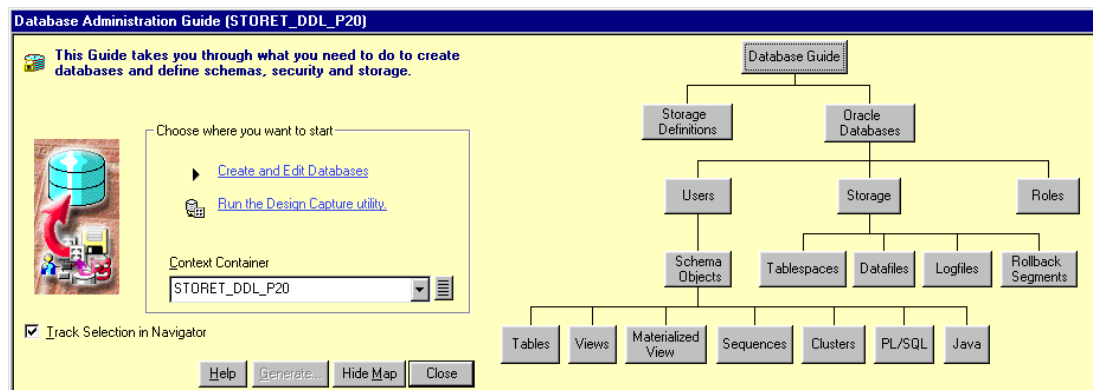


7.      Select STORET database and press <**Generate**>.
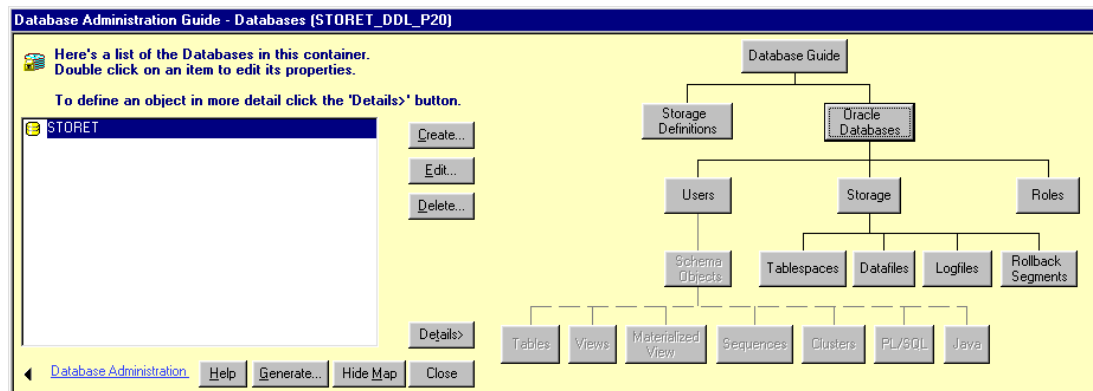
8.    Specify a file prefix (i.e., STORETDB).

9.    Specify a target directory.

10.   Click the "Objects" tab.

## Generate Database Administration Objects  (STORET_DDL_P20)

Target | Objects |

Target for Generation

File Prefix    storetdb

Directory    C:\Designer DDL\11042003    Browse...

Database Type    Oracle8.1

Database    STORET

Generation Options

☑ Generate Create Database statement

☑ Grant System Privileges

☑ Generate Space Quotas

☑ Generate Replication Statements

☐ Upload generated files to repository

Start    Cancel    Help

11.    Ensure all available roles, rollback segments, tablespaces, and users are selected for generation.

12.    Press <**Start**>.

**Generate Database Administration Objects  (STORET_DDL_P20)**

Target | Objects

**Generate DB Admin Objects for Database STORET**

Don't Generate

Generate

- User Selection
  - Database Links
  - Directories
  - Profiles
  - Replication Groups
  - Roles
  - Rollback Segments
  - Tablespaces
  - Users

- STORET
  - Database Links
  - Directories
  - Profiles
  - Replication Groups
  - Roles
    - CONNECT
    - DBA
    - EXP_FULL_DATABAS
    - PUBLIC
    - STORET_USER
    - STORET1_USER
  - Rollback Segments
    - RBS01
    - RBS02
    - RSB03
    - RSB04
    - RSB05

Start    Cancel    Help
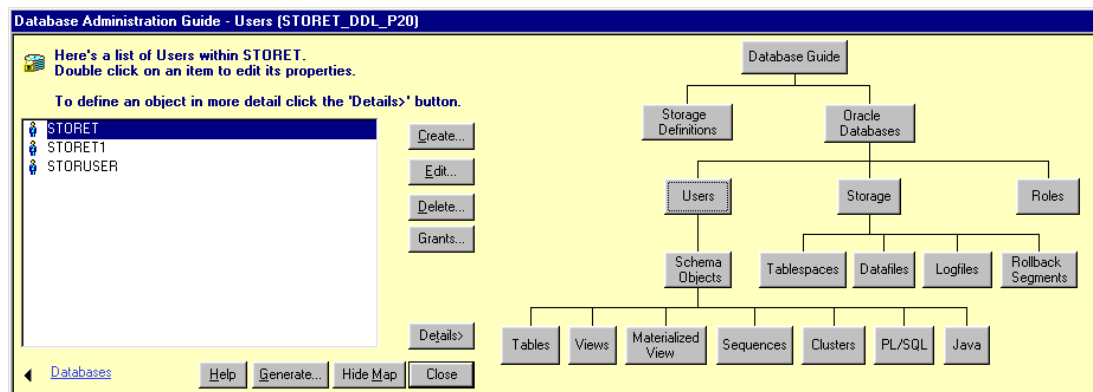
13.    Verify that the following files have been generated within the target directory (e.g.,
       C:\Designer DDL\11042003).

       C       STORETDB.SQL – runs all files in proper sequence.
       C       STORETDB.DB – creates database.
       C       STORETDB.TBS – creates tablespaces.
       C       STORETDB.RBS – creates rollback segments.
       C       STORETDB.RLE – creates roles.
       C       STORETDB.USR – creates users.

## 4.2     User Files

Perform the following steps to generate the required user files.  File generation must be performed for STORET and STORET1 users separately.  STORUSER will not generate anything so it can be ignored.
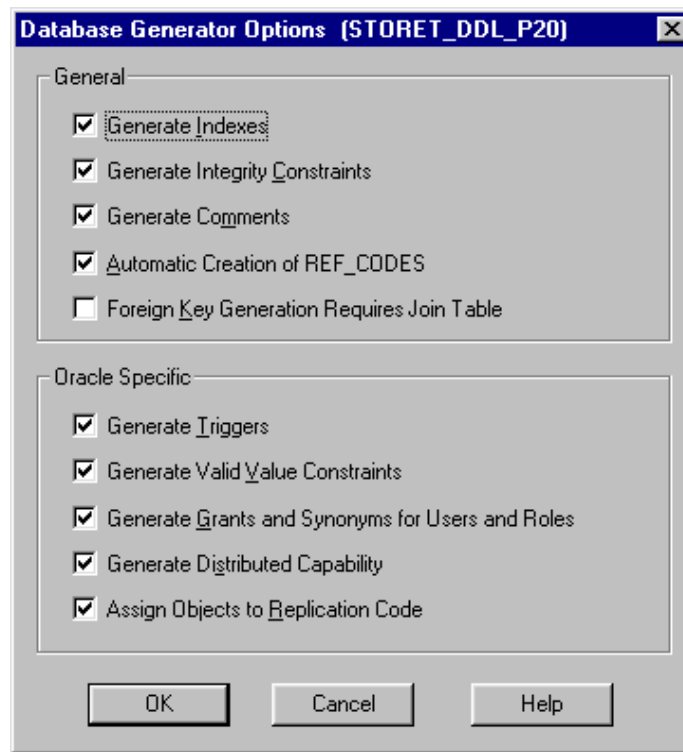
1.      Select "Users" from the Data Administration Guide map.

2.      Highlight the STORET user and press <**Generate**>.



3.      Specify a file prefix (i.e., STORETUSR for STORET and STORET1USR for STORET1).

4.      Specify a target directory.

5.      Press <**Options…**>.
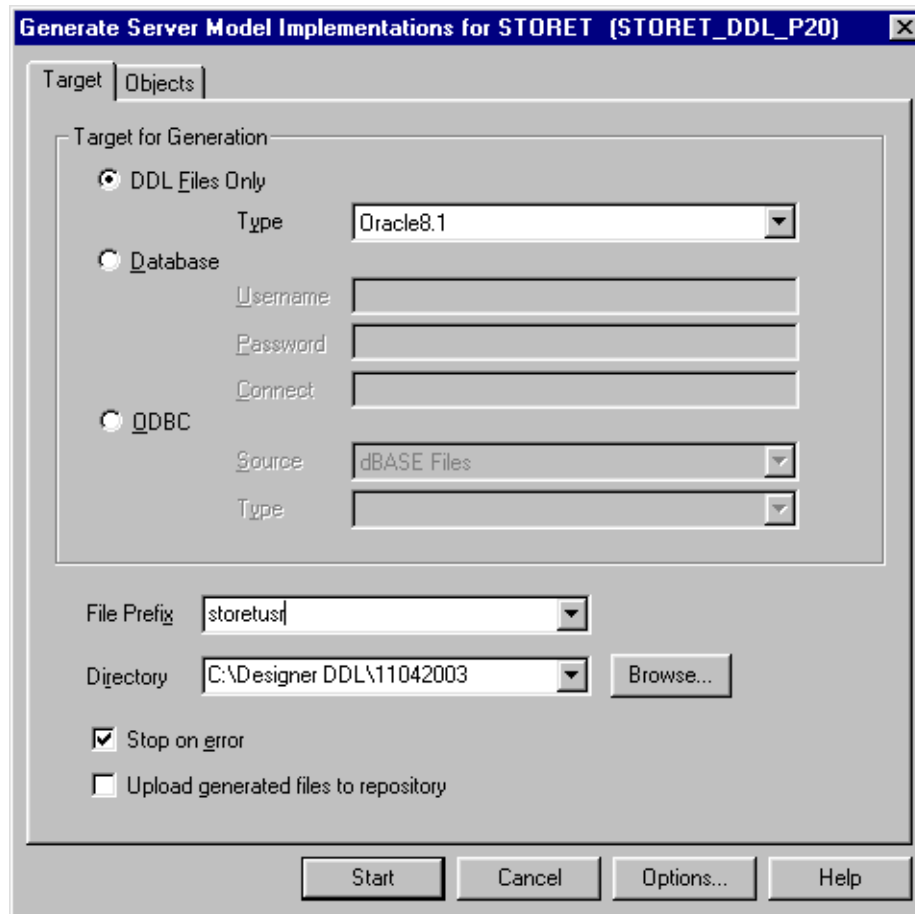
6.      All check boxes except "Foreign Key Generation Requires Join Table" should be
        checked.

7.      Press <**OK**>.

8.      From the displayed Generate Server Model Implementation dialog, click the "Objects" tab and ensure all available packages, relational tables, and relational views are selected for generation.

9.      Press <**Start**>.
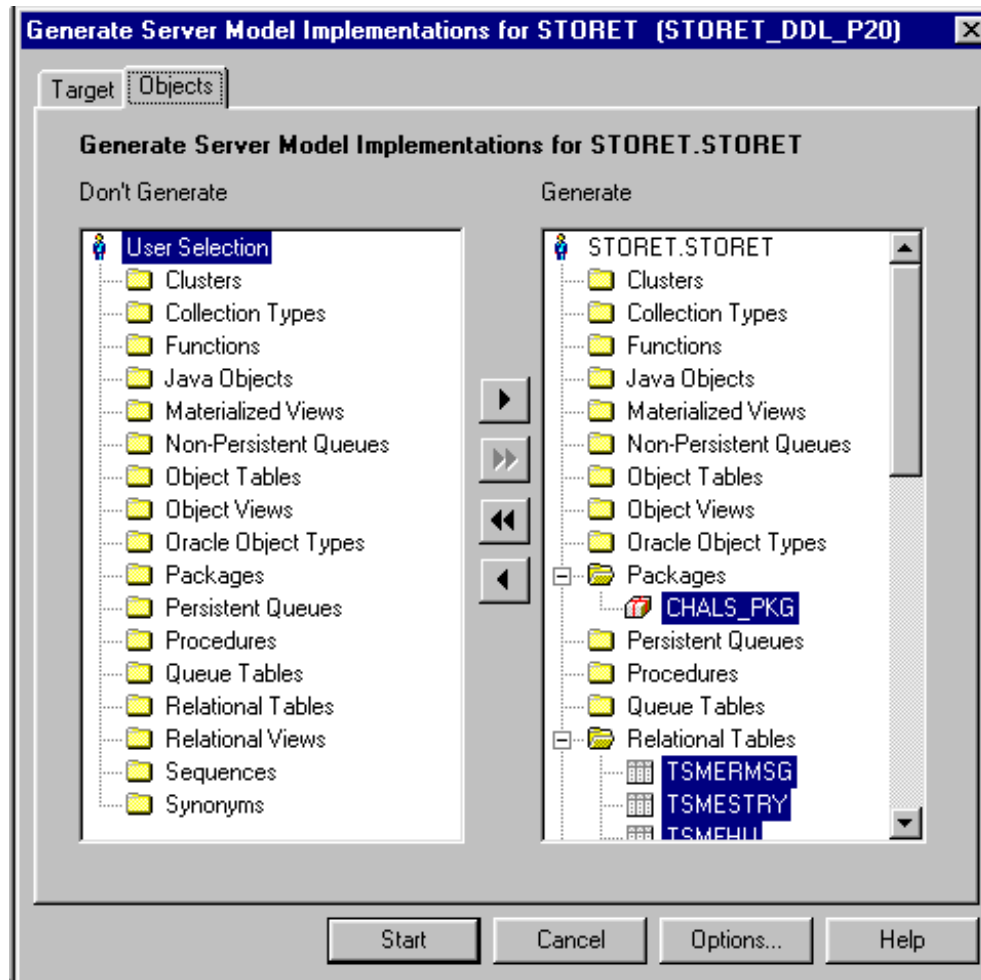
10.    Repeat the above steps for the STORET1 user.

11.    Verify that the following files have been generated within the target directory (e.g.,
       C:\Designer DDL\11042003).  Note that some files (e.g., STORETUSR.IND) generate
       several blank lines before the first statement so be sure to scroll down when viewing.

       User  STORET:

       C        STORETUSR.SQL – runs all files in proper sequence.
       C        STORETUSR.TAB – creates tables with sizes.
       C        STORETUSR.IND – creates indexes with sizes.
       C        STORETUSR.CON – creates constraints.
       C        STORETUSR.PKS – creates package specifications.
       C        STORETUSR.PKB – creates package body.

- C     STORETUSR.TRG – creates triggers.
- C     STORETUSR.GRT – creates grants.

<u>User STORET1:</u>

- C     STORET1USR.SQL –  runs all files in proper sequence.
- C     STORET1USR.TAB – creates tables with sizes.
- C     STORET1USR.VW – creates TSMDBUSR view.
- C     STORET1USR.IND – creates indexes with sizes.
- C     STORET1USR.CON – creates constraints.
- C     STORET1USR.PKS – creates package specifications.
- C     STORET1USR.PKB – creates package body.
- C     STORET1USR.TRG – creates triggers.
- C     STORET1USR.GRT – creates grants.

## 5.0    FOLLOW-UP ACTIONS (BEFORE RUNNING GENERATED FILES)

Before running the generated files, perform the following modifications.

1. Copy the SYNONYMS.SQL file (provided separately) to the generation target directory (e.g., Designer DDL\11042003).

2. Modify each Structured Query Language (SQL) file located in the generation target directory to provide the appropriate database connection:

    - C     For STORETDB.SQL, login as DBA.
    - C     For STORETUSR.SQL, login as STORET.
    - C     For STORET1USR.SQL, login as STORET1.
    - C     For SYNONYMS.SQL, login as STORUSER.

3. Replace the contents of the STORETDB.DB file located in the generation target directory with the following.  Change the datafile full path names as required and make sure the directories exist.

```
create database STORET02
logfile          'C:\STORET\ORASTO2\SYSTEM\REDOLOG\LOG1STO2.ORA' size 200K ,
                 'C:\STORET\ORASTO2\SYSTEM\REDOLOG\LOG2STO2.ORA' size 200K
datafile         'C:\STORET\ORASTO2\SYSTEM\SYS1STO2.ora' size 75M  autoextend on next 10M
                 maxsize UNLIMITED
CHARACTER SET WE8ISO8859P1
NATIONAL CHARACTER SET WE8ISO8859P1;
```

4.  Edit the STORETUSR.CON and STORET1USR.CON files located in the generation target directory to include the prefix schema name for all "REFERENCES" tables.

    Example (change marked in italics):

    ```
    PROMPT Creating Foreign Key on 'TSRCCGA'
    ALTER TABLE TSRCCGA ADD (CONSTRAINT
     CCGA_CHAR_FK FOREIGN KEY
      (TSRCHAR_IS_NUMBER
      ,TSRCHAR_ORG_ID) REFERENCES STORET.TSRCHAR
      (TSRCHAR_IS_NUMBER
      ,TSRCHAR_ORG_ID))
    /
    ```

5.  Edit the STORET1USR.TAB file located in the generation target directory to include a Large Object (LOB) storage clause for STORET1.TSMBLOB table creation as seen below marked in italics.

    ```
    PROMPT Creating Table 'TSMBLOB'
    CREATE TABLE TSMBLOB
     (TSMBLOB_IS_NUMBER NUMBER(12,0) NOT NULL
     ,TSMBLOB_ORG_ID CHAR(8) NOT NULL
     ,BLOB_CONTENT BLOB NOT NULL
     ,TABLE_NAME CHAR(8) NOT NULL
     ,TSMPROJ_IS_NUMBER NUMBER(12)
     ,TSMPROJ_ORG_ID CHAR(8)
     ,TSRRSULT_IS_NUMBER NUMBER(12)
     ,TSRRSULT_ORG_ID CHAR(8)
     ,TSRSTVST_IS_NUMBER NUMBER(12)
     ,TSRSTVST_ORG_ID CHAR(8)
     ,TSMSTATN_IS_NUMBER NUMBER(12)
     ,TSMSTATN_ORG_ID CHAR(8)
     ,TSRCITN_IS_NUMBER NUMBER(12,0)
     ,TSRCITN_ORG_ID CHAR(8)
     ,TSROPPRD_IS_NUMBER NUMBER(12,0)
     ,TSROPPRD_ORG_ID CHAR(8)
     ,TSRFDACT_IS_NUMBER NUMBER(12,0)
     ,TSRFDACT_ORG_ID CHAR(8)
     ,D_USERID_CODE CHAR(8) NOT NULL
     ,D_LAST_UPDATE_TS DATE NOT NULL
     )
     STORAGE
     (
       INITIAL 512K
       NEXT 256K
     ) TABLESPACE STORET1_TABS
    LOB (BLOB_CONTENT) STORE AS  (TABLESPACE STORET1_LOBS DISABLE STORAGE IN ROW
    CHUNK 8192
    PCTVERSION 10 NOCACHE  STORAGE(INITIAL 2M NEXT 2M MINEXTENTS 1 MAXEXTENTS 1000
       PCTINCREASE 0)
    /
    ```

6.      Edit the STORETDB.RLE file located in the generation target directory to comment out the CONNECT, Database Administrator (DBA), and EXP_FULL_DATABASE create role statements.  These are created when the database system catalog is created.

7.      Modify the STORETDB.USR file located in the generation target directory by appending the following:

        GRANT CREATE USER, CREATE SYNONYM, CREATE SESSION TO STORUSER;
        GRANT EXP_FULL_DATABASE, STORET_USER, STORET1_USER TO STORUSER;
        GRANT CONNECT, DBA TO STORET1;
        GRANT CONNECT, DBA TO STORET;

## 6.0     RUN GENERATED FILES

Open a SQL*Plus session and perform the following in the order given:

1.      Create an instance (follow Oracle documentation).

2.      Run STORETDB.SQL.

3.      Run SYSTEM CATALOG (follow Oracle documentation).

4.      Run STORETUSR.SQL.

5.      Run STORET1USR.SQL.

6.      Run SYNONYMS.SQL.

## 7.0     AFTER RUNNING GENERATED FILES

Revoke privileges from STORET and STORET1 users:

1.      Revoke DBA and CONNECT from STORET user.

2.      Revoke DBA and CONNECT from STORET1 user.