GitHub Portfolio Presentation

Oracle 19c | PL/SQL | Java

Oracle Database 19c Enterprise Edition Production v. 19.3.0.0.0
Eclipse v. 2020-12 (4.18.0)
Oracle SQL Developer v. 20.4.1.407, Build 407.0006
SQL * Plus Release 19.0.0.0.0, v. 19.3.0.0.0

Presented by

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Oracle | Java | GitHub Portfolio Presentation

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Introduction 1.1

My path to programming began in high school in Salinas, California where I developed an interest in Red Hat Linux as a hobbyist. Fast-forward to 2019, where I decided to transition from a successful sales and marketing Account Manager with 10+ years of experience to an Oracle developer. I decided to make this transition because programming and working as a technologist is where my real passion resides.

I am building my PL/SQL and Java portfolio on GitHub so that I can showcase my skill sets and experience. I intend to utilize this opportunity to build upon this platform as I progress and expand my knowledge and discoveries.

My primary objective is to create an opportunity that will result in landing a position as an Oracle developer. I intend to create that opportunity by accurately presenting my Oracle 19c PL/SQL and Java projects where I have created two databases with fictitious data. I have designed and built queries and components that draw and execute data from those databases. The following is a list of queries and components that are presented and demonstrated within these projects: stored procedures, functions, data encryption, DBMS tools, a package, and Java JDBC components.

Education 1.2

I will graduate from Mission College in Spring 2021 with a an Associate of Arts in Communication Studies and a concentration in programming and a respectable GPA. My coursework included Oracle 12c, 19c, PL/SQL, Microsoft T-SQL and Python. As a result, I earned the Computer Information Systems Certificate of Proficiency.

Since I attended both Mission College and West Valley College, I was invited to join each of their Honors programs. If my full-time work schedule had permitted, I would have accepted their invitations. I also made the Dean's list.

I decided to continue my coursework and research by investing in the following programming literature: 'Oracle PL/SQL Programming, 6th ed.' by Steven Feuerstein, 'Oracle Database 12c: The Complete Reference' by Bob Bryla, 'Oracle Database 12c: SQL' by Jason Price, 'Oracle PL/SQL by Example: 5th ed.' by Benjamin Rosenzweig, 'Java: A Beginner's Guide: 8th ed.', and 'Java: The Complete Reference: 11th ed.' by Herbert Schildt, each of which provides focused concentrations, emphasis, and extensive coverage on the components presented within this project.

Project Objectives 1.3

My objectives for this project are as follows:

1. Demonstrate my PL/SQL abilities within Oracle 19c, SQL Developer, SQL * Plus, Eclipse, and Java environments.
2. Create a framework that showcases my skill sets within a structured layout that includes tables, primary and foreign keys, a dynamic stored procedure, a function, AES 192 encryption, a DBMS_Scheduler, a package, and a statistical data snapshot with mean, median, and standard deviation data.
3. Create a professional portfolio on GitHub that will result in new Oracle development opportunities.
4. Build upon my professional portfolio so that others with similar interests and career aspirations may learn from my skill sets, endeavors, and success in the future.
5. Continue a career-long path of higher education and create a platform where I can share and exchange new discoveries, ideas, and technologies.

I. Leads
II. Catalog
III. Catalog_Class
IV. Inventory
V. Accounts
VI. Orders
VII. Dyn_Order_Upd
VIII. Java_PL_SQL_Ord
IX. Payments
X. Net_30
XI. Net_30_Info
XII. Credit_Cards
XIII. Bank_Accounts
XIV. Shipments
XV. Employees
XVI. Sales Data

I. Diagnoses
II. Doctors
III. Hospitals
IV. Invoices
V. Patients
VI. Products
VII. Transactions

SQL Plus

```
SQL> SELECT * FROM diagnoses;

   DIAG_ID DIAG_DESC             DOC_ID    HOSP_ID
---------- ------------------ ---------- ----------
  40004567 Common Cold         30003456   10001234
  40004568 Pollen Allergies    30003457   10001235
  40004569 Fever               30003458   10001236
  40004570 Asthma              30003459   10001237
  40004571 Migraine            30003460   10001238
```

SQL Plus

```
SQL> SELECT * FROM doctors;

    DOC_ID DOC_FIRST  DOC_LAST   DOC_PHONE DOC_EMAIL                 HOSP_ID
---------- ---------- --------- ---------- ------------------------ ----------
  30003456 Vinit      Madhvani  4085592011 Vinit.Madhvani@yahoo.com    10001234
  30003457 Shalin     Patel     4088855000 Shalin.Patel@yahoo.com      10001235
  30003458 Phillip    Chan      4089472500 Phillip.Chan@yahoo.com      10001236
  30003459 Shilpa     Gupta     4089726010 Shilpa.Gupta@yahoo.com      10001237
  30003460 Richard    Newell    4082595000 Richard.Newell@yahoo.com    10001238
```

SQL Plus

```
SQL> SELECT * FROM hospitals;

   HOSP_ID HOSP_NAME                       HOSP_S_NUM HOSP_STREET          HOSP_CITY  HOSP_STATE    HOSP_ZIP HOSP_PHONE
---------- ------------------------------ ---------- -------------------- ---------- ----------- ---------- ----------
  10001235 Santa Clara Valley Medical Center        751 South Bascom Avenue  San Jose   CA              95128 4088855000
  10001234 Good Samaritan                          2425 Samaritan Drive      San Jose   CA              95124 4085592011
  10001236 O'Connor Hospital                       2105 Forest Avenue        San Jose   CA              95128 4089472500
  10001237 Kaiser Permanente                        280 Hospital Parkway     San Jose   CA              95119 4089726010
  10001238 Regional Medical Center                  225 North Jackson Avenue San Jose   CA              95116 4082595000
```

Entity Tables | Hospital_DB | Invoices | Patients

SQL Plus

```
SQL> SELECT inv_id, inv_status, trans_id, hosp_id, doc_id, pat_id, prod_id, prod_desc, prod_qty,
  2  TO_CHAR(prod_price, '$99.99') prod_price,
  3  TO_CHAR(inv_amt, '$999.99') inv_amt, trans_type, inv_date
  4  FROM invoices;

    INV_ID INV_STATUS   TRANS_ID    HOSP_ID     DOC_ID     PAT_ID    PROD_ID PROD_DESC        PROD_QTY PROD_PR INV_AMT  TRANS_TYPE   INV_DATE
---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------- ---------- ------- -------- ------------ ---------
  70007890 Invoiced     60006789   10001234   30003456   20002345   50005678 Sudafed                 2  $16.00   $32.00 Credit Card  18-JUL-21
  70007891 Invoiced     60006790   10001235   30003457   20002346   50005679 Azelastine              2  $35.00   $70.00 Credit Card  18-JUL-21
  70007892 Invoiced     60006791   10001236   30003458   20002347   50005680 Acetaminophen           2  $30.00   $60.00 Credit Card  18-JUL-21
  70007893 Invoiced     60006792   10001237   30003459   20002348   50005681 Inhaler                 2  $45.00   $90.00 Credit Card  18-JUL-21
  70007894 Invoiced     60006793   10001238   30003460   20002349   50005682 Aleve                   2  $17.00   $34.00 Credit Card  18-JUL-21
  70007895 Invoiced     60006794   10001234   30003456   20002345   50005678 Sudafed                 3  $16.00   $48.00 Credit Card  18-JUL-21
  70007896 Invoiced     60006795   10001235   30003457   20002346   50005679 Azelastine              3  $35.00  $105.00 Credit Card  18-JUL-21
  70007898 Invoiced     60006797   10001237   30003459   20002348   50005681 Inhaler                 3  $45.00  $135.00 Credit Card  18-JUL-21
  70007899 Invoiced     60006798   10001238   30003460   20002349   50005682 Aleve                   3  $17.00   $51.00 Credit Card  18-JUL-21
  70007897 Invoiced     60006796   10001236   30003458   20002347   50005680 Acetaminophen           3  $30.00   $90.00 Credit Card  18-JUL-21
```

SQL Plus

```
SQL> SELECT * FROM patients;

    PAT_ID PAT_FIRST  PAT_LAST    PAT_S_NUM PAT_STREET       PAT_CITY  PAT_STATE     PAT_ZIP  PAT_PHONE PAT_EMAIL
---------- ---------- ---------- ---------- ---------------- --------- ---------- ---------- ---------- --------------------------
  20002347 Joshua     Perez           33727 Daniel Locks     San Jose  CA              95135 5552428787 Joshua.Perez@yahoo.com
  20002349 Martha     Martin            861 Richard Mills    San Jose  CA              95110 5552447878 Martha.Martin@yahoo.com
  20002346 William    Parish            128 Jessica Park     San Jose  CA              95112 5552417979 William.Parish@yahoo.com
  20002345 Peter      Smith            8561 Kennedy Alley    San Jose  CA              95136 5552431898 Peter.Smith@yahoo.com
  20002348 Vanessa    Dickenson         794 Jennifer Skyway  San Jose  CA              95050 5552435858 Vanessa.Dickenson@yahoo.com
```

Entity Tables | Hospital_DB | Products | Transactions

SQL Plus

```
SQL> SELECT prod_id, prod_avail, prod_desc,
  2  TO_CHAR(prod_price, '$99.99') prod_price
  3  FROM products;

   PROD_ID PROD_AVAIL PROD_DESC      PROD_PRICE
---------- ---------- -------------- ----------
  50005678 Yes        Sudafed          $8.00
  50005679 Yes        Azelastine      $33.00
  50005680 Yes        Acetaminophen   $10.00
  50005681 Yes        Inhaler         $35.00
  50005682 Yes        Aleve           $12.00
```

SQL Plus

```
SQL> SELECT trans_id, hosp_id, diag_id, doc_id, pat_id, prod_id, prod_desc, prod_qty,
  2  TO_CHAR(prod_price, '$99.99') prod_price,
  3  TO_CHAR(trans_amt, '$999.99') trans_amt, trans_type, trans_date
  4  FROM transactions;

  TRANS_ID    HOSP_ID    DIAG_ID     DOC_ID     PAT_ID    PROD_ID PROD_DESC        PROD_QTY PROD_PRICE  TRANS_AM TRANS_TYPE   TRANS_DATE
---------- ---------- ---------- ---------- ---------- ---------- -------------- ---------- ----------- -------- ------------ -----------
  60006789   10001234   40004567   30003456   20002345   50005678 Sudafed                 2  $16.00       $32.00 Credit Card  18-JUL-21
  60006790   10001235   40004568   30003457   20002346   50005679 Azelastine              2  $35.00       $70.00 Credit Card  18-JUL-21
  60006791   10001236   40004569   30003458   20002347   50005680 Acetaminophen           2  $30.00       $60.00 Credit Card  18-JUL-21
  60006792   10001237   40004570   30003459   20002348   50005681 Inhaler                 2  $45.00       $90.00 Credit Card  18-JUL-21
  60006793   10001238   40004571   30003460   20002349   50005682 Aleve                   2  $17.00       $34.00 Credit Card  18-JUL-21
  60006795   10001235   40004568   30003457   20002346   50005679 Azelastine              3  $35.00      $105.00 Credit Card  18-JUL-21
  60006796   10001236   40004569   30003458   20002347   50005680 Acetaminophen           3  $30.00       $90.00 Credit Card  18-JUL-21
  60006797   10001237   40004570   30003459   20002348   50005681 Inhaler                 3  $45.00      $135.00 Credit Card  18-JUL-21
  60006798   10001238   40004571   30003460   20002349   50005682 Aleve                   3  $17.00       $51.00 Credit Card  18-JUL-21
  60006794   10001234   40004567   30003456   20002345   50005678 Sudafed                 3  $16.00       $48.00 Credit Card  18-JUL-21
```

Entity Tables | Leads | Catalog | Catalog_Class

3, 4, 5

SQL Plus

```
SQL> SELECT TO_CHAR(lead_id, '99999999') lead_id, lead_status, lead_name, lead_first, lead_last, lead_phone, lead_email, lead_s_num, lead_street, lead_city, lead_state, lead_zip,
  2  TO_CHAR(lead_created_date, 'YYYY-MM-DD') lead_created_date,
  3  TO_CHAR(lead_last_mod_date, 'YYYY-MM-DD') lead_last_mod_date
  4  FROM leads;

LEAD_ID   LEAD_STATUS  LEAD_NAME           LEAD_FIRST  LEAD_LAST  LEAD_PHONE  LEAD_EMAIL                LEAD_S_NUM LEAD_STREET      LEAD_CITY     LEAD_STATE    LEAD_ZIP LEAD_CREATED_DATE  LEAD_LAST_MOD_DATE
--------- ----------- ------------------- ----------- ---------- ----------- ------------------------- ---------- ---------------- ------------- ----------- ---------- ------------------ ------------------
 55550001 Open        Citigroup           Peter       Smith      9243799521  Peter.Smith@yahoo.com           8561 Kennedy Alley    Johnstown     SC              82834 2021-01-12         2021-01-13
 55550002 Open        Marathon Petroleum  William     Parish     4710718185  William.Parish@yahoo.com         128 Jessica Park     West Edward   CO              84036 2021-01-12         2021-01-13
 55550003 Open        Comcast             Joshua      Perez      5668042289  Joshua.Perez@hotmail.com       33727 Daniel Locks     East Kaitlyn  RI              46820 2021-01-12         2021-01-13
 55550004 Closed      Anthem              Vanessa     Dicker     5748474529  Vanessa.Dicker@aol.com           794 Jennifer Skyway  Port Joshua   NY              75313 2021-01-12         2021-01-13
 55550005 Closed      Dell Technologies   Martha      Martin     4047573224  Martha.Martin@aol.com            861 Richard Mills    Smithburgh    AK              51361 2021-01-12         2021-01-13
 55550006 Closed      DuPont              Brandi      Ruby       9424480478  Brandi.Ruby@gmail.com            961 Roberts Garden   Trevorside    VA              71569 2021-01-12         2021-01-13
```

SQL Plus

```
SQL> SELECT cat_id, cat_status, ord_id,
  2  TO_CHAR(cat_price, '$99,999.99') cat_price, cat_desc,
  3  TO_CHAR(cat_created_date, 'YYYY-MM-DD') cat_created_date,
  4  TO_CHAR(cat_last_mod_date, 'YYYY-MM-DD') cat_last_mod_date
  5  FROM catalog;

    CAT_ID CAT_STATUS      ORD_ID CAT_PRICE   CAT_DESC              CAT_CREATED_DATE  CAT_LAST_MOD_DATE
---------- ----------- ---------- ----------- --------------------- ----------------- -----------------
  20000001 Active        50000001     $350.00 COVID-19 Test Kit     2021-01-12        2021-01-13
  20000002 Active        50000002     $450.00 Bed Linen             2021-01-12        2021-01-13
  20000003 Active        50000003   $4,500.00 Adjustable Bed        2021-01-14        2021-01-14
  20000004 Active        50000004  $15,500.00 Hydrotherapy Fitness  2021-01-14        2021-01-14
  20000005 Active        50000005     $950.00 Glucose Monitor       2021-01-14        2021-01-14
  20000006 Active        50000006     $550.00 Wound Dressing        2021-01-14        2021-01-14
```

SQL Plus

```
SQL> SELECT TO_CHAR(cat_class_id, '99999999') cat_class_id, cat_class_status, cat_id, cat_class_desc,
  2  TO_CHAR(cat_class_created_date, 'YYYY-MM-DD') cat_class_created_date,
  3  TO_CHAR(cat_class_last_mod_date, 'YYYY-MM-DD') cat_class_last_mod_date
  4  FROM catalog_class;

CAT_CLASS_ID  CAT_CLASS_STATUS      CAT_ID CAT_CLASS_DESC       CAT_CLASS_CREATED_DATE  CAT_CLASS_LAST_MOD_DATE
------------- ----------------- ---------- -------------------- ----------------------- -----------------------
 30000001     Active             20000001 COVID-19 Supplies    2021-01-14              2021-01-14
 30000002     Active             20000002 Patient Care         2020-01-15              2021-01-15
 30000003     Active             20000003 Patient Mobility     2020-01-15              2021-01-15
 30000004     Active             20000004 Rehabilitation       2020-01-15              2021-01-15
 30000005     Active             20000005 Diabetic Products    2020-01-15              2021-01-15
 30000006     Active             20000006 Skin and Wound Care  2020-01-15              2021-01-15
```

Entity Tables | Inventory | Accounts

SQL Plus

```
SQL> SELECT inv_id, inv_status, cat_id, rt_inv_qty, ord_id, invoice_id,
  2  TO_CHAR(inv_created_date, 'YYYY-MM-DD') inv_created_date,
  3  TO_CHAR(inv_last_mod_date, 'YYYY-MM-DD') inv_last_mod_date
  4  FROM inventory;

    INV_ID INV_ST     CAT_ID RT_INV_QTY     ORD_ID INVOICE_ID INV_CREATED_DATE  INV_LAST_MOD_DATE
---------- ------ ---------- ---------- ---------- ---------- ----------------- ------------------
  40000001 Active   20000001        950   50000001   88880001 2021-01-15        2021-01-15
  40000002 Active   20000002        850   50000002   88880002 2021-01-15        2021-01-15
  40000003 Active   20000003        700   50000003   88880003 2021-01-15        2021-01-15
  40000004 Active   20000004        650   50000004   88880004 2021-01-15        2021-01-15
  40000005 Active   20000005        600   50000005   88880005 2021-01-15        2021-01-15
  40000006 Active   20000006        500   50000006   88880006 2021-01-15        2021-01-15
```

SQL Plus

```
SQL> SELECT acct_id, acct_status, emp_id, parent_id, acct_name, acct_s_num, acct_street, acct_city, acct_state, acct_zip, pass_id,
  2  TO_CHAR(acct_created_date, 'YYYY-MM-DD') acct_created_date,
  3  TO_CHAR(acct_last_mod_date, 'YYYY-MM-DD') acct_last_mod_date
  4  FROM accounts;

   ACCT_ID ACCT_S     EMP_ID  PARENT_ID ACCT_NAME          ACCT_S_NUM ACCT_STREET         ACCT_CITY    ACCT_STATE    ACCT_ZIP PASS_ID     ACCT_CREATED_DATE  ACCT_LAST_MOD_DATE
---------- ------ ---------- ---------- ------------------ ---------- -------------------- ------------ ---------- ---------- ---------- ------------------ ------------------
  10000001 Open     11110001   22220001 Walmart                   702 SW 8th Street        Bentonville  AR              72716 ********** 2021-01-15        2021-01-15
  10000002 Open     11110002   22220002 EXXON MOBIL              5959 Las Colinas Blvd     Irving       TX              75039 ********** 2021-01-15        2021-01-15
  10000003 Open     11110003   22220003 Apple                       1 Apple Park Way       Cupertino    CA              95014 ********** 2021-01-15        2021-01-15
  10000004 Open     11110004   22220004 Amazon                    410 Terry Avenue North   Seattle      WA              98109 ********** 2021-01-15        2021-01-15
  10000005 Open     11110005   22220005 UnitedHealth Group       9900 Bren Road East       Minnetonka   MN              55343 ********** 2021-01-15        2021-01-15
  10000006 Open     11110006   22220006 McKesson                 6535 Texas State Highway  Irving       TX              75039 ********** 2021-01-15        2021-01-15
```

Entity Tables | Orders

SQL Plus

```
SQL> SELECT acct_id, acct_name, cat_id, ord_id, ord_qty,
  2  TO_CHAR(ord_price, '$99,999.99') ord_price,
  3  TO_CHAR(ord_total, '$999,999.99') ord_total, ord_status,
  4  TO_CHAR(ord_created_date, 'YYYY-MM-DD') ord_created_date,
  5  TO_CHAR(ord_last_mod_date, 'YYYY-MM-DD') ord_last_mod_date
  6  FROM orders;

   ACCT_ID ACCT_NAME              CAT_ID     ORD_ID    ORD_QTY ORD_PRICE   ORD_TOTAL    ORD_STATUS ORD_CREATED_DATE  ORD_LAST_MOD_DATE
---------- -------------------- ---------- ---------- ---------- ---------- ------------ ---------- ----------------- -----------------
  10000001 Walmart              20000001   50000001          5    $325.00    $1,625.00 Invoiced   2021-01-15        2021-01-15
  10000002 Exxon Mobil          20000002   50000002         10    $425.00    $4,250.00 Invoiced   2021-01-15        2021-01-15
  10000003 Apple                20000003   50000003         15  $4,450.00   $66,750.00 Invoiced   2021-01-15        2021-01-15
  10000004 Amazon               20000004   50000004         20 $15,450.00  $309,000.00 Invoiced   2021-01-15        2021-01-15
  10000005 UnitedHealth Group   20000005   50000005         25    $925.00   $23,125.00 Invoiced   2021-01-15        2021-01-15
  10000006 McKesson             20000006   50000006         30    $525.00   $15,750.00 Invoiced   2021-01-15        2021-01-15
  10000003 Apple                20000004   50000029         23 $15,450.00  $355,350.00 Invoiced   2020-12-15        2021-06-14
  10000003 Apple                20000005   50000030         16    $925.00   $14,800.00 Invoiced   2020-11-15        2021-06-14
  10000003 Apple                20000006   50000031         30    $525.00   $15,750.00 Invoiced   2020-10-15        2021-06-14
  10000003 Apple                20000001   50000032         27    $325.00    $8,775.00 Invoiced   2020-09-15        2021-06-14
  10000003 Apple                20000002   50000033         21    $425.00    $8,925.00 Invoiced   2020-08-15        2021-06-14
  10000003 Apple                20000003   50000034         29  $4,450.00  $129,050.00 Invoiced   2020-07-15        2021-06-14
  10000003 Apple                20000004   50000035         19 $15,450.00  $293,550.00 Invoiced   2020-06-15        2021-06-14
  10000003 Apple                20000005   50000036         29    $925.00   $26,825.00 Invoiced   2020-05-15        2021-06-14
  10000003 Apple                20000006   50000037         20    $525.00   $10,500.00 Invoiced   2020-04-15        2021-06-14
  10000003 Apple                20000001   50000038         26    $325.00    $8,450.00 Invoiced   2020-03-15        2021-06-14
  10000003 Apple                20000002   50000039         11    $425.00    $4,675.00 Invoiced   2020-02-15        2021-06-14
  10000004 Amazon               20000005   50000040         30    $925.00   $27,750.00 Invoiced   2020-12-15        2021-06-14
  10000004 Amazon               20000006   50000041         33    $525.00   $17,325.00 Invoiced   2020-11-15        2021-06-14
  10000004 Amazon               20000001   50000042         17    $325.00    $5,525.00 Invoiced   2020-10-15        2021-06-14
  10000004 Amazon               20000002   50000043         28    $425.00   $11,900.00 Invoiced   2020-09-15        2021-06-14
  10000004 Amazon               20000003   50000044         24  $4,450.00  $106,800.00 Invoiced   2020-08-15        2021-06-14
  10000004 Amazon               20000004   50000045         22 $15,450.00  $339,900.00 Invoiced   2020-07-15        2021-06-14
  10000004 Amazon               20000005   50000046         29    $925.00   $26,825.00 Invoiced   2020-06-15        2021-06-14
  10000004 Amazon               20000006   50000047         18    $525.00    $9,450.00 Invoiced   2020-05-15        2021-06-14
  10000004 Amazon               20000001   50000048         21    $325.00    $6,825.00 Invoiced   2020-04-15        2021-06-14
  10000004 Amazon               20000002   50000049         19    $425.00    $8,075.00 Invoiced   2020-03-15        2021-06-14
  10000004 Amazon               20000003   50000050          5  $4,450.00   $22,250.00 Invoiced   2020-02-15        2021-06-14
  10000005 UnitedHealth Group   20000006   50000051         23    $525.00   $12,075.00 Invoiced   2020-12-15        2021-06-14
  10000005 UnitedHealth Group   20000001   50000052         18    $325.00    $5,850.00 Invoiced   2020-11-15        2021-06-14
  10000005 UnitedHealth Group   20000002   50000053         15    $425.00    $6,375.00 Invoiced   2020-10-15        2021-06-14
  10000005 UnitedHealth Group   20000003   50000054         30  $4,450.00  $133,500.00 Invoiced   2020-09-15        2021-06-14
  10000005 UnitedHealth Group   20000004   50000055         21 $15,450.00  $324,450.00 Invoiced   2020-08-15        2021-06-14
  10000005 UnitedHealth Group   20000005   50000056         19    $925.00   $17,575.00 Invoiced   2020-07-15        2021-06-14
  10000005 UnitedHealth Group   20000006   50000057         27    $525.00   $14,175.00 Invoiced   2020-06-15        2021-06-14
  10000005 UnitedHealth Group   20000001   50000058         26    $325.00    $8,450.00 Invoiced   2020-05-15        2021-06-14
  10000005 UnitedHealth Group   20000002   50000059          7    $425.00    $2,975.00 Invoiced   2020-04-15        2021-06-14
  10000005 UnitedHealth Group   20000003   50000060         16  $4,450.00   $71,200.00 Invoiced   2020-03-15        2021-06-14
  10000005 UnitedHealth Group   20000004   50000061         29 $15,450.00  $448,050.00 Invoiced   2020-02-15        2021-06-14
  10000006 McKesson             20000001   50000062         20    $325.00    $6,500.00 Invoiced   2020-12-15        2021-06-14
  10000006 McKesson             20000002   50000063         22    $425.00    $9,350.00 Invoiced   2020-11-15        2021-06-14
  10000006 McKesson             20000003   50000064         24  $4,450.00  $106,800.00 Invoiced   2020-10-15        2021-06-14
  10000006 McKesson             20000004   50000065         29 $15,450.00  $448,050.00 Invoiced   2020-09-15        2021-06-14
  10000006 McKesson             20000005   50000066         11    $925.00   $10,175.00 Invoiced   2020-08-15        2021-06-14
  10000006 McKesson             20000006   50000067         12    $525.00    $6,300.00 Invoiced   2020-07-15        2021-06-14
  10000006 McKesson             20000001   50000068         14    $325.00    $4,550.00 Invoiced   2020-06-15        2021-06-14
  10000006 McKesson             20000002   50000069         16    $425.00    $6,800.00 Invoiced   2020-05-15        2021-06-14
  10000006 McKesson             20000003   50000070         18  $4,450.00   $80,100.00 Invoiced   2020-04-15        2021-06-14
  10000006 McKesson             20000004   50000071         19 $15,450.00  $293,550.00 Invoiced   2020-03-15        2021-06-14
  10000006 McKesson             20000005   50000072         21    $925.00   $19,425.00 Invoiced   2020-02-15        2021-06-14
  10000001 Walmart              20000002   50000007          9    $425.00    $3,825.00 Invoiced   2020-12-15        2021-06-14
  10000001 Walmart              20000003   50000008         12  $4,450.00   $53,400.00 Invoiced   2020-11-15        2021-06-14
  10000001 Walmart              20000004   50000009         15 $15,450.00  $231,750.00 Invoiced   2020-10-15        2021-06-14
  10000001 Walmart              20000005   50000010         18    $925.00   $16,650.00 Invoiced   2020-09-15        2021-06-14
  10000001 Walmart              20000006   50000011         23    $525.00   $12,075.00 Invoiced   2020-08-15        2021-06-14
  10000001 Walmart              20000001   50000012         27    $325.00    $8,775.00 Invoiced   2020-07-15        2021-06-14
  10000001 Walmart              20000002   50000013         30    $425.00   $12,750.00 Invoiced   2020-06-15        2021-06-14
  10000001 Walmart              20000003   50000014          7  $4,450.00   $31,150.00 Invoiced   2020-05-15        2021-06-14
  10000001 Walmart              20000004   50000015         11 $15,450.00  $169,950.00 Invoiced   2020-04-15        2021-06-14
  10000001 Walmart              20000005   50000016         10    $925.00    $9,250.00 Invoiced   2020-03-15        2021-06-14
  10000001 Walmart              20000006   50000017         21    $525.00   $11,025.00 Invoiced   2020-02-15        2021-06-14
  10000002 EXXON MOBIL          20000003   50000018         17  $4,450.00   $75,650.00 Invoiced   2020-12-15        2021-06-14
  10000002 EXXON MOBIL          20000004   50000019         12 $15,450.00  $185,400.00 Invoiced   2020-11-15        2021-06-14
  10000002 EXXON MOBIL          20000005   50000020         19    $925.00   $17,575.00 Invoiced   2020-10-15        2021-06-14
  10000002 EXXON MOBIL          20000006   50000021         24    $525.00   $12,600.00 Invoiced   2020-09-15        2021-06-14
  10000002 EXXON MOBIL          20000001   50000022         29    $325.00    $9,425.00 Invoiced   2020-08-15        2021-06-14
  10000002 EXXON MOBIL          20000002   50000023         27    $425.00   $11,475.00 Invoiced   2020-07-15        2021-06-14
  10000002 EXXON MOBIL          20000003   50000024         16  $4,450.00   $71,200.00 Invoiced   2020-06-15        2021-06-14
  10000002 EXXON MOBIL          20000004   50000025         18 $15,450.00  $278,100.00 Invoiced   2020-05-15        2021-06-14
  10000002 EXXON MOBIL          20000005   50000026         14    $925.00   $12,950.00 Invoiced   2020-04-15        2021-06-14
  10000002 EXXON MOBIL          20000006   50000027         22    $525.00   $11,550.00 Invoiced   2020-03-15        2021-06-14
  10000002 EXXON MOBIL          20000001   50000028         25    $325.00    $8,125.00 Invoiced   2020-02-15        2021-06-14
```

Entity Tables | Dyn_Order_Upd | Java_PL_SQL_Ord | Payments

9, 10, 11

SQL Plus

```
SQL> SELECT * FROM dyn_order_upd
  2  ORDER BY dyn_ord_id;

DYN_ORD_ID DYN_ACCT_ID DYN_QUOTE_ID DYN_CAT_ID
---------- ----------- ------------ ----------
  43210001    33330001     44440001   12340001
  43210002    33330002     44440002   12340002
  43210003    33330003     44440003   12340003
  43210004    33330004     44440004   12340004
  43210005    33330005     44440005   12340005
  43210006    33330006     44440006   12340006
```

SQL Plus

```
SQL> SELECT * FROM java_pl_sql_ord;

JAVA_ORD_ID JAVA_ACCT_ID JAVA_QUOTE_ID JAVA_CAT_ID
----------- ------------ ------------- -----------
       1001         2001          3001        4001
       1002         2002          3002        4002
       1003         2003          3003        4003
       1004         2004          3004        4004
       1005         2005          3005        4005
```

SQL Plus

```
SQL> SELECT pay_id, pay_status, trans_id,
  2  TO_CHAR(trans_amt, '$999,999.99') trans_amt,
  3  TO_CHAR(pay_created_date, 'YYYY-MM-DD') pay_created_date,
  4  TO_CHAR(pay_last_mod_date, 'YYYY-MM-DD') pay_last_mod_date
  5  FROM payments;

    PAY_ID PAY_STATUS    TRANS_ID TRANS_AMT    PAY_CREATED_DATE  PAY_LAST_MOD_DATE
---------- ----------- ---------- ------------ ----------------- ------------------
  60000001 Paid          77770001    $1,625.00 2021-01-15        2021-01-15
  60000002 Paid          77770002    $4,250.00 2021-01-15        2021-01-15
  60000003 Paid          77770003   $66,750.00 2021-01-15        2021-01-15
  60000004 Paid          77770004  $309,000.00 2021-01-15        2021-01-15
  60000005 Paid          77770005   $23,125.00 2021-01-15        2021-01-15
  60000006 Paid          77770006   $15,750.00 2021-01-15        2021-01-15
```

Entity Tables | Net_30 | Net_30_Info _Credit_Cards

SQL Plus

```
SQL> SELECT net_30_id, net_30_status, acct_id, pay_id,
  2  TO_CHAR(net_30_credit_limit, '$999,999.99') net_30_credit_limit,
  3  TO_CHAR(trans_amt, '$999,999.99') trans_amt,
  4  TO_CHAR(net_30_avail_cred, '$99,999.99') net_30_avail_cred, bank_check_num,
  5  TO_CHAR(net_30_created_date, 'YYYY-MM-DD') net_30_created_date,
  6  TO_CHAR(net_30_last_mod_date, 'YYYY-MM-DD') net_30_last_mod_date
  7  FROM net_30;

 NET_30_ID NET_30_STATUS     ACCT_ID     PAY_ID NET_30_CREDIT_LIMIT  TRANS_AMT    NET_30_AVAIL_CRED  BANK_CHECK_NUM NET_30_CREATED_DATE  NET_30_LAST_MOD_DATE
---------- --------------- ---------- ---------- ------------------ ------------ ------------------ -------------- -------------------- --------------------
  80000001 Open            10000001   60000001   $10,000.00                $.00  $10,000.00                    0 2021-01-15           2021-01-15
  80000002 Open            10000002   60000002   $15,000.00                $.00  $15,000.00                    0 2021-01-15           2021-01-15
  80000003 Open            10000003   60000003   $75,000.00          $66,750.00   $8,250.00                 1234 2021-01-15           2021-01-15
  80000004 Open            10000004   60000004  $350,000.00         $309,000.00  $41,000.00                1235 2021-01-15           2021-01-15
  80000005 Open            10000005   60000005   $30,000.00                $.00  $30,000.00                    0 2021-01-15           2021-01-15
  80000006 Open            10000006   60000006   $35,000.00                $.00  $35,000.00                    0 2021-01-15           2021-01-15
```

SQL Plus

```
SQL> SELECT net_30_id, net_30_status, acct_id,
  2  TO_CHAR(net_30_avail_cred, '$99,999.99') net_30_avail_cred
  3  FROM net_30_info;

 NET_30_ID NET_30_STATUS     ACCT_ID NET_30_AVAIL_CRED
---------- --------------- ---------- ------------------
  80000001 OPEN            10000001  $10,000.00
```

SQL Plus

```
SQL> SELECT cc_id, pay_id, acct_id, cc_num,
  2  TO_CHAR(exp_date, 'YYYY-MM-DD') exp_date, cvv, cc_first, cc_last,
  3  TO_CHAR(cc_created_date, 'YYYY-MM-DD') cc_created_date,
  4  TO_CHAR(cc_last_mod_date, 'YYYY-MM-DD') cc_last_mod_date
  5  FROM credit_cards;

     CC_ID     PAY_ID    ACCT_ID CC_NUM           EXP_DATE   CVV CC_FIRST  CC_LAST    CC_CREATED_DATE  CC_LAST_MOD_DATE
---------- ---------- ---------- ---------------- ---------- --- --------- ---------- ---------------- ----------------
  70000001   60000001   10000001 ************1234  2021-01-01 *** Benjamin  Nichols   2021-01-15       2021-01-15
  70000002   60000002   10000002 ************1235  2021-01-01 *** Tyler     Brown      2021-01-15       2021-01-15
  70000003   60000003   10000003 ************1236  2021-01-01 *** Richard   Robinson   2021-01-15       2021-01-15
  70000004   60000004   10000004 ************1237  2021-01-01 *** Peter     Fernandez  2021-01-15       2021-01-15
  70000005   60000005   10000005 ************1238  2021-01-01 *** Henry     Myers      2021-01-15       2021-01-15
  70000006   60000006   10000006 ************1239  2021-01-01 *** Yessenia  Martin     2021-01-15       2021-01-15
```

Entity Tables | Bank_Accounts | Shipments | Employees

15, 16, 17

SQL Plus

```
SQL> SELECT TO_CHAR(bank_acct_id, '99999999') bank_acct_id, bank_acct_status, pay_id, trans_id, bank_name, routing_num, bank_acct_num, first_name, last_name,
  2  TO_CHAR(bank_created_date, 'YYYY-MM-DD') bank_created_date,
  3  TO_CHAR(bank_last_mod_date, 'YYYY-MM-DD') bank_last_mod_date
  4  FROM bank_accounts;

BANK_ACCT_ID   BANK_ACCT_STATUS      PAY_ID   TRANS_ID BANK_NAME              ROUTING_NUM  BANK_ACCT_NUM FIRST_NAME  LAST_NAME  BANK_CREATED_DATE  BANK_LAST_MOD_DATE
-------------- ----------------- ---------- ---------- ---------------------- ------------ ------------- ----------- ---------- ------------------ ------------------
 99990001      Open               60000001   77770001 Wells Fargo Bank       *******82       1214151820 Benjamin    Nichols    2021-01-15         2021-01-15
 99990002      Open               60000002   77770002 Star One Credit Union  *******83       1214151821 Tyler       Brown      2021-01-15         2021-01-15
 99990003      Open               60000003   77770003 Citibank               *******84       1214151822 Richard     Robinson   2021-01-15         2021-01-15
 99990004      Open               60000004   77770004 JPMorgan Chase Bank    *******85       1214151823 Peter       Fernandez  2021-01-15         2021-01-15
 99990005      Open               60000005   77770005 Technology Credit Union *******86       1214151824 Henry       Myers      2021-01-15         2021-01-15
 99990006      Open               60000006   77770006 First Republic Bank    *******87       1214151825 Yessenia    Martin     2021-01-15         2021-01-15
```

SQL Plus

```
SQL> SELECT ship_num_id, ship_status, ship_method_id, ship_track_id,
  2  TO_CHAR(ship_chrg_amt, '$999.99') ship_chrg_amt,
  3  TO_CHAR(acct_id, '99999999') acct_id,
  4  TO_CHAR(ord_id, '99999999') ord_id,
  5  TO_CHAR(ord_qty, '99') ord_qty,
  6  TO_CHAR(ship_created_date, 'YYYY-MM-DD') ship_created_date,
  7  TO_CHAR(ship_last_mod_date, 'YYYY-MM-DD') ship_last_mod_date
  8  FROM shipments;

SHIP_NUM_ID SHIP_STATUS  SHIP_METHOD_ID  SHIP_TRACK_ID       SHIP_CHR ACCT_ID   ORD_ID    ORD_QTY  SHIP_CREATED_DATE  SHIP_LAST_MOD_DATE
----------- ------------ --------------- ------------------- -------- --------- --------- -------- ------------------ ------------------
   90000001 Shipped      UPS             1Z123AA10123456701   $225.00  10000001  50000001   5       2021-01-15         2021-01-15
   90000002 Shipped      FedEx           678901234567         $175.00  10000002  50000002  10       2021-01-15         2021-01-15
   90000003 Shipped      DHL             4567123789           $275.00  10000003  50000003  15       2021-01-15         2021-01-15
   90000004 Shipped      USPS            345690101234700011   $195.00  10000004  50000004  20       2021-01-15         2021-01-15
   90000005 Shipped      UPS             1Z123AA10123456702   $185.00  10000005  50000005  25       2021-01-15         2021-01-15
   90000006 Shipped      FedEx           678901234568         $265.00  10000006  50000006  30       2021-01-15         2021-01-15
```

SQL Plus

```
SQL> SELECT emp_id, emp_status, emp_first, emp_last, emp_phone, emp_email, emp_s_num, emp_street, emp_city, emp_state, emp_zip,
  2  TO_CHAR(emp_created_date, 'YYYY-MM-DD') emp_created_date,
  3  TO_CHAR(emp_last_mod_date, 'YYYY-MM-DD') emp_last_mod_date
  4  FROM employees;

    EMP_ID EMP_STATUS  EMP_FIRST  EMP_LAST  EMP_PHONE   EMP_EMAIL                  EMP_S_NUM EMP_STREET       EMP_CITY         EMP_STATE     EMP_ZIP EMP_CREATED_DATE  EMP_LAST_MOD_DATE
---------- ----------- ---------- --------- ----------- -------------------------- --------- ---------------- ---------------- ---------- ---------- ----------------- ------------------
  11110001 Active      Junior     Slover    4101435118  Junior.Slover@nexus.com        85763 Shawn Meadows    Port Xavierbury  MD              94532 2020-01-16        2021-01-16
  11110002 Active      Kristine   Williams  8610195306  Kristine.Williams@nexus.com      609 Vaughan Estate   Lake Roberthaven IA              65140 2020-01-16        2021-01-16
  11110003 Active      Todd       Newcomb   8656611223  Todd.Newcomb@nexus.com           660 Jessica Forges   East Dannybury   ID              22252 2020-01-16        2021-01-16
  11110004 Active      James      Neumayer  4412561388  James.Neumayer@nexus.com       28669 Robinson Orchard South Matthew    KY              29977 2020-01-16        2021-01-16
  11110005 Active      Homer      Glasper   4378491568  Homer.Glasper@nexus.com          471 Hebert Passage   Port Anthony     RI              82814 2020-01-16        2021-01-16
  11110006 Active      Stephanie  Doutt     2696616752  Stephanie.Doutt@nexus.com        8601 Robert Burg     Chelseamouth     MS              26315 2020-01-16        2021-01-16
```

Entity Tables | Sales_Data

SQL Plus

```
SQL> SELECT acct_id, acct_name, cat_id, cat_desc, cat_class_id, cat_class_desc, ord_id, ord_qty,
  2  TO_CHAR(ord_price, '$99,999.99') ord_price,
  3  TO_CHAR(ord_total, '$999,999.99') ord_total, ord_status,
  4  TO_CHAR(ord_created_date, 'YYYY-MM-DD') ord_created_date,
  5  TO_CHAR(ord_last_mod_date, 'YYYY-MM-DD') ord_last_mod_date
  6  FROM sales_data;
```

ACCT_ID	ACCT_NAME	CAT_ID	CAT_DESC	CAT_CLASS_ID	CAT_CLASS_DESC	ORD_ID	ORD_QTY	ORD_PRICE	ORD_TOTAL	ORD_STATUS	ORD_CREATED_DATE	ORD_LAST_MOD_DATE
10000003	Apple	20000003	Adjustable Bed	30000003	Patient Mobility	50000003	15	$4,450.00	$66,750.00	Invoiced	2021-01-15	2021-01-15
10000003	Apple	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000029	23	$15,450.00	$355,350.00	Invoiced	2020-12-15	2021-06-14
10000003	Apple	20000005	Glucose Monitor	30000005	Diabetic Products	50000030	16	$925.00	$14,800.00	Invoiced	2020-11-15	2021-06-14
10000003	Apple	20000006	Wound Dressing	30000006	Skin and Wound Care	50000031	30	$525.00	$15,750.00	Invoiced	2020-10-15	2021-06-14
10000003	Apple	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000032	27	$325.00	$8,775.00	Invoiced	2020-09-15	2021-06-14
10000003	Apple	20000002	Bed Linen	30000002	Patient Care	50000033	21	$425.00	$8,925.00	Invoiced	2020-08-15	2021-06-14
10000003	Apple	20000003	Adjustable Bed	30000003	Patient Mobility	50000034	29	$4,450.00	$129,050.00	Invoiced	2020-07-15	2021-06-14
10000003	Apple	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000035	19	$15,450.00	$293,550.00	Invoiced	2020-06-15	2021-06-14
10000003	Apple	20000005	Glucose Monitor	30000005	Diabetic Products	50000036	29	$925.00	$26,825.00	Invoiced	2020-05-15	2021-06-14
10000003	Apple	20000006	Wound Dressing	30000006	Skin and Wound Care	50000037	20	$525.00	$10,500.00	Invoiced	2020-04-15	2021-06-14
10000003	Apple	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000038	26	$325.00	$8,450.00	Invoiced	2020-03-15	2021-06-14
10000003	Apple	20000002	Bed Linen	30000002	Patient Care	50000039	11	$425.00	$4,675.00	Invoiced	2020-02-15	2021-06-14
10000004	Amazon	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000004	20	$15,450.00	$309,000.00	Invoiced	2021-01-15	2021-01-15
10000004	Amazon	20000005	Glucose Monitor	30000005	Diabetic Products	50000040	30	$925.00	$27,750.00	Invoiced	2020-12-15	2021-06-14
10000004	Amazon	20000006	Wound Dressing	30000006	Skin and Wound Care	50000041	33	$525.00	$17,325.00	Invoiced	2020-11-15	2021-06-14
10000004	Amazon	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000042	17	$325.00	$5,525.00	Invoiced	2020-10-15	2021-06-14
10000004	Amazon	20000002	Bed Linen	30000002	Patient Care	50000043	28	$425.00	$11,900.00	Invoiced	2020-09-15	2021-06-14
10000004	Amazon	20000003	Adjustable Bed	30000003	Patient Mobility	50000044	24	$4,450.00	$106,800.00	Invoiced	2020-08-15	2021-06-14
10000004	Amazon	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000045	22	$15,450.00	$339,900.00	Invoiced	2020-07-15	2021-06-14
10000004	Amazon	20000005	Glucose Monitor	30000005	Diabetic Products	50000046	29	$925.00	$26,825.00	Invoiced	2020-06-15	2021-06-14
10000004	Amazon	20000006	Wound Dressing	30000006	Skin and Wound Care	50000047	18	$525.00	$9,450.00	Invoiced	2020-05-15	2021-06-14
10000004	Amazon	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000048	21	$325.00	$6,825.00	Invoiced	2020-04-15	2021-06-14
10000004	Amazon	20000002	Bed Linen	30000002	Patient Care	50000049	19	$425.00	$8,075.00	Invoiced	2020-03-15	2021-06-14
10000004	Amazon	20000003	Adjustable Bed	30000003	Patient Mobility	50000050	5	$4,450.00	$22,250.00	Invoiced	2020-02-15	2021-06-14
10000005	UnitedHealth Group	20000005	Glucose Monitor	30000005	Diabetic Products	50000005	25	$925.00	$23,125.00	Invoiced	2021-01-15	2021-01-15
10000005	UnitedHealth Group	20000006	Wound Dressing	30000006	Skin and Wound Care	50000051	23	$525.00	$12,075.00	Invoiced	2020-12-15	2021-06-14
10000005	UnitedHealth Group	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000052	18	$325.00	$5,850.00	Invoiced	2020-11-15	2021-06-14
10000005	UnitedHealth Group	20000002	Bed Linen	30000002	Patient Care	50000053	15	$425.00	$6,375.00	Invoiced	2020-10-15	2021-06-14
10000005	UnitedHealth Group	20000003	Adjustable Bed	30000003	Patient Mobility	50000054	30	$4,450.00	$133,500.00	Invoiced	2020-09-15	2021-06-14
10000005	UnitedHealth Group	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000055	21	$15,450.00	$324,450.00	Invoiced	2020-08-15	2021-06-14
10000005	UnitedHealth Group	20000005	Glucose Monitor	30000005	Diabetic Products	50000056	19	$925.00	$17,575.00	Invoiced	2020-07-15	2021-06-14
10000005	UnitedHealth Group	20000006	Wound Dressing	30000006	Skin and Wound Care	50000057	27	$525.00	$14,175.00	Invoiced	2020-06-15	2021-06-14
10000005	UnitedHealth Group	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000058	26	$325.00	$8,450.00	Invoiced	2020-05-15	2021-06-14
10000005	UnitedHealth Group	20000002	Bed Linen	30000002	Patient Care	50000059	7	$425.00	$2,975.00	Invoiced	2020-04-15	2021-06-14
10000005	UnitedHealth Group	20000003	Adjustable Bed	30000003	Patient Mobility	50000060	16	$4,450.00	$71,200.00	Invoiced	2020-03-15	2021-06-14
10000005	UnitedHealth Group	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000061	29	$15,450.00	$448,050.00	Invoiced	2020-02-15	2021-06-14
10000006	McKesson	20000006	Wound Dressing	30000006	Skin and Wound Care	50000006	30	$525.00	$15,750.00	Invoiced	2021-01-15	2021-01-15
10000006	McKesson	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000062	20	$325.00	$6,500.00	Invoiced	2020-12-15	2021-06-14
10000006	McKesson	20000002	Bed Linen	30000002	Patient Care	50000063	22	$425.00	$9,350.00	Invoiced	2020-11-15	2021-06-14
10000006	McKesson	20000003	Adjustable Bed	30000003	Patient Mobility	50000064	24	$4,450.00	$106,800.00	Invoiced	2020-10-15	2021-06-14
10000006	McKesson	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000065	29	$15,450.00	$448,050.00	Invoiced	2020-09-15	2021-06-14
10000006	McKesson	20000005	Glucose Monitor	30000005	Diabetic Products	50000066	11	$925.00	$10,175.00	Invoiced	2020-08-15	2021-06-14
10000006	McKesson	20000006	Wound Dressing	30000006	Skin and Wound Care	50000067	12	$525.00	$6,300.00	Invoiced	2020-07-15	2021-06-14
10000006	McKesson	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000068	14	$325.00	$4,550.00	Invoiced	2020-06-15	2021-06-14
10000006	McKesson	20000002	Bed Linen	30000002	Patient Care	50000069	16	$425.00	$6,800.00	Invoiced	2020-05-15	2021-06-14
10000006	McKesson	20000003	Adjustable Bed	30000003	Patient Mobility	50000070	18	$4,450.00	$80,100.00	Invoiced	2020-04-15	2021-06-14
10000006	McKesson	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000071	19	$15,450.00	$293,550.00	Invoiced	2020-03-15	2021-06-14
10000006	McKesson	20000005	Glucose Monitor	30000005	Diabetic Products	50000072	21	$925.00	$19,425.00	Invoiced	2020-02-15	2021-06-14
10000001	Walmart	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000001	5	$325.00	$1,625.00	Invoiced	2021-01-15	2021-01-15
10000001	Walmart	20000002	Bed Linen	30000002	Patient Care	50000007	9	$425.00	$3,825.00	Invoiced	2020-12-15	2021-06-14
10000001	Walmart	20000003	Adjustable Bed	30000003	Patient Mobility	50000008	12	$4,450.00	$53,400.00	Invoiced	2020-11-15	2021-06-14
10000001	Walmart	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000009	15	$15,450.00	$231,750.00	Invoiced	2020-10-15	2021-06-14
10000001	Walmart	20000005	Glucose Monitor	30000005	Diabetic Products	50000010	18	$925.00	$16,650.00	Invoiced	2020-09-15	2021-06-14
10000001	Walmart	20000006	Wound Dressing	30000006	Skin and Wound Care	50000011	23	$525.00	$12,075.00	Invoiced	2020-08-15	2021-06-14
10000001	Walmart	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000012	27	$325.00	$8,775.00	Invoiced	2020-07-15	2021-06-14
10000001	Walmart	20000002	Bed Linen	30000002	Patient Care	50000013	30	$425.00	$12,750.00	Invoiced	2020-06-15	2021-06-14
10000001	Walmart	20000003	Adjustable Bed	30000003	Patient Mobility	50000014	7	$4,450.00	$31,150.00	Invoiced	2020-05-15	2021-06-14
10000001	Walmart	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000015	11	$15,450.00	$169,950.00	Invoiced	2020-04-15	2021-06-14
10000001	Walmart	20000005	Glucose Monitor	30000005	Diabetic Products	50000016	10	$925.00	$9,250.00	Invoiced	2020-03-15	2021-06-14
10000001	Walmart	20000006	Wound Dressing	30000006	Skin and Wound Care	50000017	21	$525.00	$11,025.00	Invoiced	2020-02-15	2021-06-14
10000002	EXXON MOBIL	20000002	Bed Linen	30000002	Patient Care	50000002	10	$425.00	$4,250.00	Invoiced	2021-01-15	2021-01-15
10000002	EXXON MOBIL	20000003	Adjustable Bed	30000003	Patient Mobility	50000018	17	$4,450.00	$75,650.00	Invoiced	2020-12-15	2021-06-14
10000002	EXXON MOBIL	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000019	12	$15,450.00	$185,400.00	Invoiced	2020-11-15	2021-06-14
10000002	EXXON MOBIL	20000005	Glucose Monitor	30000005	Diabetic Products	50000020	19	$925.00	$17,575.00	Invoiced	2020-10-15	2021-06-14
10000002	EXXON MOBIL	20000006	Wound Dressing	30000006	Skin and Wound Care	50000021	24	$525.00	$12,600.00	Invoiced	2020-09-15	2021-06-14
10000002	EXXON MOBIL	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000022	29	$325.00	$9,425.00	Invoiced	2020-08-15	2021-06-14
10000002	EXXON MOBIL	20000002	Bed Linen	30000002	Patient Care	50000023	27	$425.00	$11,475.00	Invoiced	2020-07-15	2021-06-14
10000002	EXXON MOBIL	20000003	Adjustable Bed	30000003	Patient Mobility	50000024	16	$4,450.00	$71,200.00	Invoiced	2020-06-15	2021-06-14
10000002	EXXON MOBIL	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	50000025	18	$15,450.00	$278,100.00	Invoiced	2020-05-15	2021-06-14
10000002	EXXON MOBIL	20000005	Glucose Monitor	30000005	Diabetic Products	50000026	14	$925.00	$12,950.00	Invoiced	2020-04-15	2021-06-14
10000002	EXXON MOBIL	20000006	Wound Dressing	30000006	Skin and Wound Care	50000027	22	$525.00	$11,550.00	Invoiced	2020-03-15	2021-06-14
10000002	EXXON MOBIL	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	50000028	25	$325.00	$8,125.00	Invoiced	2020-02-15	2021-06-14

PL/SQL | Regression Model | Sales_Data

SQL Plus

```
SQL> SELECT TO_CHAR(acct_id, '99999999') acct_id, acct_name,
  2  TO_CHAR(cat_id, '99999999') cat_id, cat_desc,
  3  TO_CHAR(cat_class_id, '99999999') cat_class_id, cat_class_desc,
  4  REGR_SLOPE(SYSDATE-ord_created_date, ord_qty) ord_qty_slope,
  5  REGR_INTERCEPT(SYSDATE-ord_created_date, ord_qty) ord_qty_intercept,
  6  REGR_SLOPE(SYSDATE-ord_created_date, ord_total) ord_total_slope,
  7  REGR_INTERCEPT(SYSDATE-ord_created_date, ord_total) ord_total_intercept
  8  FROM sales_data
  9  WHERE acct_id BETWEEN 10000001 AND 10000006
 10  GROUP BY acct_id, acct_name, cat_id, cat_desc, cat_class_id, cat_class_desc
 11  ORDER BY acct_id;
```

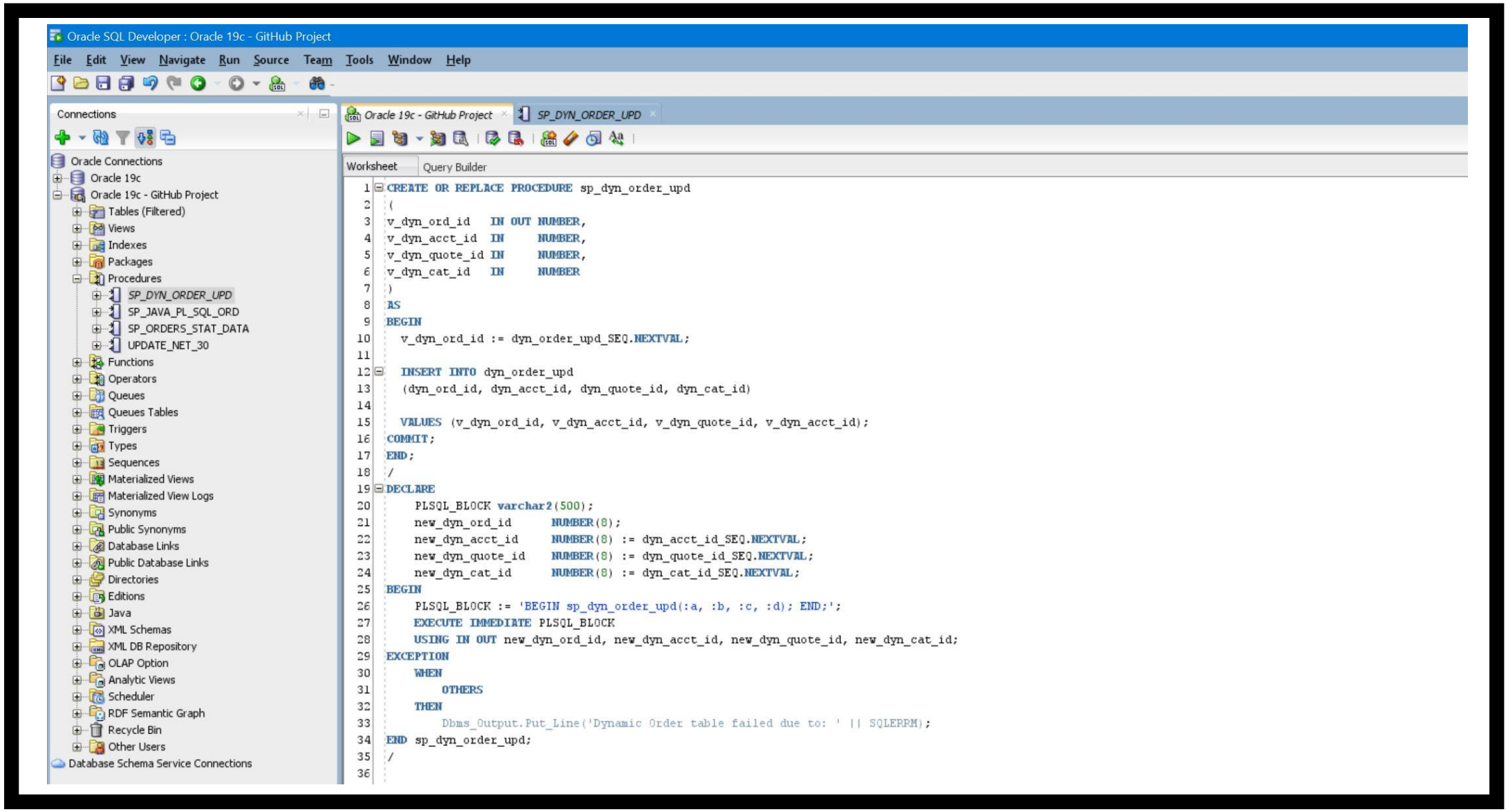
ACCT_ID	ACCT_NAME	CAT_ID	CAT_DESC	CAT_CLASS_ID	CAT_CLASS_DESC	ORD_QTY_SLOPE	ORD_QTY_INTERCEPT	ORD_TOTAL_SLOPE	ORD_TOTAL_INTERCEPT
10000001	Walmart	20000002	Bed Linen	30000002	Patient Care	8.71428571	96.5287665	.020504202	96.5287665
10000001	Walmart	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	8.36363636	102.139156	.025734266	102.139156
10000001	Walmart	20000005	Glucose Monitor	30000005	Diabetic Products	-23	679.957338	-.02486486	679.957338
10000001	Walmart	20000006	Wound Dressing	30000006	Skin and Wound Care	-91	2389.95734	-.17333333	2389.95734
10000001	Walmart	20000003	Adjustable Bed	30000003	Patient Mobility	-36.8	646.557338	-.00826966	646.557338
10000001	Walmart	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	-45.75	922.207338	-.00296117	922.207338
10000002	EXXON MOBIL	20000003	Adjustable Bed	30000003	Patient Mobility	-183	3285.95734	-.0411236	3285.95734
10000002	EXXON MOBIL	20000006	Wound Dressing	30000006	Skin and Wound Care	-92	2473.95734	-.1752381	2473.95734
10000002	EXXON MOBIL	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	-45.5	1616.45734	-.14	1616.45734
10000002	EXXON MOBIL	20000002	Bed Linen	30000002	Patient Care	10.8235294	35.7220438	.025467128	35.7220438
10000002	EXXON MOBIL	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	30.6666667	-163.04266	.001984898	-163.04266
10000002	EXXON MOBIL	20000005	Glucose Monitor	30000005	Diabetic Products	-36.6	931.357338	-.03956757	931.357338
10000003	Apple	20000003	Adjustable Bed	30000003	Patient Mobility	13.1428571	-53.185519	.002953451	-53.185519
10000003	Apple	20000002	Bed Linen	30000002	Patient Care	-18.2	679.157338	-.04282353	679.157338
10000003	Apple	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	-45.75	1227.20734	-.00296117	1227.20734
10000003	Apple	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	-184	5233.95734	-.56615385	5233.95734
10000003	Apple	20000006	Wound Dressing	30000006	Skin and Wound Care	-18.3	784.957338	-.03485714	784.957338
10000003	Apple	20000005	Glucose Monitor	30000005	Diabetic Products	14.1538462	-21.5042	.015301455	-21.5042
10000004	Amazon	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	92	-1696.0427	.005954693	-1696.0427
10000004	Amazon	20000006	Wound Dressing	30000006	Skin and Wound Care	-12.266667	609.757338	-.02336508	609.757338
10000004	Amazon	20000002	Bed Linen	30000002	Patient Care	-20.444444	838.401782	-.04810458	838.401782
10000004	Amazon	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	45.75	-541.79266	.140769231	-541.79266
10000004	Amazon	20000005	Glucose Monitor	30000005	Diabetic Products	-183	5664.95734	-.19783784	5664.95734
10000004	Amazon	20000003	Adjustable Bed	30000003	Patient Mobility	-9.5789474	526.852075	-.00215257	526.852075
10000005	UnitedHealth Group	20000005	Glucose Monitor	30000005	Diabetic Products	-30.666667	910.624005	-.03315315	910.624005
10000005	UnitedHealth Group	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	23	-209.04266	.070769231	-209.04266
10000005	UnitedHealth Group	20000002	Bed Linen	30000002	Patient Care	-22.875	579.082338	-.05382353	579.082338
10000005	UnitedHealth Group	20000006	Wound Dressing	30000006	Skin and Wound Care	45.75	-877.29266	.087142857	-877.29266
10000005	UnitedHealth Group	20000003	Adjustable Bed	30000003	Patient Mobility	-13.142857	660.243052	-.00295345	660.243052
10000005	UnitedHealth Group	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	22.75	-180.79266	.001472492	-180.79266
10000006	McKesson	20000003	Adjustable Bed	30000003	Patient Mobility	-30.5	967.957338	-.00685393	967.957338
10000006	McKesson	20000002	Bed Linen	30000002	Patient Care	-30.666667	879.624005	-.07215686	879.624005
10000006	McKesson	20000004	Hydrotherapy Fitness	30000004	Rehabilitation	-18.4	799.557338	-.00119094	799.557338
10000006	McKesson	20000005	Glucose Monitor	30000005	Diabetic Products	18.2	96.757338	.019675676	96.757338
10000006	McKesson	20000001	COVID-19 Test Kit	30000001	COVID-19 Supplies	-30.5	784.957338	-.09384615	784.957338
10000006	McKesson	20000006	Wound Dressing	30000006	Skin and Wound Care	-10.222222	450.624005	-.0194709	450.624005

SQL Plus

```
SQL> SELECT owner, constraint_name, constraint_type, table_name
  2  FROM user_constraints
  3  WHERE constraint_type = 'P'
  4  MINUS
  5  SELECT owner, constraint_name, constraint_type, table_name
  6  FROM user_constraints
  7  WHERE constraint_name LIKE 'bin%'
  8  AND owner = 'FREESTYLE7'
  9  ORDER BY table_name;

OWNER       CONSTRAINT_NAME  CONSTRAINT_TYPE  TABLE_NAME
----------- ---------------- ---------------- ----------------
FREESTYLE7  ACCT_ID_PK       P                ACCOUNTS
FREESTYLE7  BANK_ACCT_ID_PK  P                BANK_ACCOUNTS
FREESTYLE7  CAT_ID_PK        P                CATALOG
FREESTYLE7  CAT_CLASS_ID_PK  P                CATALOG_CLASS
FREESTYLE7  CC_ID_PK         P                CREDIT_CARDS
FREESTYLE7  DYN_ORD_ID_PK    P                DYN_ORDER_UPD
FREESTYLE7  EMP_ID_PK        P                EMPLOYEES
FREESTYLE7  INV_ID_PK        P                INVENTORY
FREESTYLE7  INVOICE_ID_PK    P                INVOICES
FREESTYLE7  JAVA_ORD_ID_PK   P                JAVA_PL_SQL_ORD
FREESTYLE7  LEAD_ID_PK       P                LEADS
FREESTYLE7  NET_30_ID_PK     P                NET_30
FREESTYLE7  ORD_ID_PK        P                ORDERS
FREESTYLE7  MEAN_VAL_PK      P                ORDERS_STAT_DATA
FREESTYLE7  PAY_ID_PK        P                PAYMENTS
FREESTYLE7  SHIP_NUM_ID_PK   P                SHIPMENTS
FREESTYLE7  TRANS_ID_PK      P                TRANSACTIONS
```

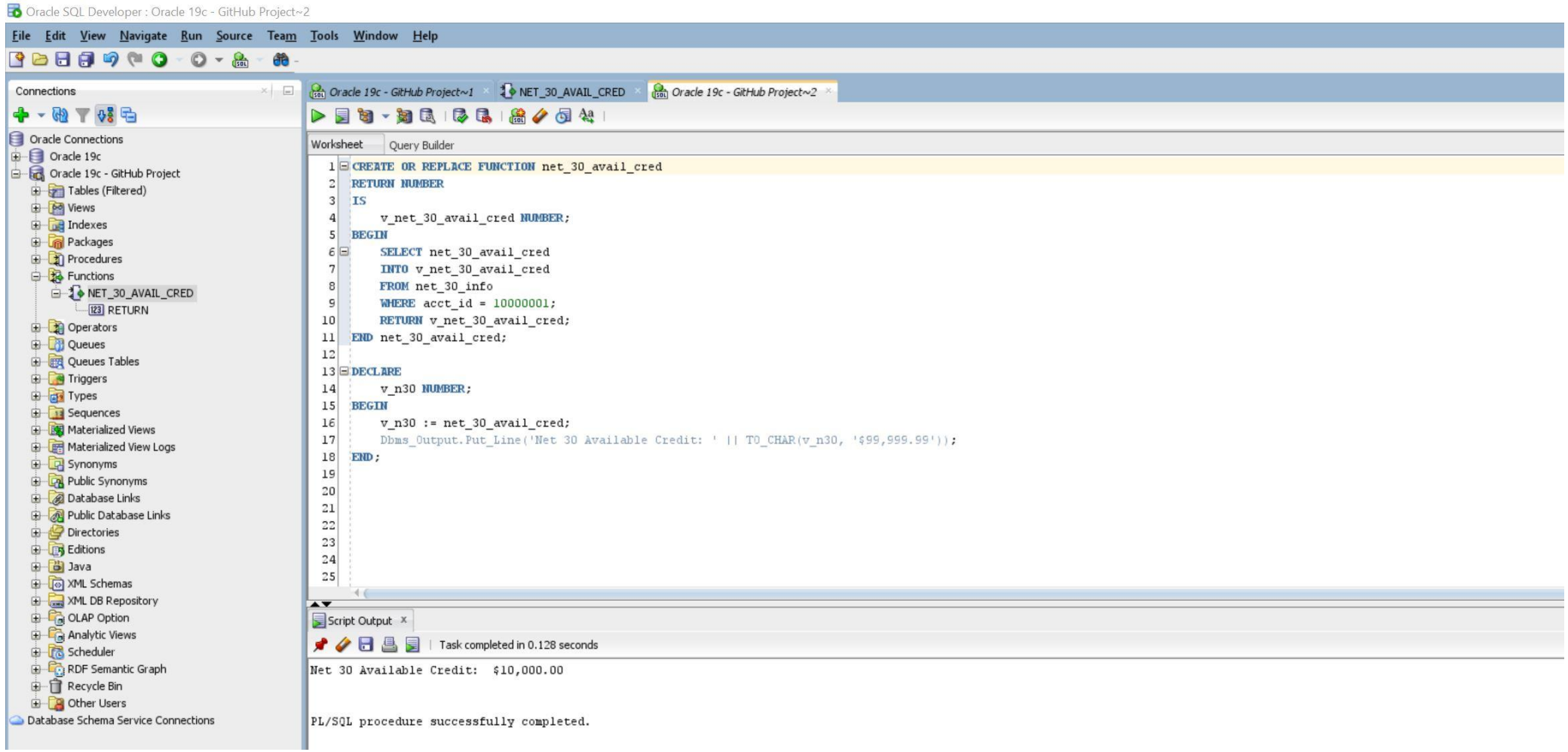
SQL Plus

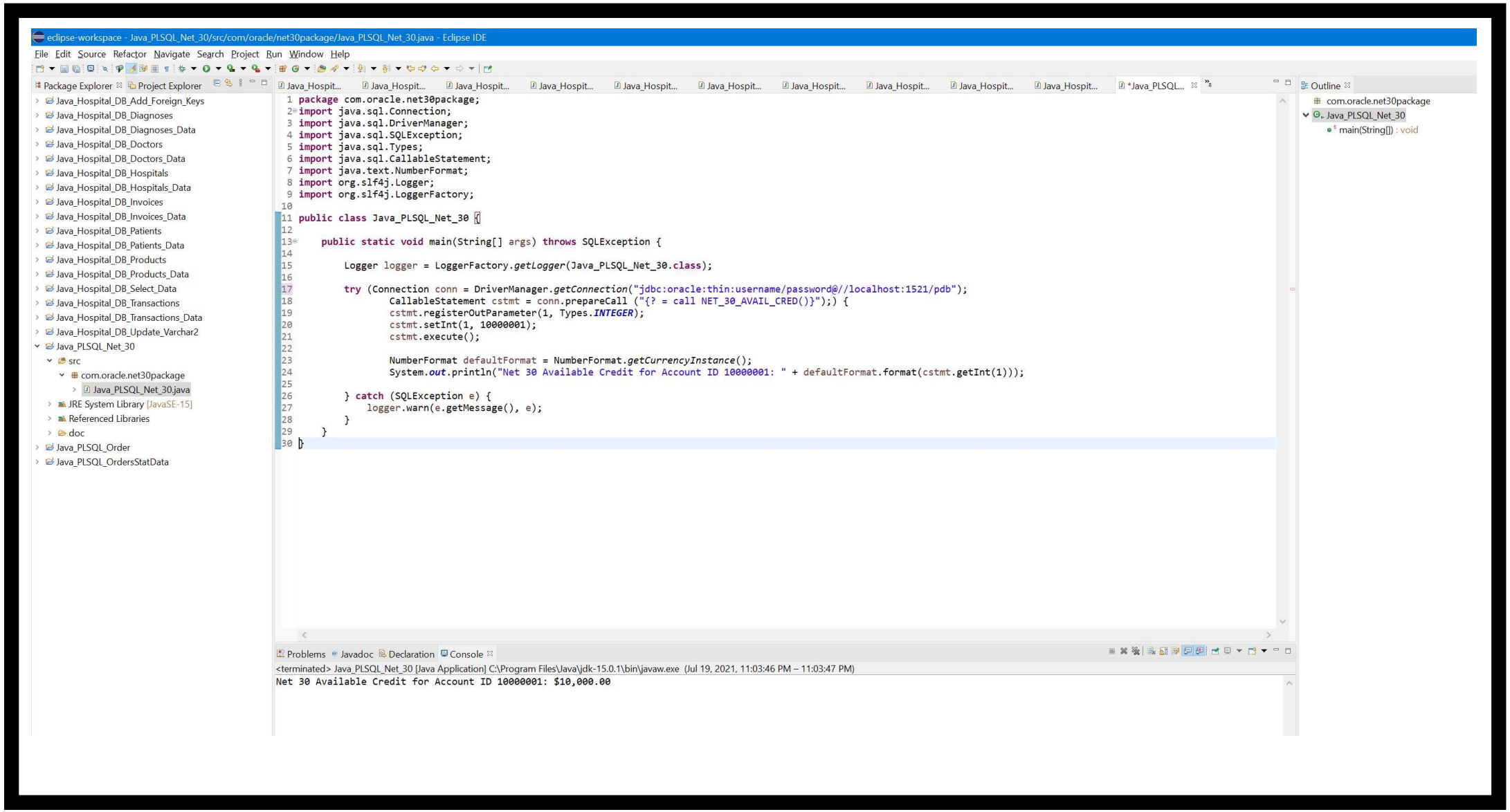
```
SQL> SELECT owner, constraint_name, constraint_type, table_name
  2  FROM user_constraints
  3  WHERE constraint_type = 'R'
  4  MINUS
  5  SELECT owner, constraint_name, constraint_type, table_name
  6  FROM user_constraints
  7  WHERE constraint_name LIKE 'bin%'
  8  AND owner = 'FREESTYLE7'
  9  ORDER BY table_name;

OWNER       CONSTRAINT_NAME  CONSTRAINT_TYPE  TABLE_NAME
----------- ---------------- ---------------- ----------------
FREESTYLE7  EMP_ID_FK_1      R                ACCOUNTS
FREESTYLE7  PAY_ID_FK_1      R                BANK_ACCOUNTS
FREESTYLE7  TRANS_ID_FK_1    R                BANK_ACCOUNTS
FREESTYLE7  ORD_ID_FK_1      R                CATALOG
FREESTYLE7  CAT_ID_FK_1      R                CATALOG_CLASS
FREESTYLE7  ACCT_ID_FK_1     R                CREDIT_CARDS
FREESTYLE7  PAY_ID_FK_2      R                CREDIT_CARDS
FREESTYLE7  CAT_ID_FK_2      R                INVENTORY
FREESTYLE7  INVOICE_ID_FK_1  R                INVENTORY
FREESTYLE7  ORD_ID_FK_2      R                INVENTORY
FREESTYLE7  CAT_CLASS_ID_FK_ R                INVOICES
FREESTYLE7  CAT_ID_FK_3      R                INVOICES
FREESTYLE7  PAY_ID_FK_3      R                NET_30
FREESTYLE7  ACCT_ID_FK_2     R                NET_30
FREESTYLE7  ACCT_ID_FK_3     R                ORDERS
FREESTYLE7  CAT_ID_FK_4      R                ORDERS
FREESTYLE7  TRANS_ID_FK_2    R                PAYMENTS
FREESTYLE7  CAT_ID_FK_5      R                SALES_DATA
FREESTYLE7  ACCT_ID_FK_4     R                SHIPMENTS
FREESTYLE7  ORD_ID_FK_3      R                SHIPMENTS
FREESTYLE7  ACCT_ID_FK_5     R                TRANSACTIONS
```

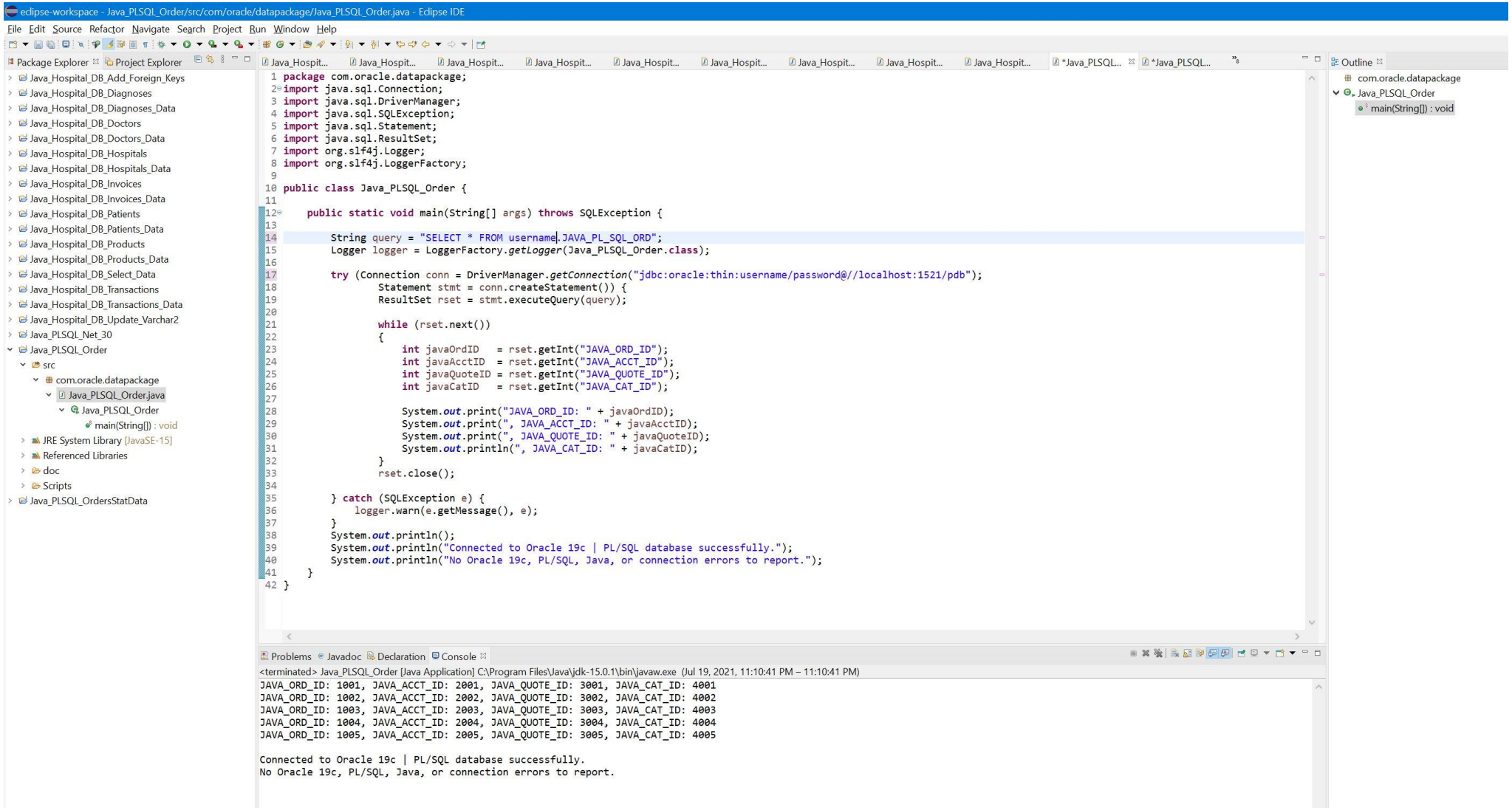

Oracle SQL Developer : Oracle 19c - GitHub Project
File Edit View Navigate Run Source Team Tools Window Help
Connections
Oracle Connections
Oracle 19c
Oracle 19c - GitHub Project
Tables (Filtered)
Views
Indexes
Packages
Procedures
SP_DYN_ORDER_UPD
SP_JAVA_PL_SQL_ORD
SP_ORDERS_STAT_DATA
UPDATE_NET_30
Functions
Operators
Queues
Queues Tables
Triggers
Types
Sequences
Materialized Views
Materialized View Logs
Synonyms
Public Synonyms
Database Links
Public Database Links
Directories
Editions
Java
XML Schemas
XML DB Repository
OLAP Option
Analytic Views
Scheduler
RDF Semantic Graph
Recycle Bin
Other Users
Database Schema Service Connections
Oracle 19c - GitHub Project
SP_DYN_ORDER_UPD
Worksheet
Query Builder
CREATE OR REPLACE PROCEDURE sp_dyn_order_upd
(
v_dyn_ord_id IN OUT NUMBER,
v_dyn_acct_id IN NUMBER,
v_dyn_quote_id IN NUMBER,
v_dyn_cat_id IN NUMBER
)
AS
BEGIN
v_dyn_ord_id := dyn_order_upd_SEQ.NEXTVAL;
INSERT INTO dyn_order_upd
(dyn_ord_id, dyn_acct_id, dyn_quote_id, dyn_cat_id)
VALUES (v_dyn_ord_id, v_dyn_acct_id, v_dyn_quote_id, v_dyn_acct_id);
COMMIT;
END;
/
DECLARE
PLSQL_BLOCK varchar2(500);
new_dyn_ord_id NUMBER(8);
new_dyn_acct_id NUMBER(8) := dyn_acct_id_SEQ.NEXTVAL;
new_dyn_quote_id NUMBER(8) := dyn_quote_id_SEQ.NEXTVAL;
new_dyn_cat_id NUMBER(8) := dyn_cat_id_SEQ.NEXTVAL;
BEGIN
PLSQL_BLOCK := 'BEGIN sp_dyn_order_upd(:a, :b, :c, :d); END;';
EXECUTE IMMEDIATE PLSQL_BLOCK
USING IN OUT new_dyn_ord_id, new_dyn_acct_id, new_dyn_quote_id, new_dyn_cat_id;
EXCEPTION
WHEN
OTHERS
THEN
Dbms_Output.Put_Line('Dynamic Order table failed due to: ' || SQLERRM);
END sp_dyn_order_upd;
/

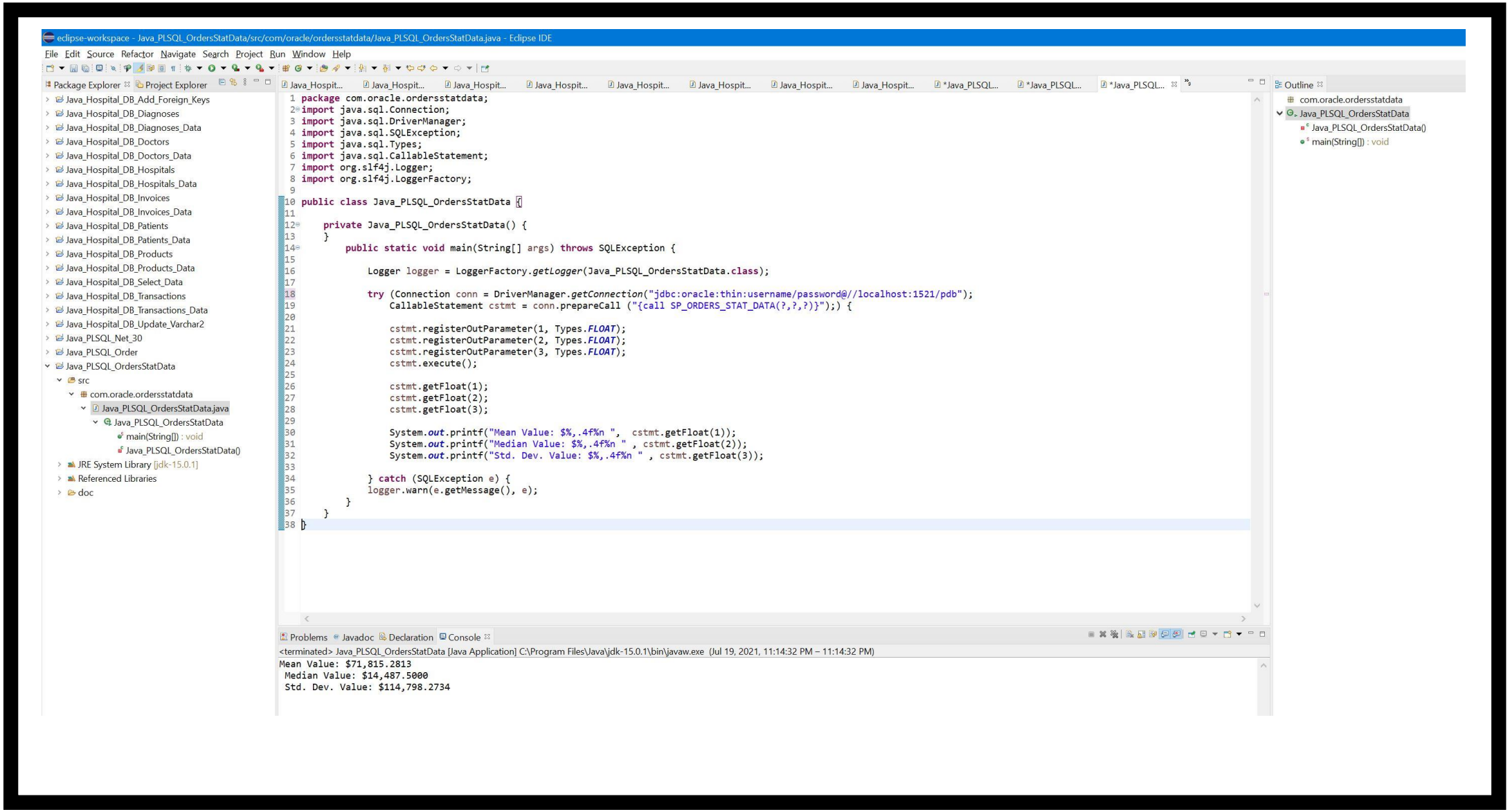
SQL Plus

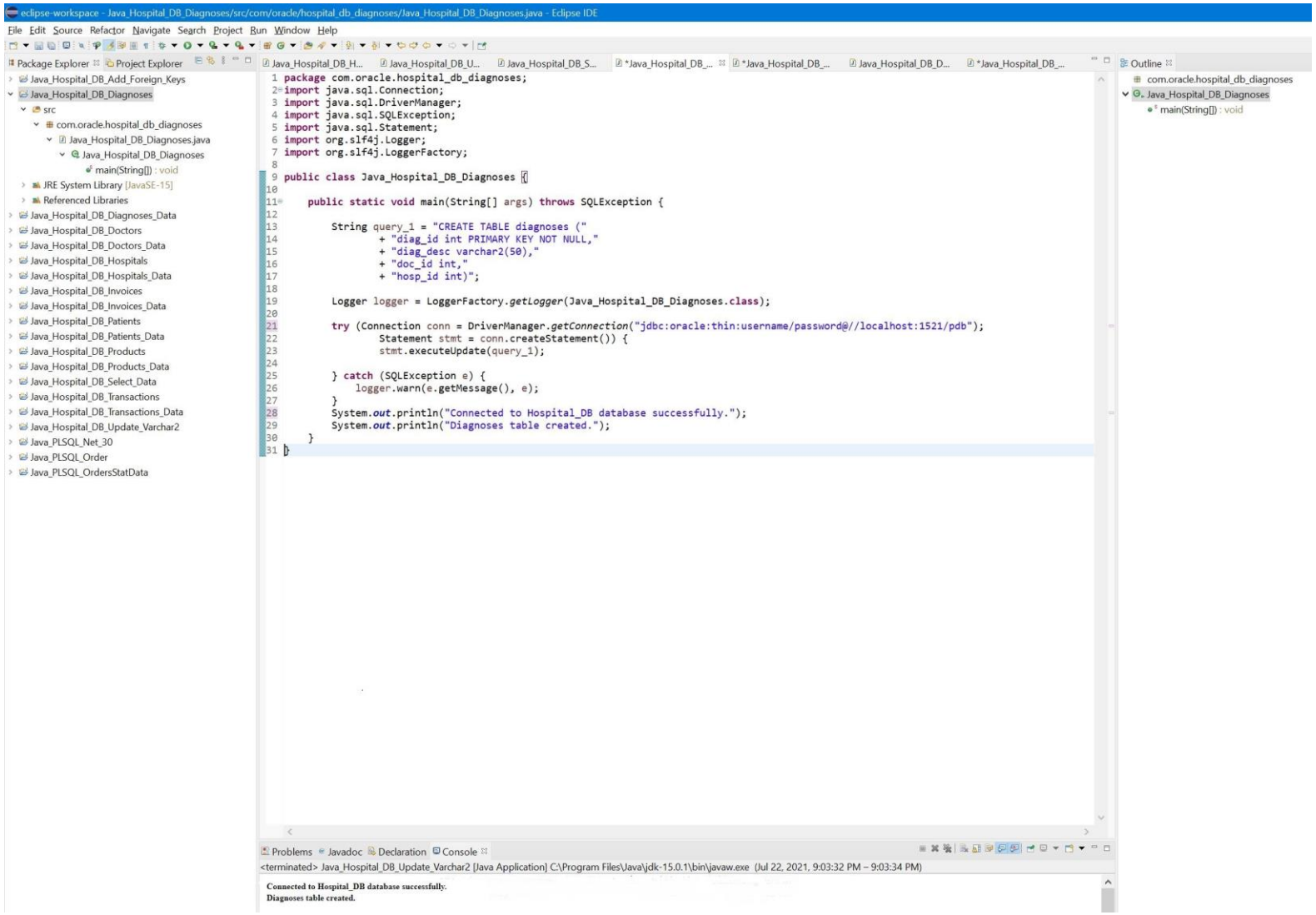
```
SQL> SELECT * FROM dyn_order_upd;

DYN_ORD_ID DYN_ACCT_ID DYN_QUOTE_ID DYN_CAT_ID
---------- ----------- ------------ ----------
  22220001    33330001     44440001   12340001
  22220002    33330002     44440002   12340002
  43210001    33330003     44440003   12340003
  43210002    33330004     44440004   12340004
  43210003    33330005     44440005   12340005
  43210004    33330006     44440006   12340006
  22220005    33330007     44440007   12340007
  43210005    33330008     44440008   12340008
```

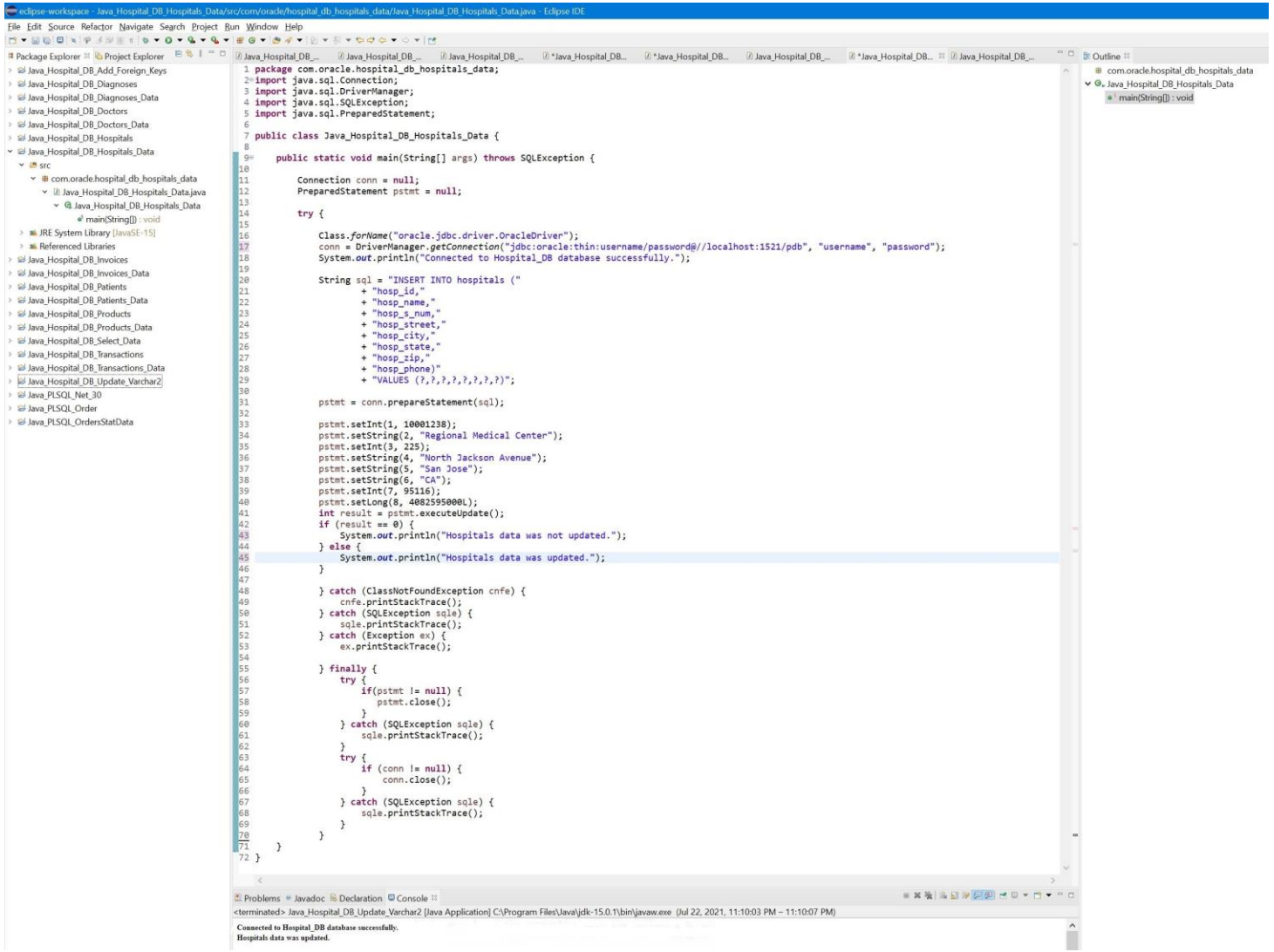

Oracle SQL Developer : Oracle 19c - GitHub Project~2
File Edit View Navigate Run Source Team Tools Window Help
Connections
Oracle Connections
Oracle 19c
Oracle 19c - GitHub Project
Tables (Filtered)
Views
Indexes
Packages
Procedures
Functions
NET_30_AVAIL_CRED
RETURN
Operators
Queues
Queues Tables
Triggers
Types
Sequences
Materialized Views
Materialized View Logs
Synonyms
Public Synonyms
Database Links
Public Database Links
Directories
Editions
Java
XML Schemas
XML DB Repository
OLAP Option
Analytic Views
Scheduler
RDF Semantic Graph
Recycle Bin
Other Users
Database Schema Service Connections
Oracle 19c - GitHub Project~1
NET_30_AVAIL_CRED
Oracle 19c - GitHub Project~2
Worksheet
Query Builder
1 CREATE OR REPLACE FUNCTION net_30_avail_cred
2 RETURN NUMBER
3 IS
4 v_net_30_avail_cred NUMBER;
5 BEGIN
6 SELECT net_30_avail_cred
7 INTO v_net_30_avail_cred
8 FROM net_30_info
9 WHERE acct_id = 10000001;
10 RETURN v_net_30_avail_cred;
11 END net_30_avail_cred;
12
13 DECLARE
14 v_n30 NUMBER;
15 BEGIN
16 v_n30 := net_30_avail_cred;
17 Dbms_Output.Put_Line('Net 30 Available Credit: ' || TO_CHAR(v_n30, '$99,999.99'));
18 END;
19
20
21
22
23
24
25
Script Output
Task completed in 0.128 seconds
Net 30 Available Credit: $10,000.00
PL/SQL procedure successfully completed.


eclipse-workspace - Java_PLSQL_Net_30/src/com/oracle/net30package/Java_PLSQL_Net_30.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
Project Explorer
Java_Hospital_DB_Add_Foreign_Keys
Java_Hospital_DB_Diagnoses
Java_Hospital_DB_Diagnoses_Data
Java_Hospital_DB_Doctors
Java_Hospital_DB_Doctors_Data
Java_Hospital_DB_Hospitals
Java_Hospital_DB_Hospitals_Data
Java_Hospital_DB_Invoices
Java_Hospital_DB_Invoices_Data
Java_Hospital_DB_Patients
Java_Hospital_DB_Patients_Data
Java_Hospital_DB_Products
Java_Hospital_DB_Products_Data
Java_Hospital_DB_Select_Data
Java_Hospital_DB_Transactions
Java_Hospital_DB_Transactions_Data
Java_Hospital_DB_Update_Varchar2
Java_PLSQL_Net_30
src
com.oracle.net30package
Java_PLSQL_Net_30.java
JRE System Library [JavaSE-15]
Referenced Libraries
doc
Java_PLSQL_Order
Java_PLSQL_OrdersStatData
*Java_PLSQL...
1 package com.oracle.net30package;
2 import java.sql.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.Types;
6 import java.sql.CallableStatement;
7 import java.text.NumberFormat;
8 import org.slf4j.Logger;
9 import org.slf4j.LoggerFactory;
10
11 public class Java_PLSQL_Net_30 {
12
13 public static void main(String[] args) throws SQLException {
14
15 Logger logger = LoggerFactory.getLogger(Java_PLSQL_Net_30.class);
16
17 try (Connection conn = DriverManager.getConnection("jdbc:oracle:thin:username/password@//localhost:1521/pdb");
18 CallableStatement cstmt = conn.prepareCall ("{? = call NET_30_AVAIL_CRED()}");) {
19 cstmt.registerOutParameter(1, Types.INTEGER);
20 cstmt.setInt(1, 10000001);
21 cstmt.execute();
22
23 NumberFormat defaultFormat = NumberFormat.getCurrencyInstance();
24 System.out.println("Net 30 Available Credit for Account ID 10000001: " + defaultFormat.format(cstmt.getInt(1)));
25
26 } catch (SQLException e) {
27 logger.warn(e.getMessage(), e);
28 }
29 }
30 }
Outline
com.oracle.net30package
Java_PLSQL_Net_30
main(String[]) : void
Problems Javadoc Declaration Console
<terminated> Java_PLSQL_Net_30 [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Jul 19, 2021, 11:03:46 PM – 11:03:47 PM)
Net 30 Available Credit for Account ID 10000001: $10,000.00

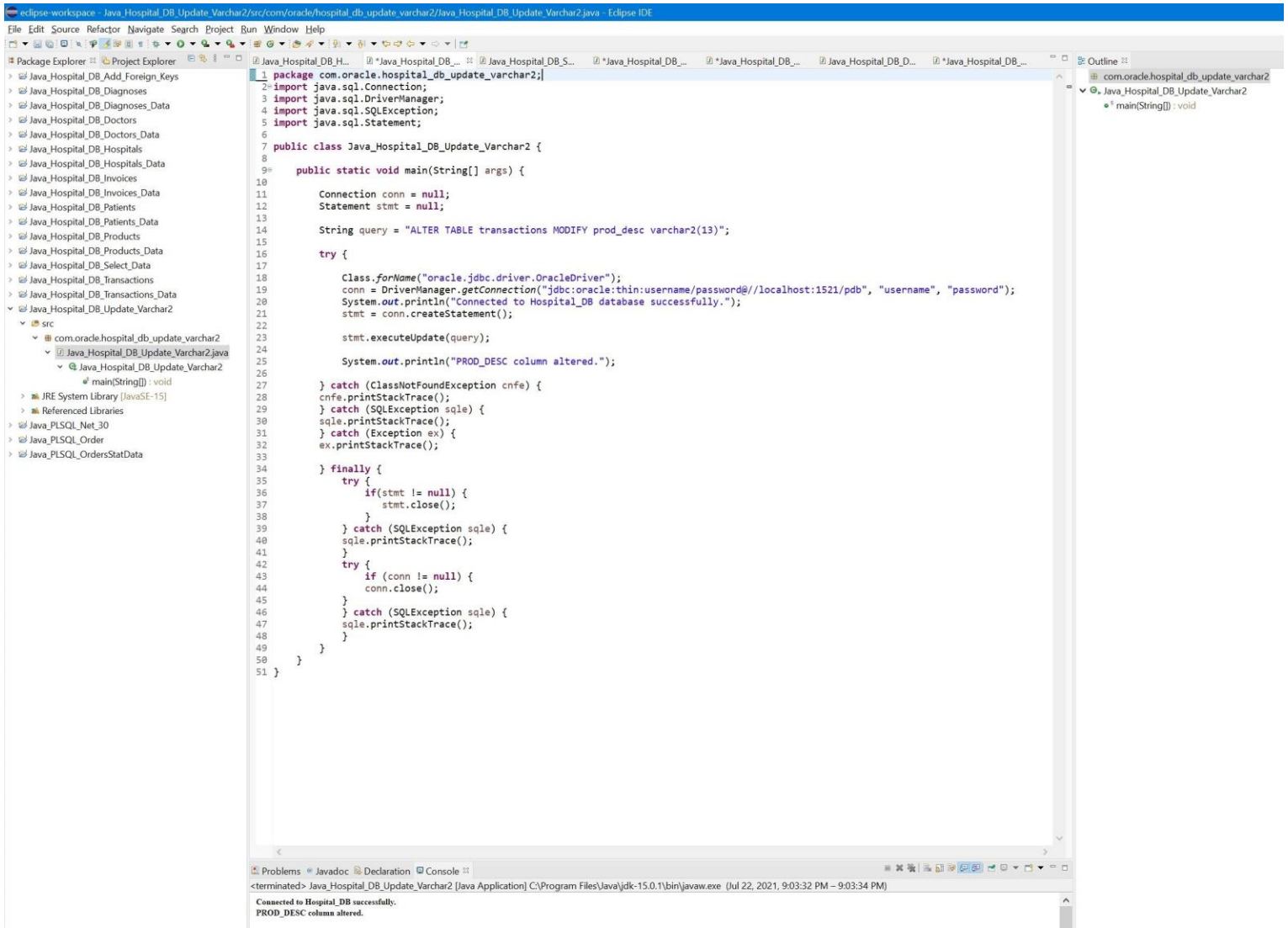

eclipse-workspace - Java_PLSQL_Order/src/com/oracle/datapackage/Java_PLSQL_Order.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
Project Explorer
Java_Hospital_DB_Add_Foreign_Keys
Java_Hospital_DB_Diagnoses
Java_Hospital_DB_Diagnoses_Data
Java_Hospital_DB_Doctors
Java_Hospital_DB_Doctors_Data
Java_Hospital_DB_Hospitals
Java_Hospital_DB_Hospitals_Data
Java_Hospital_DB_Invoices
Java_Hospital_DB_Invoices_Data
Java_Hospital_DB_Patients
Java_Hospital_DB_Patients_Data
Java_Hospital_DB_Products
Java_Hospital_DB_Products_Data
Java_Hospital_DB_Select_Data
Java_Hospital_DB_Transactions
Java_Hospital_DB_Transactions_Data
Java_Hospital_DB_Update_Varchar2
Java_PLSQL_Net_30
Java_PLSQL_Order
src
com.oracle.datapackage
Java_PLSQL_Order.java
Java_PLSQL_Order
main(String[]) : void
JRE System Library [JavaSE-15]
Referenced Libraries
doc
Scripts
Java_PLSQL_OrdersStatData
Java_Hospit...
*Java_PLSQL...
1 package com.oracle.datapackage;
2 import java.sql.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.Statement;
6 import java.sql.ResultSet;
7 import org.slf4j.Logger;
8 import org.slf4j.LoggerFactory;
9
10 public class Java_PLSQL_Order {
11
12 public static void main(String[] args) throws SQLException {
13
14 String query = "SELECT * FROM username.JAVA_PL_SQL_ORD";
15 Logger logger = LoggerFactory.getLogger(Java_PLSQL_Order.class);
16
17 try (Connection conn = DriverManager.getConnection("jdbc:oracle:thin:username/password@//localhost:1521/pdb");
18 Statement stmt = conn.createStatement()) {
19 ResultSet rset = stmt.executeQuery(query);
20
21 while (rset.next())
22 {
23 int javaOrdID = rset.getInt("JAVA_ORD_ID");
24 int javaAcctID = rset.getInt("JAVA_ACCT_ID");
25 int javaQuoteID = rset.getInt("JAVA_QUOTE_ID");
26 int javaCatID = rset.getInt("JAVA_CAT_ID");
27
28 System.out.print("JAVA_ORD_ID: " + javaOrdID);
29 System.out.print(", JAVA_ACCT_ID: " + javaAcctID);
30 System.out.print(", JAVA_QUOTE_ID: " + javaQuoteID);
31 System.out.println(", JAVA_CAT_ID: " + javaCatID);
32 }
33 rset.close();
34
35 } catch (SQLException e) {
36 logger.warn(e.getMessage(), e);
37 }
38 System.out.println();
39 System.out.println("Connected to Oracle 19c | PL/SQL database successfully.");
40 System.out.println("No Oracle 19c, PL/SQL, Java, or connection errors to report.");
41 }
42 }
Outline
com.oracle.datapackage
Java_PLSQL_Order
main(String[]) : void
Problems Javadoc Declaration Console
<terminated> Java_PLSQL_Order [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Jul 19, 2021, 11:10:41 PM – 11:10:41 PM)
JAVA_ORD_ID: 1001, JAVA_ACCT_ID: 2001, JAVA_QUOTE_ID: 3001, JAVA_CAT_ID: 4001
JAVA_ORD_ID: 1002, JAVA_ACCT_ID: 2002, JAVA_QUOTE_ID: 3002, JAVA_CAT_ID: 4002
JAVA_ORD_ID: 1003, JAVA_ACCT_ID: 2003, JAVA_QUOTE_ID: 3003, JAVA_CAT_ID: 4003
JAVA_ORD_ID: 1004, JAVA_ACCT_ID: 2004, JAVA_QUOTE_ID: 3004, JAVA_CAT_ID: 4004
JAVA_ORD_ID: 1005, JAVA_ACCT_ID: 2005, JAVA_QUOTE_ID: 3005, JAVA_CAT_ID: 4005
Connected to Oracle 19c | PL/SQL database successfully.
No Oracle 19c, PL/SQL, Java, or connection errors to report.


eclipse-workspace - Java_PLSQL_OrdersStatData/src/com/oracle/ordersstatdata/Java_PLSQL_OrdersStatData.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
Project Explorer
Java_Hospital_DB_Add_Foreign_Keys
Java_Hospital_DB_Diagnoses
Java_Hospital_DB_Diagnoses_Data
Java_Hospital_DB_Doctors
Java_Hospital_DB_Doctors_Data
Java_Hospital_DB_Hospitals
Java_Hospital_DB_Hospitals_Data
Java_Hospital_DB_Invoices
Java_Hospital_DB_Invoices_Data
Java_Hospital_DB_Patients
Java_Hospital_DB_Patients_Data
Java_Hospital_DB_Products
Java_Hospital_DB_Products_Data
Java_Hospital_DB_Select_Data
Java_Hospital_DB_Transactions
Java_Hospital_DB_Transactions_Data
Java_Hospital_DB_Update_Varchar2
Java_PLSQL_Net_30
Java_PLSQL_Order
Java_PLSQL_OrdersStatData
src
com.oracle.ordersstatdata
Java_PLSQL_OrdersStatData.java
Java_PLSQL_OrdersStatData
main(String[]) : void
Java_PLSQL_OrdersStatData()
JRE System Library [jdk-15.0.1]
Referenced Libraries
doc
1 package com.oracle.ordersstatdata;
2 import java.sql.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.Types;
6 import java.sql.CallableStatement;
7 import org.slf4j.Logger;
8 import org.slf4j.LoggerFactory;
9
10 public class Java_PLSQL_OrdersStatData {
11
12 private Java_PLSQL_OrdersStatData() {
13 }
14 public static void main(String[] args) throws SQLException {
15
16 Logger logger = LoggerFactory.getLogger(Java_PLSQL_OrdersStatData.class);
17
18 try (Connection conn = DriverManager.getConnection("jdbc:oracle:thin:username/password@//localhost:1521/pdb");
19 CallableStatement cstmt = conn.prepareCall ("{call SP_ORDERS_STAT_DATA(?,?,?)}");) {
20
21 cstmt.registerOutParameter(1, Types.FLOAT);
22 cstmt.registerOutParameter(2, Types.FLOAT);
23 cstmt.registerOutParameter(3, Types.FLOAT);
24 cstmt.execute();
25
26 cstmt.getFloat(1);
27 cstmt.getFloat(2);
28 cstmt.getFloat(3);
29
30 System.out.printf("Mean Value: $%,.4f%n ", cstmt.getFloat(1));
31 System.out.printf("Median Value: $%,.4f%n " , cstmt.getFloat(2));
32 System.out.printf("Std. Dev. Value: $%,.4f%n " , cstmt.getFloat(3));
33
34 } catch (SQLException e) {
35 logger.warn(e.getMessage(), e);
36 }
37 }
38 }
Outline
com.oracle.ordersstatdata
Java_PLSQL_OrdersStatData
Java_PLSQL_OrdersStatData()
main(String[]) : void
Problems Javadoc Declaration Console
<terminated> Java_PLSQL_OrdersStatData [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Jul 19, 2021, 11:14:32 PM – 11:14:32 PM)
Mean Value: $71,815.2813
Median Value: $14,487.5000
Std. Dev. Value: $114,798.2734


eclipse-workspace - Java_Hospital_DB_Diagnoses/src/com/oracle/hospital_db_diagnoses/Java_Hospital_DB_Diagnoses.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
Project Explorer
Java_Hospital_DB_Add_Foreign_Keys
Java_Hospital_DB_Diagnoses
src
com.oracle.hospital_db_diagnoses
Java_Hospital_DB_Diagnoses.java
Java_Hospital_DB_Diagnoses
main(String[]) : void
JRE System Library [JavaSE-15]
Referenced Libraries
Java_Hospital_DB_Diagnoses_Data
Java_Hospital_DB_Doctors
Java_Hospital_DB_Doctors_Data
Java_Hospital_DB_Hospitals
Java_Hospital_DB_Hospitals_Data
Java_Hospital_DB_Invoices
Java_Hospital_DB_Invoices_Data
Java_Hospital_DB_Patients
Java_Hospital_DB_Patients_Data
Java_Hospital_DB_Products
Java_Hospital_DB_Products_Data
Java_Hospital_DB_Select_Data
Java_Hospital_DB_Transactions
Java_Hospital_DB_Transactions_Data
Java_Hospital_DB_Update_Varchar2
Java_PLSQL_Net_30
Java_PLSQL_Order
Java_PLSQL_OrdersStatData
Java_Hospital_DB_H...
Java_Hospital_DB_U...
Java_Hospital_DB_S...
*Java_Hospital_DB_...
*Java_Hospital_DB_...
Java_Hospital_DB_D...
*Java_Hospital_DB_...
1 package com.oracle.hospital_db_diagnoses;
2 import java.sql.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.Statement;
6 import org.slf4j.Logger;
7 import org.slf4j.LoggerFactory;
8
9 public class Java_Hospital_DB_Diagnoses {
10
11 public static void main(String[] args) throws SQLException {
12
13 String query_1 = "CREATE TABLE diagnoses ("
14 + "diag_id int PRIMARY KEY NOT NULL,"
15 + "diag_desc varchar2(50),"
16 + "doc_id int,"
17 + "hosp_id int)";
18
19 Logger logger = LoggerFactory.getLogger(Java_Hospital_DB_Diagnoses.class);
20
21 try (Connection conn = DriverManager.getConnection("jdbc:oracle:thin:username/password@//localhost:1521/pdb");
22 Statement stmt = conn.createStatement()) {
23 stmt.executeUpdate(query_1);
24
25 } catch (SQLException e) {
26 logger.warn(e.getMessage(), e);
27 }
28 System.out.println("Connected to Hospital_DB database successfully.");
29 System.out.println("Diagnoses table created.");
30 }
31 }
Outline
com.oracle.hospital_db_diagnoses
Java_Hospital_DB_Diagnoses
main(String[]) : void
Problems Javadoc Declaration Console
<terminated> Java_Hospital_DB_Update_Varchar2 [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Jul 22, 2021, 9:03:32 PM – 9:03:34 PM)
Connected to Hospital_DB database successfully.
Diagnoses table created.




```java
package com.oracle.hospital_db_hospitals_data;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.sql.PreparedStatement;

public class Java_Hospital_DB_Hospitals_Data {

    public static void main(String[] args) throws SQLException {

        Connection conn = null;
        PreparedStatement pstmt = null;

        try {

            Class.forName("oracle.jdbc.driver.OracleDriver");
            conn = DriverManager.getConnection("jdbc:oracle:thin:username/password@//localhost:1521/pdb", "username", "password");
            System.out.println("Connected to Hospital_DB database successfully.");

            String sql = "INSERT INTO hospitals ("
                    + "hosp_id,"
                    + "hosp_name,"
                    + "hosp_s_num,"
                    + "hosp_street,"
                    + "hosp_city,"
                    + "hosp_state,"
                    + "hosp_zip,"
                    + "hosp_phone)"
                    + "VALUES (?,?,?,?,?,?,?,?)";

            pstmt = conn.prepareStatement(sql);

            pstmt.setInt(1, 10001238);
            pstmt.setString(2, "Regional Medical Center");
            pstmt.setInt(3, 225);
            pstmt.setString(4, "North Jackson Avenue");
            pstmt.setString(5, "San Jose");
            pstmt.setString(6, "CA");
            pstmt.setInt(7, 95116);
            pstmt.setLong(8, 4082595000L);
            int result = pstmt.executeUpdate();
            if (result == 0) {
                System.out.println("Hospitals data was not updated.");
            } else {
                System.out.println("Hospitals data was updated.");
            }

            } catch (ClassNotFoundException cnfe) {
                cnfe.printStackTrace();
            } catch (SQLException sqle) {
                sqle.printStackTrace();
            } catch (Exception ex) {
                ex.printStackTrace();

            } finally {
                try {
                    if(pstmt != null) {
                        pstmt.close();
                    }
                } catch (SQLException sqle) {
                    sqle.printStackTrace();
                }
                try {
                    if (conn != null) {
                        conn.close();
                    }
                } catch (SQLException sqle) {
                    sqle.printStackTrace();
                }
            }
    }
}
```


eclipse-workspace - Java_Hospital_DB_Update_Varchar2/src/com/oracle/hospital_db_update_varchar2/Java_Hospital_DB_Update_Varchar2.java - Eclipse IDE
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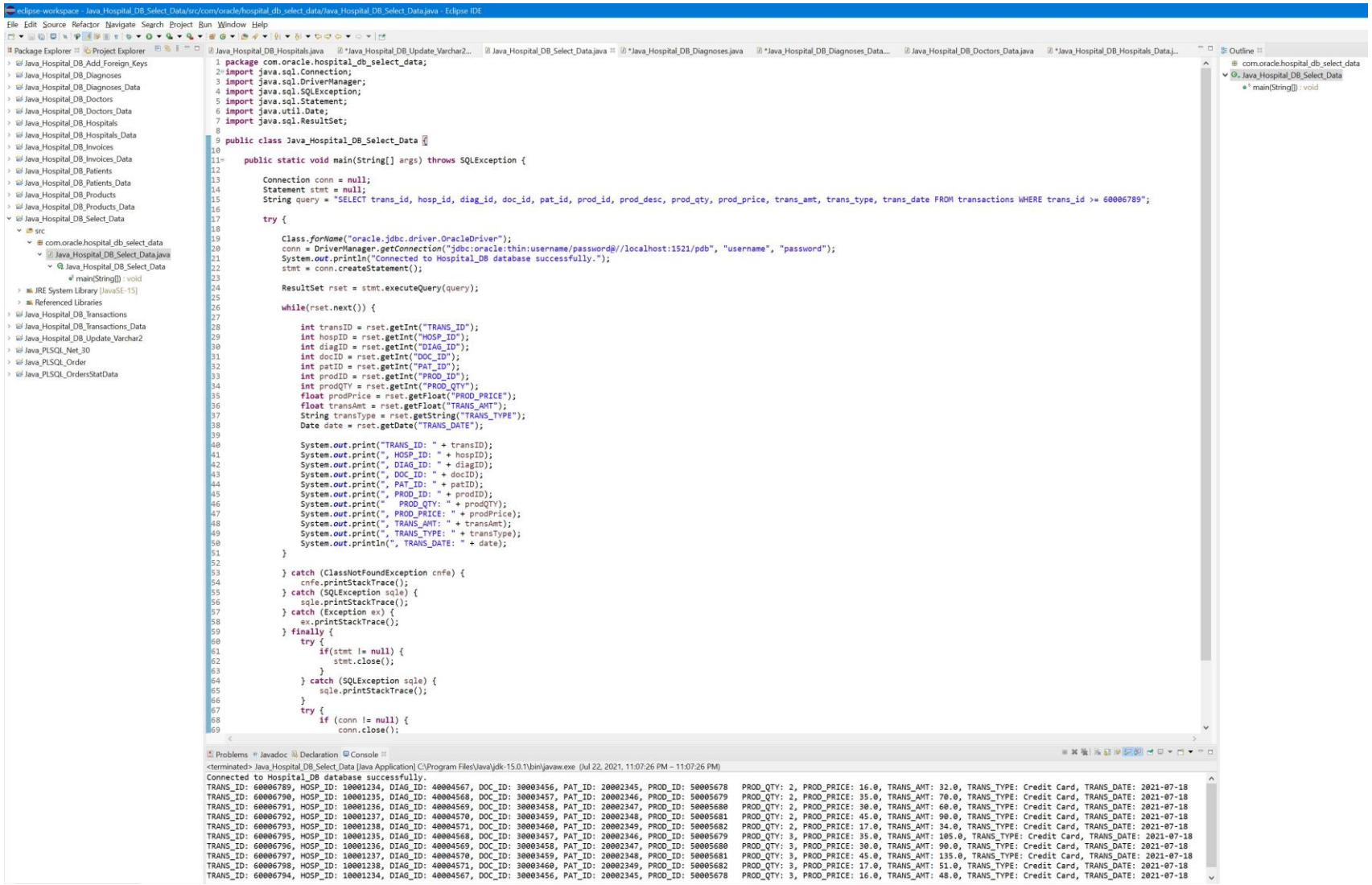
Java_Hospital_DB_Diagnoses_Data
Java_Hospital_DB_Doctors
Java_Hospital_DB_Doctors_Data
Java_Hospital_DB_Hospitals
Java_Hospital_DB_Hospitals_Data
Java_Hospital_DB_Invoices
Java_Hospital_DB_Invoices_Data
Java_Hospital_DB_Patients
Java_Hospital_DB_Patients_Data
Java_Hospital_DB_Products
Java_Hospital_DB_Products_Data
Java_Hospital_DB_Select_Data
Java_Hospital_DB_Transactions
Java_Hospital_DB_Transactions_Data
Java_Hospital_DB_Update_Varchar2
src
com.oracle.hospital_db_update_varchar2
Java_Hospital_DB_Update_Varchar2.java
Java_Hospital_DB_Update_Varchar2
main(String[]) : void
JRE System Library [JavaSE-15]
Referenced Libraries
Java_PLSQL_Net_30
Java_PLSQL_Order
Java_PLSQL_OrdersStatData
Java_Hospital_DB_H...
*Java_Hospital_DB_...
Java_Hospital_DB_S...
*Java_Hospital_DB_...
*Java_Hospital_DB_...
Java_Hospital_DB_D...
*Java_Hospital_DB_...
1 package com.oracle.hospital_db_update_varchar2;
2 import java.sql.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.Statement;
6
7 public class Java_Hospital_DB_Update_Varchar2 {
8
9 public static void main(String[] args) {
10
11 Connection conn = null;
12 Statement stmt = null;
13
14 String query = "ALTER TABLE transactions MODIFY prod_desc varchar2(13)";
15
16 try {
17
18 Class.forName("oracle.jdbc.driver.OracleDriver");
19 conn = DriverManager.getConnection("jdbc:oracle:thin:username/password@//localhost:1521/pdb", "username", "password");
20 System.out.println("Connected to Hospital_DB database successfully.");
21 stmt = conn.createStatement();
22
23 stmt.executeUpdate(query);
24
25 System.out.println("PROD_DESC column altered.");
26
27 } catch (ClassNotFoundException cnfe) {
28 cnfe.printStackTrace();
29 } catch (SQLException sqle) {
30 sqle.printStackTrace();
31 } catch (Exception ex) {
32 ex.printStackTrace();
33
34 } finally {
35 try {
36 if(stmt != null) {
37 stmt.close();
38 }
39 } catch (SQLException sqle) {
40 sqle.printStackTrace();
41 }
42 try {
43 if (conn != null) {
44 conn.close();
45 }
46 } catch (SQLException sqle) {
47 sqle.printStackTrace();
48 }
49 }
50 }
51 }
Outline
com.oracle.hospital_db_update_varchar2
Java_Hospital_DB_Update_Varchar2
main(String[]) : void
Problems Javadoc Declaration Console
<terminated> Java_Hospital_DB_Update_Varchar2 [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Jul 22, 2021, 9:03:32 PM – 9:03:34 PM)
Connected to Hospital_DB successfully.
PROD_DESC column altered.


eclipse-workspace - Java_Hospital_DB_Select_Data/src/com/oracle/hospital_db_select_data/Java_Hospital_DB_Select_Data.java - Eclipse IDE
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Java_Hospital_DB_Diagnoses
Java_Hospital_DB_Diagnoses_Data
Java_Hospital_DB_Doctors
Java_Hospital_DB_Doctors_Data
Java_Hospital_DB_Hospitals
Java_Hospital_DB_Hospitals_Data
Java_Hospital_DB_Invoices
Java_Hospital_DB_Invoices_Data
Java_Hospital_DB_Patients
Java_Hospital_DB_Patients_Data
Java_Hospital_DB_Products
Java_Hospital_DB_Products_Data
Java_Hospital_DB_Select_Data
src
com.oracle.hospital_db_select_data
Java_Hospital_DB_Select_Data.java
Java_Hospital_DB_Select_Data
main(String[]) : void
JRE System Library [JavaSE-15]
Referenced Libraries
Java_Hospital_DB_Transactions
Java_Hospital_DB_Transactions_Data
Java_Hospital_DB_Update_Varchar2
Java_PLSQL_Net_30
Java_PLSQL_Order
Java_PLSQL_OrdersStatData
Java_Hospital_DB_Hospitals.java
*Java_Hospital_DB_Update_Varchar2...
Java_Hospital_DB_Select_Data.java
*Java_Hospital_DB_Diagnoses.java
*Java_Hospital_DB_Diagnoses_Data....
Java_Hospital_DB_Doctors_Data.java
*Java_Hospital_DB_Hospitals_Data.j...
Outline
com.oracle.hospital_db_select_data
Java_Hospital_DB_Select_Data
main(String[]) : void
Problems Javadoc Declaration Console
<terminated> Java_Hospital_DB_Select_Data [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Jul 22, 2021, 11:07:26 PM – 11:07:26 PM)
Connected to Hospital_DB database successfully.
TRANS_ID: 60006789, HOSP_ID: 10001234, DIAG_ID: 40004567, DOC_ID: 30003456, PAT_ID: 20002345, PROD_ID: 50005678 PROD_QTY: 2, PROD_PRICE: 16.0, TRANS_AMT: 32.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
TRANS_ID: 60006790, HOSP_ID: 10001235, DIAG_ID: 40004568, DOC_ID: 30003457, PAT_ID: 20002346, PROD_ID: 50005679 PROD_QTY: 2, PROD_PRICE: 35.0, TRANS_AMT: 70.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
TRANS_ID: 60006791, HOSP_ID: 10001236, DIAG_ID: 40004569, DOC_ID: 30003458, PAT_ID: 20002347, PROD_ID: 50005680 PROD_QTY: 2, PROD_PRICE: 30.0, TRANS_AMT: 60.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
TRANS_ID: 60006792, HOSP_ID: 10001237, DIAG_ID: 40004570, DOC_ID: 30003459, PAT_ID: 20002348, PROD_ID: 50005681 PROD_QTY: 2, PROD_PRICE: 45.0, TRANS_AMT: 90.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
TRANS_ID: 60006793, HOSP_ID: 10001238, DIAG_ID: 40004571, DOC_ID: 30003460, PAT_ID: 20002349, PROD_ID: 50005682 PROD_QTY: 2, PROD_PRICE: 17.0, TRANS_AMT: 34.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
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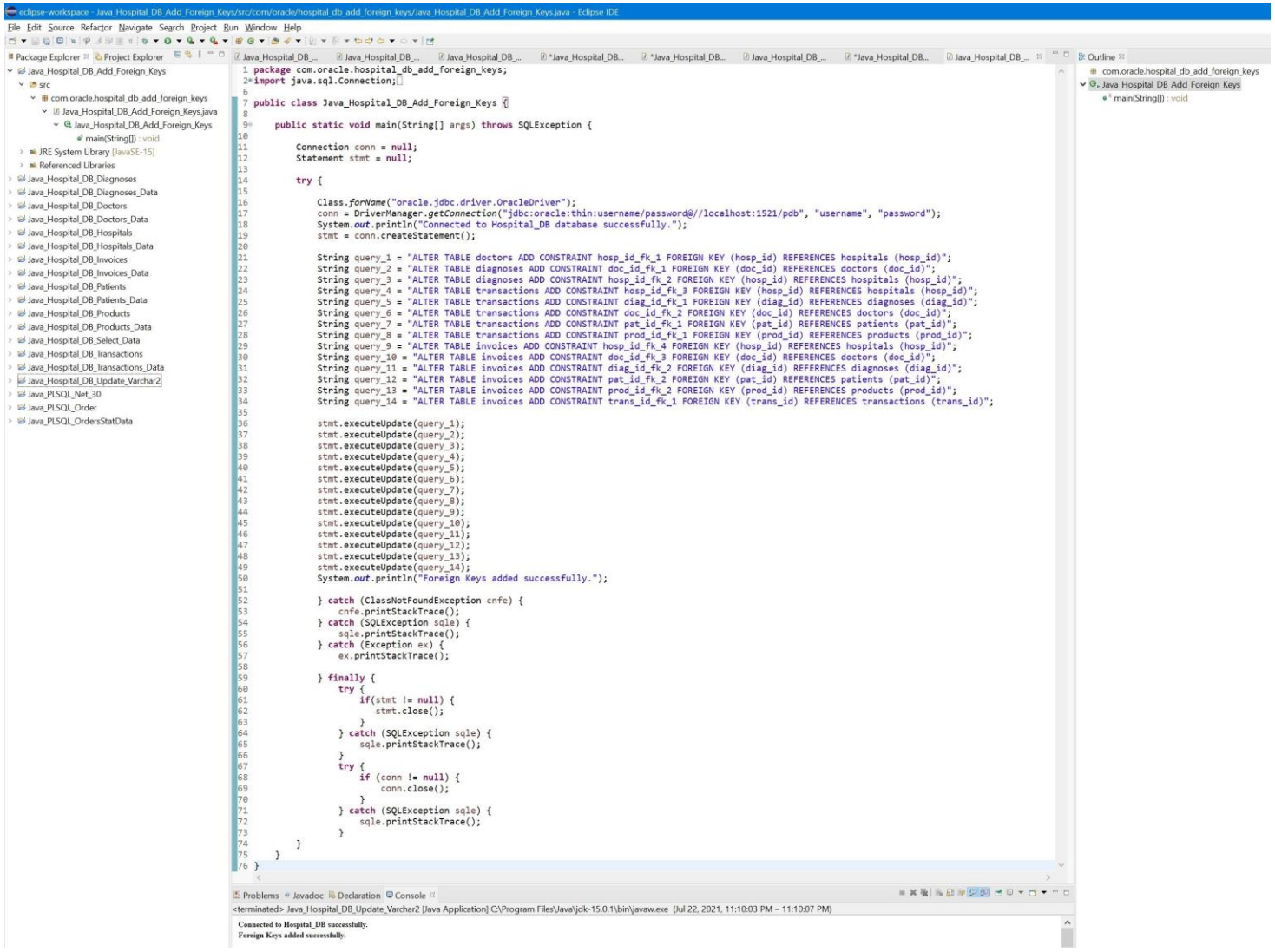
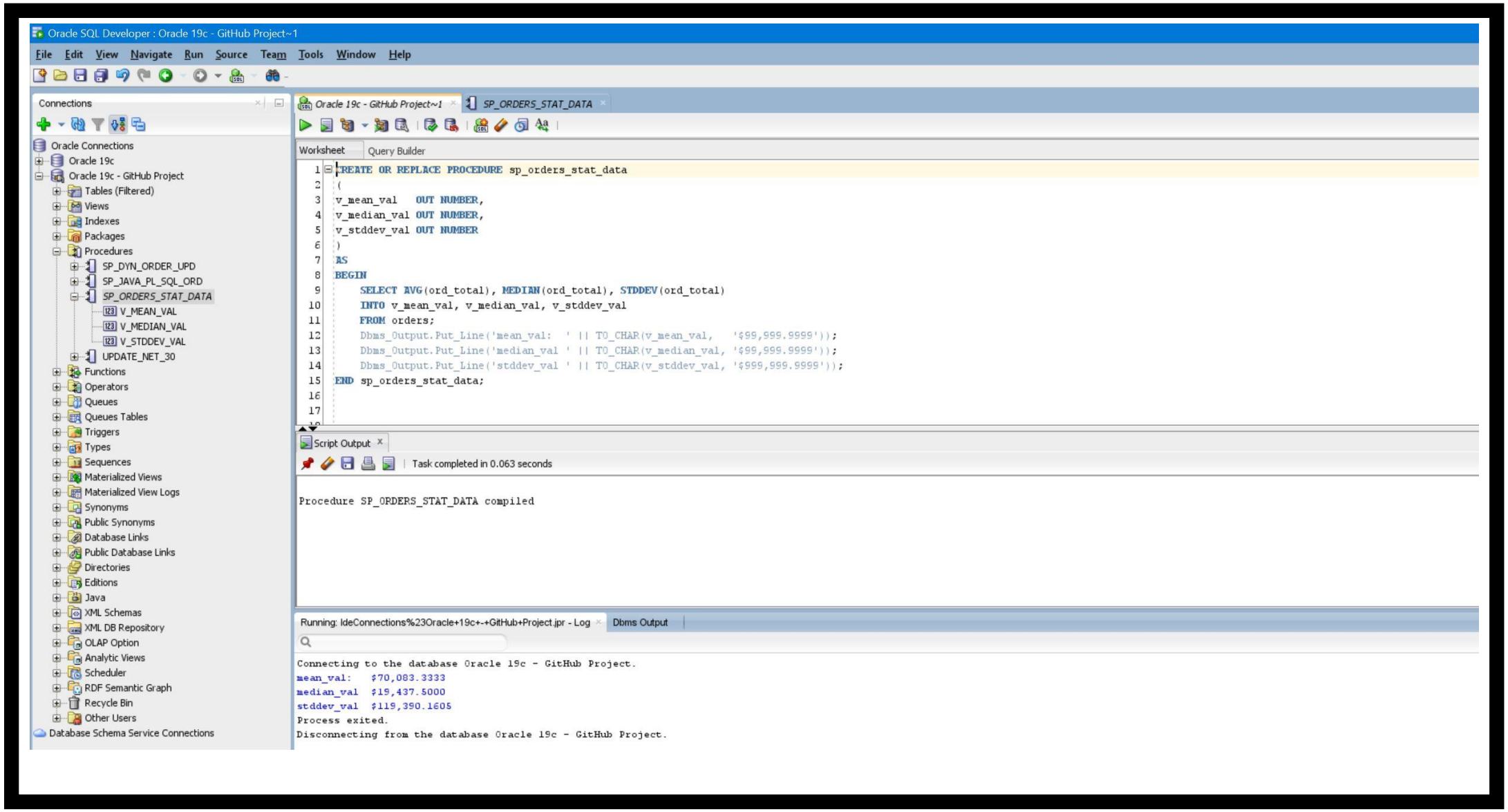
TRANS_ID: 60006796, HOSP_ID: 10001236, DIAG_ID: 40004569, DOC_ID: 30003458, PAT_ID: 20002347, PROD_ID: 50005680 PROD_QTY: 3, PROD_PRICE: 30.0, TRANS_AMT: 90.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
TRANS_ID: 60006797, HOSP_ID: 10001237, DIAG_ID: 40004570, DOC_ID: 30003459, PAT_ID: 20002348, PROD_ID: 50005681 PROD_QTY: 3, PROD_PRICE: 45.0, TRANS_AMT: 135.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
TRANS_ID: 60006798, HOSP_ID: 10001238, DIAG_ID: 40004571, DOC_ID: 30003460, PAT_ID: 20002349, PROD_ID: 50005682 PROD_QTY: 3, PROD_PRICE: 17.0, TRANS_AMT: 51.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18
TRANS_ID: 60006794, HOSP_ID: 10001234, DIAG_ID: 40004567, DOC_ID: 30003456, PAT_ID: 20002345, PROD_ID: 50005678 PROD_QTY: 3, PROD_PRICE: 16.0, TRANS_AMT: 48.0, TRANS_TYPE: Credit Card, TRANS_DATE: 2021-07-18




```java
package com.oracle.hospital_db_add_foreign_keys;
import java.sql.Connection;

public class Java_Hospital_DB_Add_Foreign_Keys {

    public static void main(String[] args) throws SQLException {

        Connection conn = null;
        Statement stmt = null;

        try {

            Class.forName("oracle.jdbc.driver.OracleDriver");
            conn = DriverManager.getConnection("jdbc:oracle:thin:username/password@//localhost:1521/pdb", "username", "password");
            System.out.println("Connected to Hospital_DB database successfully.");
            stmt = conn.createStatement();

            String query_1 = "ALTER TABLE doctors ADD CONSTRAINT hosp_id_fk_1 FOREIGN KEY (hosp_id) REFERENCES hospitals (hosp_id)";
            String query_2 = "ALTER TABLE diagnoses ADD CONSTRAINT doc_id_fk_1 FOREIGN KEY (doc_id) REFERENCES doctors (doc_id)";
            String query_3 = "ALTER TABLE diagnoses ADD CONSTRAINT hosp_id_fk_2 FOREIGN KEY (hosp_id) REFERENCES hospitals (hosp_id)";
            String query_4 = "ALTER TABLE transactions ADD CONSTRAINT hosp_id_fk_3 FOREIGN KEY (hosp_id) REFERENCES hospitals (hosp_id)";
            String query_5 = "ALTER TABLE transactions ADD CONSTRAINT diag_id_fk_1 FOREIGN KEY (diag_id) REFERENCES diagnoses (diag_id)";
            String query_6 = "ALTER TABLE transactions ADD CONSTRAINT doc_id_fk_2 FOREIGN KEY (doc_id) REFERENCES doctors (doc_id)";
            String query_7 = "ALTER TABLE transactions ADD CONSTRAINT pat_id_fk_1 FOREIGN KEY (pat_id) REFERENCES patients (pat_id)";
            String query_8 = "ALTER TABLE transactions ADD CONSTRAINT prod_id_fk_1 FOREIGN KEY (prod_id) REFERENCES products (prod_id)";
            String query_9 = "ALTER TABLE invoices ADD CONSTRAINT hosp_id_fk_4 FOREIGN KEY (hosp_id) REFERENCES hospitals (hosp_id)";
            String query_10 = "ALTER TABLE invoices ADD CONSTRAINT doc_id_fk_3 FOREIGN KEY (doc_id) REFERENCES doctors (doc_id)";
            String query_11 = "ALTER TABLE invoices ADD CONSTRAINT diag_id_fk_2 FOREIGN KEY (diag_id) REFERENCES diagnoses (diag_id)";
            String query_12 = "ALTER TABLE invoices ADD CONSTRAINT pat_id_fk_2 FOREIGN KEY (pat_id) REFERENCES patients (pat_id)";
            String query_13 = "ALTER TABLE invoices ADD CONSTRAINT prod_id_fk_2 FOREIGN KEY (prod_id) REFERENCES products (prod_id)";
            String query_14 = "ALTER TABLE invoices ADD CONSTRAINT trans_id_fk_1 FOREIGN KEY (trans_id) REFERENCES transactions (trans_id)";

            stmt.executeUpdate(query_1);
            stmt.executeUpdate(query_2);
            stmt.executeUpdate(query_3);
            stmt.executeUpdate(query_4);
            stmt.executeUpdate(query_5);
            stmt.executeUpdate(query_6);
            stmt.executeUpdate(query_7);
            stmt.executeUpdate(query_8);
            stmt.executeUpdate(query_9);
            stmt.executeUpdate(query_10);
            stmt.executeUpdate(query_11);
            stmt.executeUpdate(query_12);
            stmt.executeUpdate(query_13);
            stmt.executeUpdate(query_14);
            System.out.println("Foreign Keys added successfully.");

            } catch (ClassNotFoundException cnfe) {
                cnfe.printStackTrace();
            } catch (SQLException sqle) {
                sqle.printStackTrace();
            } catch (Exception ex) {
                ex.printStackTrace();

            } finally {
                try {
                    if(stmt != null) {
                        stmt.close();
                    }
                } catch (SQLException sqle) {
                    sqle.printStackTrace();
                }
                try {
                    if (conn != null) {
                        conn.close();
                    }
                } catch (SQLException sqle) {
                    sqle.printStackTrace();
                }
        }
    }
}
```


Oracle SQL Developer : Oracle 19c - GitHub Project~1
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Oracle Connections
Oracle 19c
Oracle 19c - GitHub Project
Tables (Filtered)
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SP_JAVA_PL_SQL_ORD
SP_ORDERS_STAT_DATA
V_MEAN_VAL
V_MEDIAN_VAL
V_STDDEV_VAL
UPDATE_NET_30
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Queues Tables
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Types
Sequences
Materialized Views
Materialized View Logs
Synonyms
Public Synonyms
Database Links
Public Database Links
Directories
Editions
Java
XML Schemas
XML DB Repository
OLAP Option
Analytic Views
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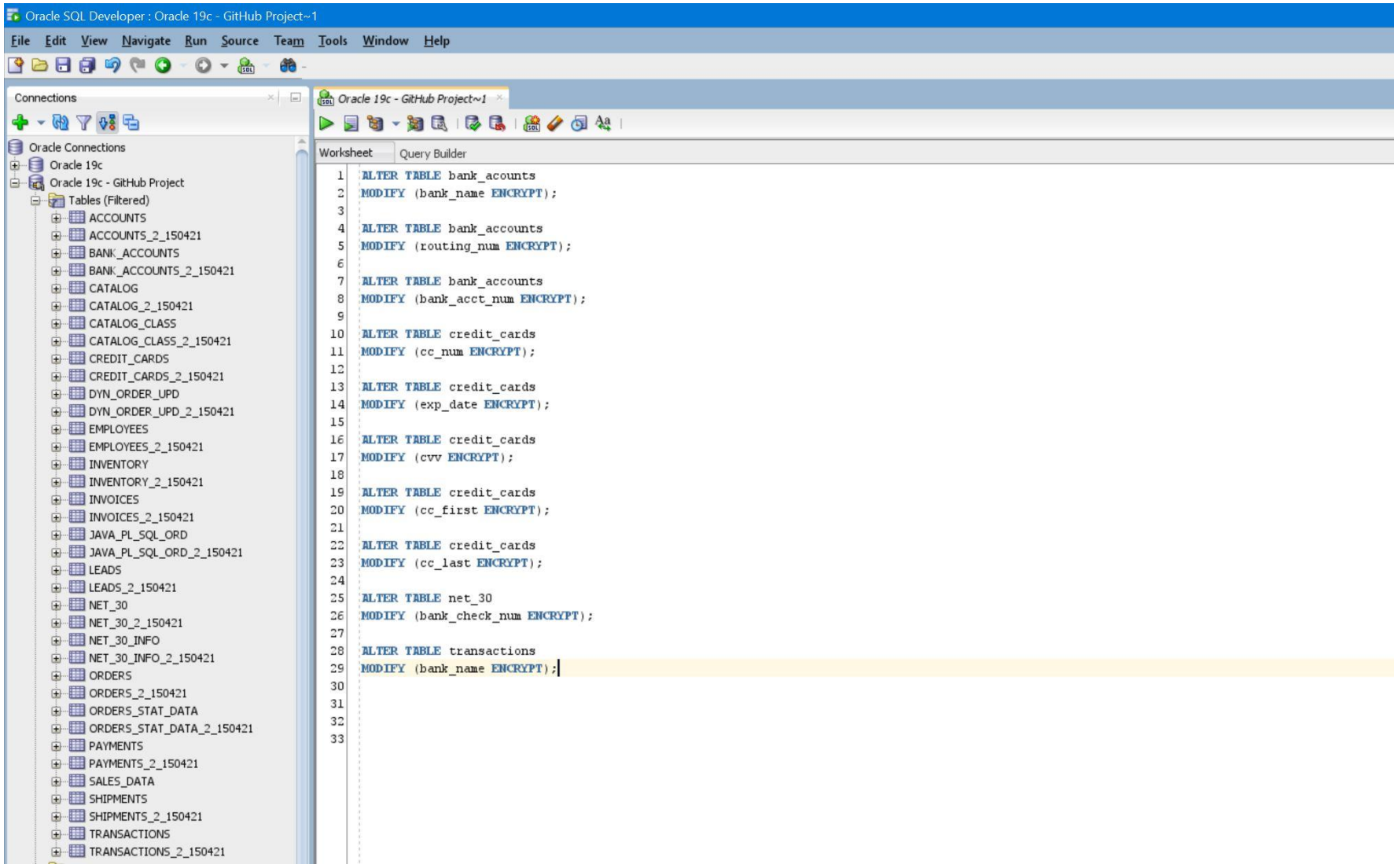
Other Users
Database Schema Service Connections
Oracle 19c - GitHub Project~1
SP_ORDERS_STAT_DATA
Worksheet
Query Builder
1 CREATE OR REPLACE PROCEDURE sp_orders_stat_data
2 (
3 v_mean_val OUT NUMBER,
4 v_median_val OUT NUMBER,
5 v_stddev_val OUT NUMBER
6)
7 AS
8 BEGIN
9 SELECT AVG(ord_total), MEDIAN(ord_total), STDDEV(ord_total)
10 INTO v_mean_val, v_median_val, v_stddev_val
11 FROM orders;
12 Dbms_Output.Put_Line('mean_val: ' || TO_CHAR(v_mean_val, '$99,999.9999'));
13 Dbms_Output.Put_Line('median_val ' || TO_CHAR(v_median_val, '$99,999.9999'));
14 Dbms_Output.Put_Line('stddev_val ' || TO_CHAR(v_stddev_val, '$999,999.9999'));
15 END sp_orders_stat_data;
16
17
Script Output
Task completed in 0.063 seconds
Procedure SP_ORDERS_STAT_DATA compiled
Running: IdeConnections%23Oracle+19c+-+GitHub+Project.jpr - Log
Dbms Output
Connecting to the database Oracle 19c - GitHub Project.
mean_val: $70,083.3333
median_val $19,437.5000
stddev_val $119,390.1605
Process exited.
Disconnecting from the database Oracle 19c - GitHub Project.


Oracle SQL Developer : Oracle 19c - GitHub Project~1
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Oracle Connections
Oracle 19c
Oracle 19c - GitHub Project
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BANK_ACCOUNTS_2_150421
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CATALOG_2_150421
CATALOG_CLASS
CATALOG_CLASS_2_150421
CREDIT_CARDS
CREDIT_CARDS_2_150421
DYN_ORDER_UPD
DYN_ORDER_UPD_2_150421
EMPLOYEES
EMPLOYEES_2_150421
INVENTORY
INVENTORY_2_150421
INVOICES
INVOICES_2_150421
JAVA_PL_SQL_ORD
JAVA_PL_SQL_ORD_2_150421
LEADS
LEADS_2_150421
NET_30
NET_30_2_150421
NET_30_INFO
NET_30_INFO_2_150421
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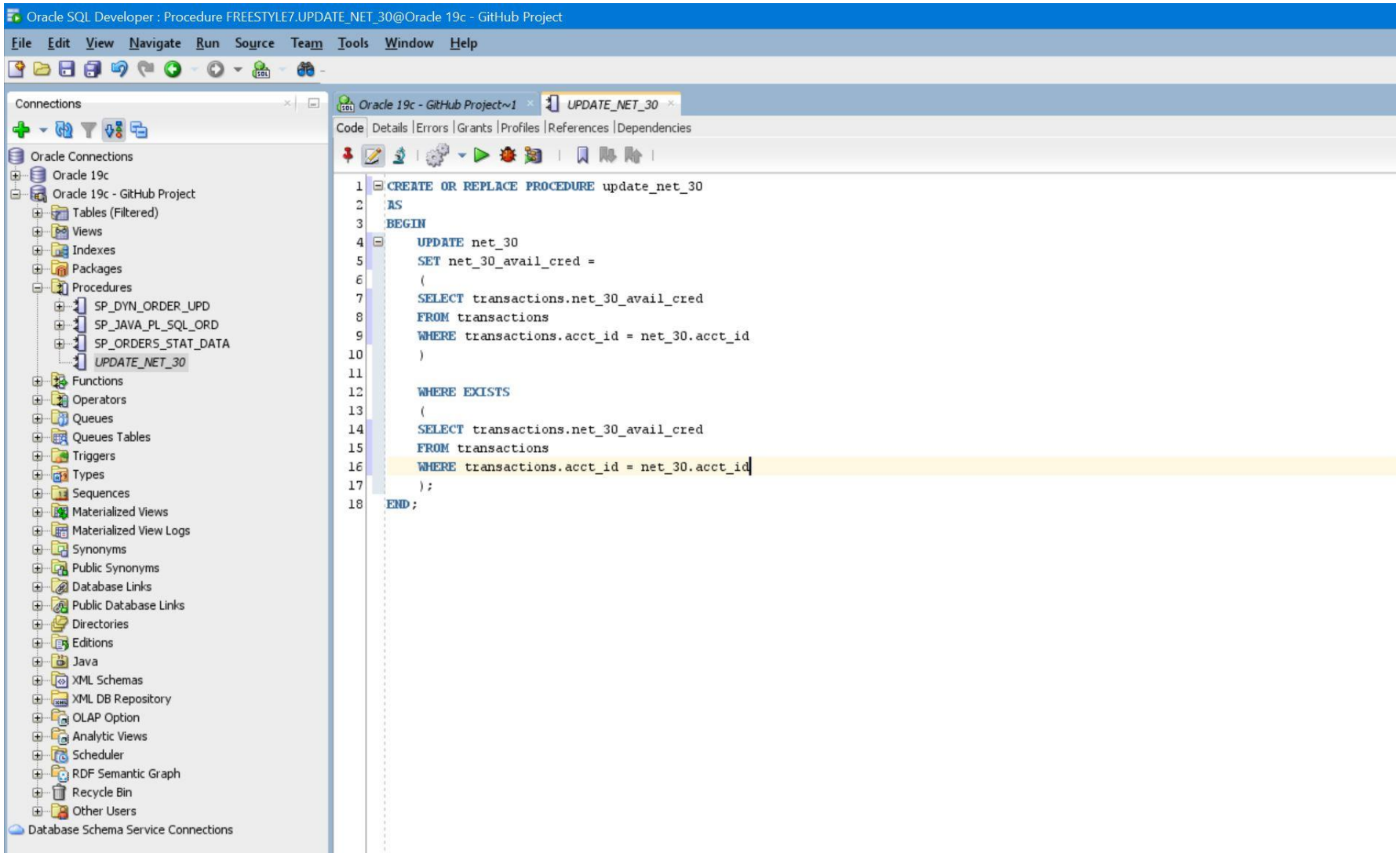
ORDERS_2_150421
ORDERS_STAT_DATA
ORDERS_STAT_DATA_2_150421
PAYMENTS
PAYMENTS_2_150421
SALES_DATA
SHIPMENTS
SHIPMENTS_2_150421
TRANSACTIONS
TRANSACTIONS_2_150421
Oracle 19c - GitHub Project~1
Worksheet
Query Builder
1 ALTER TABLE bank_acounts
2 MODIFY (bank_name ENCRYPT);
3
4 ALTER TABLE bank_accounts
5 MODIFY (routing_num ENCRYPT);
6
7 ALTER TABLE bank_accounts
8 MODIFY (bank_acct_num ENCRYPT);
9
10 ALTER TABLE credit_cards
11 MODIFY (cc_num ENCRYPT);
12
13 ALTER TABLE credit_cards
14 MODIFY (exp_date ENCRYPT);
15
16 ALTER TABLE credit_cards
17 MODIFY (cvv ENCRYPT);
18
19 ALTER TABLE credit_cards
20 MODIFY (cc_first ENCRYPT);
21
22 ALTER TABLE credit_cards
23 MODIFY (cc_last ENCRYPT);
24
25 ALTER TABLE net_30
26 MODIFY (bank_check_num ENCRYPT);
27
28 ALTER TABLE transactions
29 MODIFY (bank_name ENCRYPT);
30
31
32
33

PL/SQL AES 192 Encryption

SQL Plus

```
SQL> SELECT * FROM dba_encrypted_columns;

OWNER       TABLE_NAME     COLUMN_NAME     ENCRYPTION_ALG    SAL INTEGRITY_ALG
----------- -------------- --------------- ----------------- --- --------------
FREESTYLE7  BANK_ACCOUNTS  BANK_NAME       AES 192 bits key  YES SHA-1
FREESTYLE7  BANK_ACCOUNTS  ROUTING_NUM     AES 192 bits key  YES SHA-1
FREESTYLE7  BANK_ACCOUNTS  BANK_ACCT_NUM   AES 192 bits key  YES SHA-1
FREESTYLE7  CREDIT_CARDS   CC_NUM          AES 192 bits key  YES SHA-1
FREESTYLE7  CREDIT_CARDS   EXP_DATE        AES 192 bits key  YES SHA-1
FREESTYLE7  CREDIT_CARDS   CVV             AES 192 bits key  YES SHA-1
FREESTYLE7  CREDIT_CARDS   CC_FIRST        AES 192 bits key  YES SHA-1
FREESTYLE7  CREDIT_CARDS   CC_LAST         AES 192 bits key  YES SHA-1
FREESTYLE7  NET_30         BANK_CHECK_NUM  AES 192 bits key  YES SHA-1
FREESTYLE7  TRANSACTIONS   BANK_NAME       AES 192 bits key  YES SHA-1
```


Oracle SQL Developer : Procedure FREESTYLE7.UPDATE_NET_30@Oracle 19c - GitHub Project
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SP_JAVA_PL_SQL_ORD
SP_ORDERS_STAT_DATA
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Triggers
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Sequences
Materialized Views
Materialized View Logs
Synonyms
Public Synonyms
Database Links
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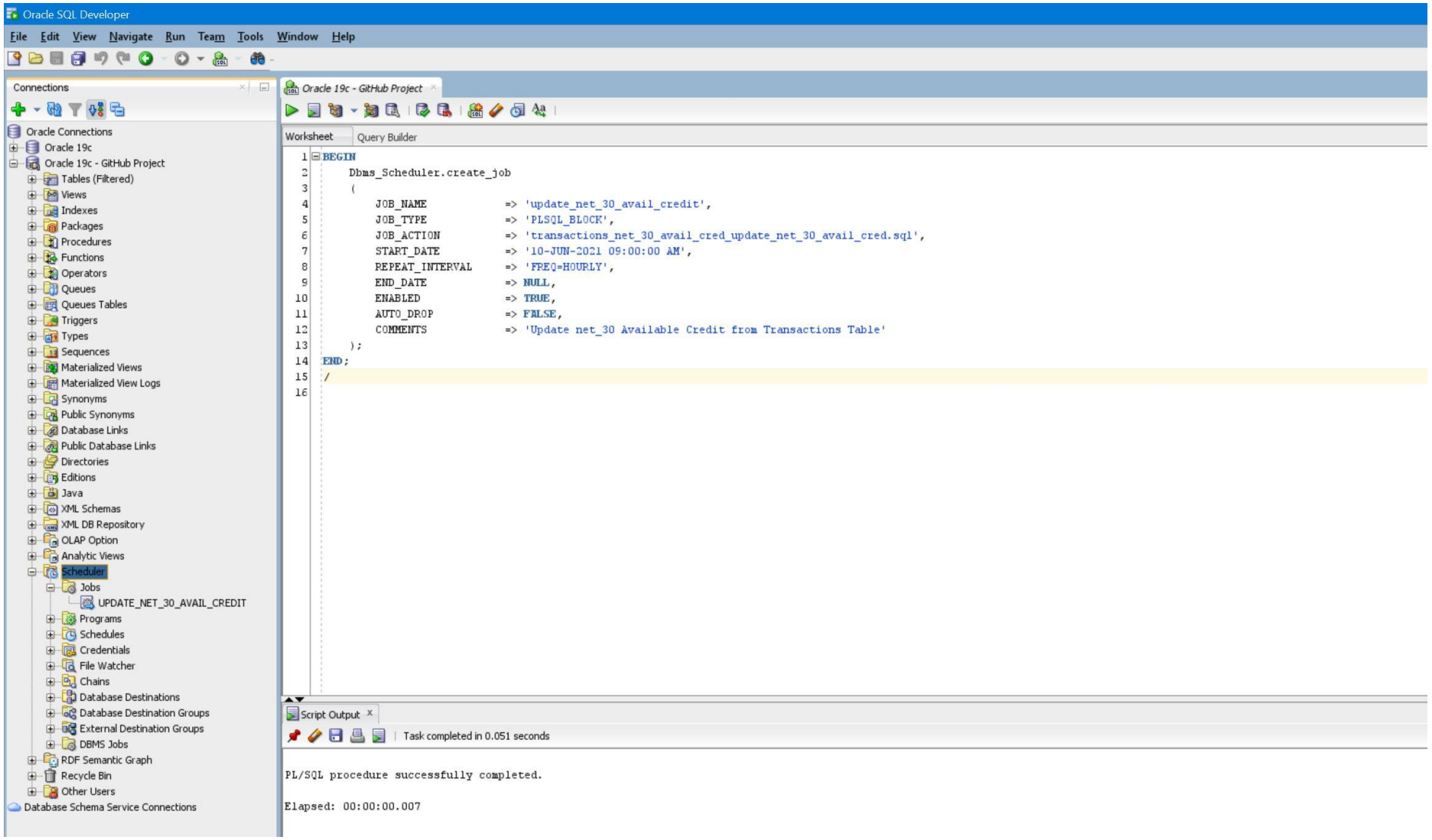
Directories
Editions
Java
XML Schemas
XML DB Repository
OLAP Option
Analytic Views
Scheduler
RDF Semantic Graph
Recycle Bin
Other Users
Database Schema Service Connections
Oracle 19c - GitHub Project~1
UPDATE_NET_30
Code Details Errors Grants Profiles References Dependencies
1 CREATE OR REPLACE PROCEDURE update_net_30
2 AS
3 BEGIN
4 UPDATE net_30
5 SET net_30_avail_cred =
6 (
7 SELECT transactions.net_30_avail_cred
8 FROM transactions
9 WHERE transactions.acct_id = net_30.acct_id
10)
11
12 WHERE EXISTS
13 (
14 SELECT transactions.net_30_avail_cred
15 FROM transactions
16 WHERE transactions.acct_id = net_30.acct_id
17);
18 END;


Oracle SQL Developer
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Materialized View Logs
Synonyms
Public Synonyms
Database Links
Public Database Links
Directories
Editions
Java
XML Schemas
XML DB Repository
OLAP Option
Analytic Views
Scheduler
Jobs
UPDATE_NET_30_AVAIL_CREDIT
Programs
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Credentials
File Watcher
Chains
Database Destinations
Database Destination Groups
External Destination Groups
DBMS Jobs
RDF Semantic Graph
Recycle Bin
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Oracle 19c - GitHub Project
Worksheet
Query Builder
BEGIN
Dbms_Scheduler.create_job
(
JOB_NAME => 'update_net_30_avail_credit',
JOB_TYPE => 'PLSQL_BLOCK',
JOB_ACTION => 'transactions_net_30_avail_cred_update_net_30_avail_cred.sql',
START_DATE => '10-JUN-2021 09:00:00 AM',
REPEAT_INTERVAL => 'FREQ=HOURLY',
END_DATE => NULL,
ENABLED => TRUE,
AUTO_DROP => FALSE,
COMMENTS => 'Update net_30 Available Credit from Transactions Table'
);
END;
/
Script Output
Task completed in 0.051 seconds
PL/SQL procedure successfully completed.
Elapsed: 00:00:00.007

SQL Plus

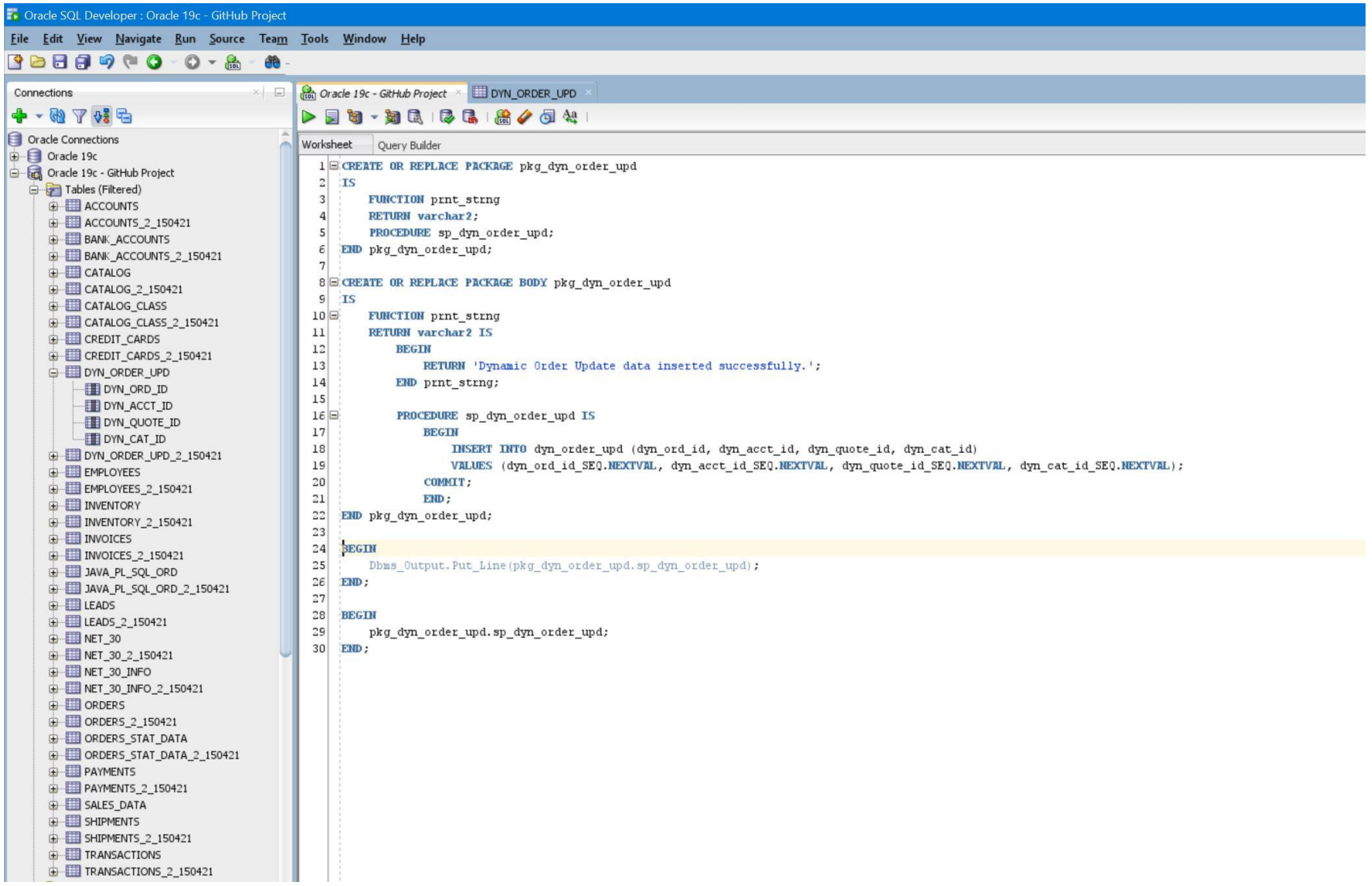
```
SQL> SELECT TO_CHAR(log_id, '9999') log_id,
  2  TO_CHAR(log_date, 'YYYY-MM-DD HH12:MM:SS') timestamp, owner, job_name, status
  3  FROM all_scheduler_job_run_details
  4  WHERE owner = 'FREESTYLE7'
  5  ORDER BY log_date;

LOG_ID  TIMESTAMP           OWNER       JOB_NAME                  STATUS
------- ------------------- ----------- ------------------------- ----------
 2854   2021-06-10 10:06:52 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2856   2021-06-10 10:06:46 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2858   2021-06-10 10:06:01 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2864   2021-06-10 11:06:12 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2874   2021-06-10 11:06:44 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2884   2021-06-11 11:06:22 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2904   2021-06-11 11:06:35 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2912   2021-06-11 12:06:52 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2922   2021-06-11 01:06:52 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
 2930   2021-06-11 02:06:52 FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  SUCCEEDED
```

SQL Plus

```
SQL> SELECT TO_CHAR(start_date, 'YYYY-MM-DD HH12:MM:SS') timestamp, owner, job_name, job_class, state, repeat_interval, job_type
  2  FROM all_scheduler_jobs
  3  WHERE owner = 'FREESTYLE7';

TIMESTAMP           OWNER       JOB_NAME                  JOB_CLASS          STATE      REPEAT_INTERVAL  JOB_TYPE
------------------- ----------- ------------------------- ------------------ ---------- ---------------- ------------
2021-06-10 10:06:52  FREESTYLE7  UPDATE_NET_30_AVAIL_CRED  DEFAULT_JOB_CLASS  SCHEDULED  FREQ=HOURLY      PLSQL_BLOCK
```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DYN_ORD_ID
DYN_ACCT_ID
DYN_QUOTE_ID
DYN_CAT_ID
DYN_ORDER_UPD_2_150421
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ORDERS_STAT_DATA_2_150421
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PAYMENTS_2_150421
SALES_DATA
SHIPMENTS
SHIPMENTS_2_150421
TRANSACTIONS
TRANSACTIONS_2_150421
Oracle 19c - GitHub Project
DYN_ORDER_UPD
Worksheet
Query Builder
1 CREATE OR REPLACE PACKAGE pkg_dyn_order_upd
2 IS
3 FUNCTION prnt_strng
4 RETURN varchar2;
5 PROCEDURE sp_dyn_order_upd;
6 END pkg_dyn_order_upd;
7
8 CREATE OR REPLACE PACKAGE BODY pkg_dyn_order_upd
9 IS
10 FUNCTION prnt_strng
11 RETURN varchar2 IS
12 BEGIN
13 RETURN 'Dynamic Order Update data inserted successfully.';
14 END prnt_strng;
15
16 PROCEDURE sp_dyn_order_upd IS
17 BEGIN
18 INSERT INTO dyn_order_upd (dyn_ord_id, dyn_acct_id, dyn_quote_id, dyn_cat_id)
19 VALUES (dyn_ord_id_SEQ.NEXTVAL, dyn_acct_id_SEQ.NEXTVAL, dyn_quote_id_SEQ.NEXTVAL, dyn_cat_id_SEQ.NEXTVAL);
20 COMMIT;
21 END;
22 END pkg_dyn_order_upd;
23
24 BEGIN
25 Dbms_Output.Put_Line(pkg_dyn_order_upd.sp_dyn_order_upd);
26 END;
27
28 BEGIN
29 pkg_dyn_order_upd.sp_dyn_order_upd;
30 END;

PL/SQL | Package | DYN_ORDER_UPD | Output

SQL Plus

```
SQL> SELECT * FROM dyn_order_upd
  2  ORDER BY dyn_ord_id;

DYN_ORD_ID DYN_ACCT_ID DYN_QUOTE_ID DYN_CAT_ID
---------- ----------- ------------ ----------
  43210001    33330001     44440001   12340001
  43210002    33330002     44440002   12340002
  43210003    33330003     44440003   12340003
  43210004    33330004     44440004   12340004
  43210005    33330005     44440005   12340005
  43210006    33330006     44440006   12340006
```