



PART
IX

Appendix

APPENDIX

A

**Tables Used
in this Book**



This appendix contains the complete listings of all the tables used in the examples throughout this book. They can be keyed in to a start file “as is” to load into a database using SQLPLUS. If these tables are a part of your Oracle database, you can easily work your way through the examples in this book and experiment with the many techniques that are illustrated.

For ease of use, set up a user named **practice**, with a password of **practice**. Give this user CONNECT and RESOURCE authority so that new users can access it to learn Oracle. If you are a new user on an existing Oracle installation, check with your DBA to see if this has already been done. If not, you might request it, or at least request that the tables and start files be available to you through public synonyms. Whatever “damage” is done on the **practice** id can always be repaired simply by reloading the tables from their start files.

Using the Tables in this Book

The tables in this appendix are on the CD that comes bundled with this book, so you can access these tables without retyping. You can use these tables to easily work your way through the examples and experiment with the many techniques that are illustrated in the book.

The activity.sql Start File

```
rem          Name: activity.sql    Type: start file report
rem  Written by: G. Koch
rem
rem  Description: Report on G. B. Talbot sales by product
rem              during second half of 1901.
set headsep !

tttitle 'Sales by Product During 1901!Second Six Months (Jul-Dec) '

btitle 'from G. B. Talbot"s Ledger'

column Item heading 'What Was!Sold'
column Item format a18
column Item truncated

column Person heading 'To Whom Sold' format a18 word_wrapped
column Rate format 90.99
column ActionDate heading 'Date'
column QuantityType heading 'Type' format a8 truncated
```

```

column Quantity heading 'Quan' format 9990
column Ext format 990.99

break on Item skip 2
compute sum of Ext on Item

set linesize 79
set pagesize 50 set
newpage 0

spool activity.lst

select ActionDate, Person, Item, Quantity, QuantityType,
       Rate, Quantity * Rate AS Ext
  from Ledger
 where Action = 'SOLD'                /* last 6 months only */
       and ActionDate BETWEEN
           TO_DATE('01-JUL-1901','DD-MON-YYYY') AND
           TO_DATE('31-DEC-1901','DD-MON-YYYY')
 order by Item, ActionDate;

spool off

```

The math.sql Start File

```

rem          Name: math.sql          Type: start file report
rem  Written by: G. Koch
rem
rem  Description: Illustrates ORACLE math functions. Produces
rem                an output file named MATH.LST
set echo off
set pagesize 32000
set linesize 132
column Plus format 99.999
column Minus format 999.999
column Times format 9999.999999
column Divided format .999999
column VSIZE(Above) heading 'VSIZE| (Above) '
column VSIZE(Below) heading 'VSIZE| (Below) '
column VSIZE(Empty) heading 'VSIZE| (Empty) '
column NVL(Above,11) heading 'NVL| (Above,11) '
column NVL(Below,11) heading 'NVL| (Below,11) '
column NVL(Empty,11) heading 'NVL| (Empty,11) '
column ROUND(Above,2) heading 'ROUND| (Above,2) '

```

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```
column ROUND(Below,2) heading 'ROUND|(Below,2)'  
column TRUNC(Above,2) heading 'TRUNC|(Above,2)'  
column TRUNC(Below,2) heading 'TRUNC|(Below,2)'  
column ROUND(Above,0) heading 'ROUND|(Above,0)'  
column ROUND(Below,0) heading 'ROUND|(Below,0)'  
column TRUNC(Above,0) heading 'TRUNC|(Above,0)'  
column TRUNC(Below,0) heading 'TRUNC|(Below,0)'  
column ROUND(Above,-1) heading 'ROUND|(Above,-1)'  
column ROUND(Below,-1) heading 'ROUND|(Below,-1)'  
column TRUNC(Above,-1) heading 'TRUNC|(Above,-1)'  
column TRUNC(Below,-1) heading 'TRUNC|(Below,-1)'  
set echo on  
set numwidth 7  
set numformat ""  
spool math.lst  
select Name, Above, Below, Empty from MATH;  
  
select Name, Above, Below, Empty,  
       Above + Below "Plus",  
       Above - Below "Minus",  
       Above * Below "Times",  
       Above / Below "Divided"  
from MATH where Name = 'HIGH DECIMAL';  
  
select Name, Above, Below, Empty,  
       Above + Empty "Plus",  
       Above - Empty "Minus",  
       Above * Empty "Times",  
       Above / Empty "Divided"  
from MATH where Name = 'HIGH DECIMAL';  
  
select Name, Above, Below, Empty,  
       ABS(Above),  
       ABS(Below),  
       ABS(Empty)  
from MATH where Name = 'HIGH DECIMAL';  
  
select Name, Above, Below, Empty,  
       VSIZE(Above),  
       VSIZE(Below),  
       VSIZE(Empty)  
  
from MATH;  
  
select Name, Above, Below, Empty,  
       NVL(Above,11),  
       NVL(Below,11),  
       NVL(Empty,11)
```

```
from MATH where Name = 'HIGH DECIMAL';

select Name, Above, Below,
       CEIL(Above),
       CEIL(Below)
from MATH;

select Name, Above, Below,
       FLOOR(Above),
       FLOOR(Below)
from MATH;

select Name, Above, Below,
       MOD(Above,11),
       MOD(Below,11)
from MATH where Name = 'HIGH DECIMAL';

set numformat 9999.999999
select Name, Above, Below,
       POWER(Above,2),
       POWER(Below,2)
from MATH where Name = 'HIGH DECIMAL';

select Name, Above, Below,
       POWER(Above,2.9),
       POWER(Below,2.9)
from MATH;

set numformat ""
select Name, Above, Below,
       SQRT(Above),
       SQRT(Below)
from MATH where Name = 'HIGH DECIMAL';

select Name, Above, Below,
       ROUND(Above,2),
       ROUND(Below,2),
       TRUNC(Above,2),
       TRUNC(Below,2)
from MATH;

select Name, Above, Below,
       ROUND(Above,0),
       ROUND(Below,0),
       TRUNC(Above,0),
       TRUNC(Below,0)
from MATH;
```

```

select Name, Above, Below,
       ROUND(Above,-1),
       ROUND(Below,-1),
       TRUNC(Above,-1),
       TRUNC(Below,-1)
from MATH;

select Name, Above, Below,
       SIGN(Above),
       SIGN(Below)
from MATH where Name = 'HIGH DECIMAL';

spool off

```

The ADDRESS_TY Type

```

create or replace type ADDRESS_TY as object
(Street  VARCHAR2(50),
 City    VARCHAR2(25),
 State   CHAR(2),
 Zip     NUMBER);
/

```

The ANIMAL_TY Type

```

create or replace type ANIMAL_TY as object
(Breed   VARCHAR2(25),
 Name    VARCHAR2(25),
 BirthDate DATE,
 member function AGE (BirthDate IN DATE) return NUMBER,
 PRAGMA RESTRICT_REFERENCES(AGE, WNDS));
/

```

```

create or replace type body ANIMAL_TY as
member function Age (BirthDate DATE) return NUMBER is
begin
    RETURN ROUND(SysDate - BirthDate);
end;
end;
/

```

```

rem For the Nested Table examples:
create type ANIMALS_NT as table of ANIMAL_TY;
/

```

The PERSON_TY Type

rem Requires that the ADDRESS_TY type already exist.

```
create type PERSON_TY as object
(Name      VARCHAR2(25),
 Address   ADDRESS_TY);
/
```

The TOOLS_VA Type

rem Creates a varying array datatype.

```
create or replace type TOOLS_VA as varray(5) of VARCHAR2(25);
/
```

The ADDRESS Table

```
drop table ADDRESS;
create table ADDRESS (
  LastName  VARCHAR2(25),
  FirstName VARCHAR2(25),
  Street    VARCHAR2(50),
  City      VARCHAR2(25),
  State     CHAR(2),
  Zip       NUMBER,
  Phone     VARCHAR2(12),
  Ext       VARCHAR2(5)
);

insert into ADDRESS values ('BAILEY', 'WILLIAM',
  null,null,null,null,'213-293-0223',null);
insert into ADDRESS values ('ADAMS', 'JACK',
  null,null,null,null,'415-453-7530',null);
insert into ADDRESS values ('SEP', 'FELICIA',
  null,null,null,null,'214-522-8383',null);
insert into ADDRESS values ('DE MEDICI', 'LEFTY',
  null,null,null,null,'312-736-1166',null);
insert into ADDRESS values ('DEMIURGE', 'FRANK',
  null,null,null,null,'707-767-8900',null);
insert into ADDRESS values ('CASEY', 'WILLIS',
  null,null,null,null,'312-684-1414',null);
insert into ADDRESS values ('ZACK', 'JACK',
  null,null,null,null,'415-620-6842',null);
```

```
insert into ADDRESS values ('YARROW', 'MARY',
    null,null,null,949414302,'415-787-2178',null);
insert into ADDRESS values ('WERSCHKY', 'ARNY',
    null,null,null,null,'415-235-7387',null);
insert into ADDRESS values ('BRANT', 'GLEN',
    null,null,null,null,'415-526-7512',null);
insert into ADDRESS values ('EDGAR', 'THEODORE',
    null,null,null,null,'415-525-6252',null);
insert into ADDRESS values ('HARDIN', 'HUGGY',
    null,null,null,null,'617-566-0125',null);
insert into ADDRESS values ('HILD', 'PHIL',
    null,null,null,null,'603-934-2242',null);
insert into ADDRESS values ('LOEBEL', 'FRANK',
    null,null,null,null,'202-456-1414',null);
insert into ADDRESS values ('MOORE', 'MARY',
    null,null,null,601262460,'718-857-1638',null);
insert into ADDRESS values ('SZEP', 'FELICIA',
    null,null,null,null,'214-522-8383',null);
insert into ADDRESS values ('ZIMMERMAN', 'FRED',
    null,null,null,null,'503-234-7491',null);
```

The AREAS Table

```
drop table AREAS;
create table AREAS
(Radius      NUMBER(5),
 Area       NUMBER(14,2)
);
```

REMARK No inserts. This table is empty.

The ASOF Table

```
drop table ASOF;
create table ASOF (
AsOf         DATE
);
```

```
insert into ASOF values (TO_DATE('15-DEC-1901','DD-MON-YYYY'));
```

The BIRTHDAY Table

```
drop table BIRTHDAY;
create table BIRTHDAY (
```

```

FirstName      VARCHAR2(15),
LastName       VARCHAR2(15),
BirthDate      DATE,
Age            NUMBER
);

insert into BIRTHDAY values ('GEORGE','SAND',
    TO_DATE('12-MAY-1946','DD-MON-YYYY'),42);
insert into BIRTHDAY values ('ROBERT','JAMES',
    TO_DATE('23-AUG-1937','DD-MON-YYYY'),52);
insert into BIRTHDAY values ('NANCY','LEE',
    TO_DATE('02-FEB-1947','DD-MON-YYYY'),42);
insert into BIRTHDAY values ('VICTORIA','LYNN',
    TO_DATE('20-MAY-1949 3:27','DD-MON-YYYY HH24:MI'),42);
insert into BIRTHDAY values ('FRANK','PILOT',
    TO_DATE('11-NOV-1942','DD-MON-YYYY'),42);

```

The BORROWER Table

 rem Requires that the TOOLS_VA datatype be created first.


```

create table BORROWER
(Name          VARCHAR2(25),
Tools         TOOLS_VA,
constraint BORROWER_PK primary key (Name));

insert into BORROWER values
('JED HOPKINS',
TOOLS_VA('HAMMER','SLEDGE','AX'));

```

The BREEDER Table


 rem Requires that the ANIMAL_TY and ANIMALS_NT types
rem already exist.

```

create table BREEDER (
BreederName    VARCHAR2(25),
Animals        ANIMALS_NT)
nested table ANIMALS store as ANIMALS_NT_TAB;

```

The BREEDING Table

 drop table BREEDING;
create table BREEDING (

```

Offspring      VARCHAR2(10),
Sex            CHAR(1),
Cow           VARCHAR2(10),
Bull          VARCHAR2(10),
Birthdate     DATE
);

insert into BREEDING values ('EVE','F',null,null,null);
insert into BREEDING values ('ADAM','M',null,null,null);
insert into BREEDING values ('BANDIT','M',null,null,null);
insert into BREEDING values ('BETSY','F','EVE','ADAM',
    TO_DATE('02-JAN-1900','DD-MON-YYYY'));
insert into BREEDING values ('POCO','M','EVE','ADAM',
    TO_DATE('15-JUL-1900','DD-MON-YYYY'));
insert into BREEDING values ('GRETA','F','EVE','BANDIT',
    TO_DATE('12-MAR-1901','DD-MON-YYYY'));
insert into BREEDING values ('MANDY','F','EVE','POCO',
    TO_DATE('22-AUG-1902','DD-MON-YYYY'));
insert into BREEDING values ('NOVI','F','BETSY','ADAM',
    TO_DATE('30-MAR-1903','DD-MON-YYYY'));
insert into BREEDING values ('GINNY','F','BETSY','BANDIT',
    TO_DATE('04-DEC-1903','DD-MON-YYYY'));
insert into BREEDING values ('CINDY','F','EVE','POCO',
    TO_DATE('09-FEB-1903','DD-MON-YYYY'));
insert into BREEDING values ('DUKE','M','MANDY','BANDIT',
    TO_DATE('24-JUL-1904','DD-MON-YYYY'));
insert into BREEDING values ('TEDDI','F','BETSY','BANDIT',
    TO_DATE('12-AUG-1905','DD-MON-YYYY'));
insert into BREEDING values ('SUZY','F','GINNY','DUKE',
    TO_DATE('03-APR-1906','DD-MON-YYYY'));
insert into BREEDING values ('RUTH','F','GINNY','DUKE',
    TO_DATE('25-DEC-1906','DD-MON-YYYY'));
insert into BREEDING values ('PAULA','F','MANDY','POCO',
    TO_DATE('21-DEC-1906','DD-MON-YYYY'));
insert into BREEDING values ('DELLA','F','SUZY','BANDIT',
    TO_DATE('11-OCT-1908','DD-MON-YYYY'));

```

The CD Table

```

drop table CD;
create table CD (
Account      NUMBER not null,
Amount      NUMBER not null,
MaturityDate DATE not null
);

insert into CD values (573334, 10000,

```

```

    TO_DATE('15-JAN-2009','DD-MON-YYYY');
insert into CD values (677654, 25000,
    TO_DATE('15-JAN-2001','DD-MON-YYYY'));
insert into CD values (976032, 10000,
    TO_DATE('15-JAN-1995','DD-MON-YYYY'));
insert into CD values (275031, 10000,
    TO_DATE('15-JAN-1997','DD-MON-YYYY'));
insert into CD values (274598, 20000,
    TO_DATE('15-JAN-1999','DD-MON-YYYY'));
insert into CD values (538365, 45000,
    TO_DATE('15-JAN-2001','DD-MON-YYYY'));
insert into CD values (267432, 16500,
    TO_DATE('15-JAN-2004','DD-MON-YYYY'));

```

The COMFORT Table

```

drop table COMFORT;
create table COMFORT (
City          VARCHAR2(13) NOT NULL,
SampleDate    DATE NOT NULL,
Noon          NUMBER(3,1),
Midnight      NUMBER(3,1),
Precipitation NUMBER
);

insert into COMFORT values ('SAN FRANCISCO',
    TO_DATE('21-MAR-1999','DD-MON-YYYY'),62.5,42.3,.5);
insert into COMFORT values ('SAN FRANCISCO',
    TO_DATE('22-JUN-1999','DD-MON-YYYY'),51.1,71.9,.1);
insert into COMFORT values ('SAN FRANCISCO',
    TO_DATE('23-SEP-1999','DD-MON-YYYY'),NULL,61.5,.1);
insert into COMFORT values ('SAN FRANCISCO',
    TO_DATE('22-DEC-1999','DD-MON-YYYY'),52.6,39.8,2.3);
insert into COMFORT values ('KEENE',
    TO_DATE('21-MAR-1999','DD-MON-YYYY'),39.9,-1.2,4.4);
insert into COMFORT values ('KEENE',
    TO_DATE('22-JUN-1999','DD-MON-YYYY'),85.1,66.7,1.3);
insert into COMFORT values ('KEENE',
    TO_DATE('23-SEP-1999','DD-MON-YYYY'),99.8,82.6,NULL);
insert into COMFORT values ('KEENE',
    TO_DATE('22-DEC-1999','DD-MON-YYYY'),-7.2,-1.2,3.9);

```

The COMMA Table

```


drop table COMMA;
create table COMMA (

```

```
Amount          NUMBER,
AmountChar      VARCHAR2(20)
);

insert into COMMA values (0,'0');
insert into COMMA values (0.25,'0.25');
insert into COMMA values (1.25,'1.25');
insert into COMMA values (12.25,'12.25');
insert into COMMA values (123.25,'123.25');
insert into COMMA values (1234.25,'1,234.25');
insert into COMMA values (12345.25,'12,345.25');
insert into COMMA values (123456.25,'123,456.25');
insert into COMMA values (1234567.25,'1,234,567.25');
insert into COMMA values (12345678.25,'12,345,678.25');
insert into COMMA values (123456789.25,'123,456,789.25');
REM insert into COMMA values (1234567890.25,'1,234,567,890.25');
REM insert into COMMA values (12345678901.25,'12,345,678,901.25');
```

The CUSTOMER Table


 rem Requires that the ADDRESS_TY and PERSON_TY types already exist.

```
create table CUSTOMER (
Customer_ID      NUMBER,
Person           PERSON_TY
);

insert into CUSTOMER
(1,
PERSON_TY('NEIL MULLANE',
ADDRESS_TY('57 MT PLEASANT ST',
'FINN', 'NH', 11111)));

insert into CUSTOMER
(2,
PERSON_TY('SEYMOUR HESTER',
ADDRESS_TY('1 STEPAHEAD RD',
'BRIANT', 'NH', 11111)));
```

The EMPTY Table

 drop table EMPTY;
create table EMPTY (

```
Nothing      VARCHAR2(25),
Less        NUMBER
);
```

REMARK No inserts. This table is empty.

The HOLIDAY Table

```
drop table HOLIDAY;
create table HOLIDAY (
Holiday      VARCHAR2(25),
ActualDate   DATE,
CelebratedDate DATE
);

insert into HOLIDAY values ('NEW YEAR DAY',
    TO_DATE('01-JAN-2000','DD-MON-YYYY'),
    TO_DATE('01-JAN-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('MARTIN LUTHER KING, JR.',
    TO_DATE('15-JAN-2000','DD-MON-YYYY'),
    TO_DATE('17-JAN-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('LINCOLNS BIRTHDAY',
    TO_DATE('12-FEB-2000','DD-MON-YYYY'),
    TO_DATE('21-FEB-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('WASHINGTONS BIRTHDAY',
    TO_DATE('22-FEB-2000','DD-MON-YYYY'),
    TO_DATE('21-FEB-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('FAST DAY, NEW HAMPSHIRE',
    TO_DATE('22-FEB-2000','DD-MON-YYYY'),
    TO_DATE('22-FEB-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('MEMORIAL DAY',
    TO_DATE('30-MAY-2000','DD-MON-YYYY'),
    TO_DATE('29-MAY-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('INDEPENDENCE DAY',
    TO_DATE('04-JUL-2000','DD-MON-YYYY'),
    TO_DATE('04-JUL-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('LABOR DAY',
    TO_DATE('04-SEP-2000','DD-MON-YYYY'),
    TO_DATE('04-SEP-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('COLUMBUS DAY',
    TO_DATE('08-OCT-2000','DD-MON-YYYY'),
    TO_DATE('09-OCT-2000','DD-MON-YYYY'));
insert into HOLIDAY values ('THANKSGIVING',
    TO_DATE('23-NOV-2000','DD-MON-YYYY'),
    TO_DATE('23-NOV-2000','DD-MON-YYYY'));
```

The INVOICE Table

```

drop table INVOICE;
create table INVOICE
(ClientName  VARCHAR2(25),
 InvoiceDate  DATE,
 Amount      NUMBER(9,2)
);

insert into INVOICE values (
 'ELBERT TALBOT', TO_DATE('23-OCT-1901','DD-MON-YYYY'),5.03);
insert into INVOICE values (
 'JOHN PEARSON', TO_DATE('09-NOV-1901','DD-MON-YYYY'),2.02);
insert into INVOICE values (
 'DICK JONES', TO_DATE('12-SEP-1901','DD-MON-YYYY'),11.12);
insert into INVOICE values (
 'GENERAL STORE', TO_DATE('09-NOV-1901','DD-MON-YYYY'),22.10);
insert into INVOICE values (
 'ADAH TALBOT', TO_DATE('17-NOV-1901','DD-MON-YYYY'),8.29);
insert into INVOICE values (
 'GENERAL STORE', TO_DATE('01-SEP-1901','DD-MON-YYYY'),21.32);
insert into INVOICE values (
 'ADAH TALBOT', TO_DATE('15-NOV-1901','DD-MON-YYYY'),7.33);
insert into INVOICE values (
 'GENERAL STORE', TO_DATE('04-OCT-1901','DD-MON-YYYY'),8.42);
insert into INVOICE values (
 'KAY WALLBOM', TO_DATE('04-OCT-1901','DD-MON-YYYY'),1.43);
insert into INVOICE values (
 'JOHN PEARSON', TO_DATE('13-OCT-1901','DD-MON-YYYY'),12.41);
insert into INVOICE values (
 'DICK JONES', TO_DATE('23-OCT-1901','DD-MON-YYYY'),4.49);
insert into INVOICE values (
 'GENERAL STORE', TO_DATE('23-NOV-1901','DD-MON-YYYY'),40.36);
insert into INVOICE values (
 'GENERAL STORE', TO_DATE('30-OCT-1901','DD-MON-YYYY'),7.47);
insert into INVOICE values (
 'MORRIS ARNOLD', TO_DATE('03-OCT-1901','DD-MON-YYYY'),3.55);
insert into INVOICE values (
 'ROLAND BRANDT', TO_DATE('22-OCT-1901','DD-MON-YYYY'),13.65);
insert into INVOICE values (
 'MORRIS ARNOLD', TO_DATE('21-SEP-1901','DD-MON-YYYY'),9.87);
insert into INVOICE values (
 'VICTORIA LYNN', TO_DATE('09-OCT-1901','DD-MON-YYYY'),8.98);
insert into INVOICE values (
 'GENERAL STORE', TO_DATE('22-OCT-1901','DD-MON-YYYY'),17.58);

```

The LEDGER Table

```

drop table LEDGER;
create table LEDGER (
  ActionDate      DATE,
  Action          VARCHAR2(8),
  Item            VARCHAR2(30),
  Quantity        NUMBER,
  QuantityType    VARCHAR2(10),
  Rate            NUMBER,
  Amount          NUMBER(9,2),
  Person          VARCHAR2(25)
);

insert into ledger values (
  TO_DATE('01-APR-1901', 'DD-MON-YYYY'),
  'PAID', 'PLOWING', 1, 'DAY', 3, 3, 'RICHARD KOCH AND BROTHERS');
insert into ledger values (
  TO_DATE('02-MAY-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', 1, 'DAY', 1, 1, 'DICK JONES');
insert into ledger values (
  TO_DATE('03-JUN-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', 1, 'DAY', 1, 1, 'ELBERT TALBOT');
insert into ledger values (
  TO_DATE('04-JAN-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', 1, 'DAY', 1, 1, 'GERHARDT KENTGEN');
insert into ledger values (
  TO_DATE('04-FEB-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', .5, 'DAY', 1, .5, 'ELBERT TALBOT');
insert into ledger values (
  TO_DATE('05-APR-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', 1, 'DAY', 1, 1, 'DICK JONES');
insert into ledger values (
  TO_DATE('06-AUG-1901', 'DD-MON-YYYY'),
  'PAID', 'PLOWING', 1, 'DAY', 1.8, 1.8, 'VICTORIA LYNN');
insert into ledger values (
  TO_DATE('07-OCT-1901', 'DD-MON-YYYY'),
  'PAID', 'PLOWING', .5, 'DAY', 3, 1.5, 'RICHARD KOCH AND BROTHERS');
prompt Going into silent mode.
set termout off
insert into ledger values (
  TO_DATE('09-SEP-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', 1, 'DAY', 1, 1, 'ADAH TALBOT');
insert into ledger values (
  TO_DATE('09-OCT-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', .5, 'DAY', 1.25, .63, 'DONALD ROLLO');

```

```

insert into ledger values (
    TO_DATE('10-NOV-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1.25,1.25,'JOHN PEARSON');
insert into ledger values (
    TO_DATE('10-AUG-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'HELEN BRANDT');
insert into ledger values (
    TO_DATE('11-AUG-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',2,2,'HELEN BRANDT');
insert into ledger values (
    TO_DATE('11-SEP-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',.75,.75,'ROLAND BRANDT');
insert into ledger values (
    TO_DATE('12-DEC-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'BART SARJEANT');
insert into ledger values (
    TO_DATE('12-JAN-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'GEORGE OSCAR');
insert into ledger values (
    TO_DATE('13-JUN-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'PETER LAWSON');
insert into ledger values (
    TO_DATE('14-JUL-1901','DD-MON-YYYY'),
    PAID','WORK',1,'DAY',1.2,1.2,'WILFRED LOWELL');
insert into ledger values (
    TO_DATE('15-JUL-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',2.25,2.25,'KAY AND PALMER WALLBOM');
insert into ledger values (
    TO_DATE('03-OCT-1901','DD-MON-YYYY'),
    'SOLD','BOOT BETWEEN HORSES',1,'EACH',12.5,12.5,'GARY KENTGEN');
insert into ledger values (
    TO_DATE('01-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','CALF',2,'EACH',2,4,'GARY KENTGEN');
insert into ledger values (
    TO_DATE('02-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','MARE',1,'EACH',5,5,'JAMES COLE');
insert into ledger values (
    TO_DATE('03-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','PIG',1,'EACH',2,2,'ANDREW DYE');
insert into ledger values (
    TO_DATE('04-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','HAY',1,'WAGON',5,5,'ANDREW DYE');
insert into ledger values (
    TO_DATE('05-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','HAY',4,'WAGON',5,20,'ANDREW DYE');
insert into ledger values (
    TO_DATE('05-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','LINE',1,'SET',.75,.75,'ANDREW DYE');

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insert into ledger values (
    TO_DATE('06-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','COLT',2,'COLT',4.5,9,'ANDREW DYE');
insert into ledger values (
    TO_DATE('06-AUG-1901','DD-MON-YYYY'),
    'PAID','PLOWING',2,'DAY',2,4,'ANDREW DYE');
insert into ledger values (
    TO_DATE('07-NOV-1901','DD-MON-YYYY'),
    'PAID','SAWED WOOD',1,'DAY',.5,.5,'ANDREW DYE');
insert into ledger values (
    TO_DATE('09-NOV-1901','DD-MON-YYYY'),
    'BOUGHT','COLT',1,'EACH',10,10,'ANDREW DYE');
insert into ledger values (
    TO_DATE('10-NOV-1901','DD-MON-YYYY'),
    'SOLD','HEFER',1,'EACH',28,28,'PAT LAVAY');
insert into ledger values (
    TO_DATE('11-NOV-1901','DD-MON-YYYY'),
    'SOLD','BOOT BETWEEN HORSES',1,'EACH',6,6,'PAT LAVAY');
insert into ledger values (
    TO_DATE('11-NOV-1901','DD-MON-YYYY'),
    'SOLD','BUTTER',1,'LB',.15,.15,'PAT LAVAY');
insert into ledger values (
    TO_DATE('12-NOV-1901','DD-MON-YYYY'),
    'PAID','WORK',2,'DAY',.75,1.5,'PAT LAVAY');
insert into ledger values (
    TO_DATE('13-NOV-1901','DD-MON-YYYY'),
    'PAID','CUT LOGS',.5,'DAY',.5,.25,'PAT LAVAY');
insert into ledger values (
    TO_DATE('13-NOV-1901','DD-MON-YYYY'),
    'PAID','DRAWED LOGS',1.5,'DAY',.5,.75,'PAT LAVAY');
insert into ledger values (
    TO_DATE('13-DEC-1901','DD-MON-YYYY'),
    'PAID','SAWED WOOD',1,'DAY',.5,.5,'PAT LAVAY');
insert into ledger values (
    TO_DATE('14-NOV-1901','DD-MON-YYYY'),
    'SOLD','HEFER',1,'EACH',35,35,'MORRIS ARNOLD');
insert into ledger values (
    TO_DATE('15-NOV-1901','DD-MON-YYYY'),
    'SOLD','BEEF',37,'LB',.04,1.48,'FRED FULLER');
insert into ledger values (
    TO_DATE('16-NOV-1901','DD-MON-YYYY'),
    'SOLD','BUTTER',5,'LB',.16,.8,'VICTORIA LYNN');
insert into ledger values (
    TO_DATE('18-NOV-1901','DD-MON-YYYY'),
    'SOLD','BUTTER',6,'LB',.16,.96,'JOHN PEARSON');
insert into ledger values (
    TO_DATE('20-NOV-1901','DD-MON-YYYY'),
    'SOLD','HEFER',1,'EACH',30,30,'PALMER WALLBOM');

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insert into ledger values (
    TO_DATE('21-NOV-1901', 'DD-MON-YYYY'),
    'SOLD', 'BEEF', 116, 'LB', .06, 6.96, 'ROLAND BRANDT');
insert into ledger values (
    TO_DATE('22-NOV-1901', 'DD-MON-YYYY'),
    'SOLD', 'BEEF', 118, 'LB', .06, 7.08, 'GERHARDT KENTGEN');
insert into ledger values (
    TO_DATE('01-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BEEF', 138, 'LB', .05, 6.9, 'VICTORIA LYNN');
insert into ledger values (
    TO_DATE('01-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BEEF', 130, 'LB', .06, 7.8, 'GEORGE B. MCCORMICK');
insert into ledger values (
    TO_DATE('03-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BEEF', 130, 'LB', .05, 6.5, 'PETER LAWSON');
insert into ledger values (
    TO_DATE('03-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BEEF', 125, 'LB', .06, 7.5, 'HELEN BRANDT');
insert into ledger values (
    TO_DATE('05-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BEEF', 140, 'LB', .05, 7, 'ROBERT JAMES');
insert into ledger values (
    TO_DATE('05-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BEEF', 145, 'LB', .05, 7.25, 'ISAIAH JAMES');
insert into ledger values (
    TO_DATE('07-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'HORSE', 1, 'EACH', 30, 30, 'GEORGE AUGUST');
insert into ledger values (
    TO_DATE('07-DEC-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'REAPER/BINDER', 1, 'EACH', 47.5, 47.5, 'JANICE TALBOT');
insert into ledger values (
    TO_DATE('03-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'HOMINY', 1, 'BUSHEL', 1.25, 1.25, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('09-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'LICE KILLER', 1, 'BOX', .5, .5, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('11-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'MENDING BRACE', 1, 'EACH', .15, .15, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('11-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'STOVE BLACKING', 1, 'BOX', .05, .05, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('13-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'GRINDING BAT', 10, 'EACH', .03, .3, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('14-JAN-1901', 'DD-MON-YYYY'),
    'SOLD', 'BEEF HIDE', 1, 'EACH', 5.46, 5.46, 'GENERAL STORE');

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insert into ledger values (
    TO_DATE('14-JAN-1901', 'DD-MON-YYYY'),
    'SOLD', 'CHEESE FLAT', 13, 'EACH', 3.15, 40.95, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('14-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'LANTERN GLOBE', 1, 'EACH', .1, .1, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('15-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'STAMP FOR LETTER', 1, 'EACH', .02, .02, 'POST OFFICE');
insert into ledger values (
    TO_DATE('15-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'STOCKING', 2, 'PAIR', .15, .3, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('16-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'OIL', 4, 'GALLON', .1, .4, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('16-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SUGAR', 25, 'LB', .07, 1.75, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('16-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'MOLASSES', 1, 'GALLON', .6, .6, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('16-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'CARD OF THANKS', 1, 'EACH', .3, .3, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('17-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'HORSE SHODDING', 1, 'EACH', .85, .85, 'LIVERY');
insert into ledger values (
    TO_DATE('17-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'CORN', 230, 'LB', .01, 2.3, 'FEED STORE');
insert into ledger values (
    TO_DATE('18-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'CORN MEAL', 213, 'LB', .01, 2.13, 'FEED STORE');
insert into ledger values (
    TO_DATE('18-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'PAPER', 50, 'SHEETS', .01, .5, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('18-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'COFFEE', 1, 'LB', .3, .3, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('18-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SEEDED RAISINS', 1, 'LB', .12, .12, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('18-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'COTTON STOCKING', 3, 'PAIR', .08, .24, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('19-JAN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'COTTON STOCKING', 3, 'PAIR', .08, .24, 'GENERAL STORE');

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insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','GRINDING BAT',24,'EACH',.03,.72,'GENERAL STORE');
insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','TELEPHONE CALL',1,'EACH',.15,.15,'PHONE COMPANY');
insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','TEA',.5,'LB',.5,.25,'GENERAL STORE');
insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','HAT',1,'EACH',.1,.1,'GENERAL STORE');
insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','SALT PETER',1,'TABLET',.08,.08,'GENERAL STORE');
insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','ENVELOPES',6,'EACH',.02,.12,'GENERAL STORE');
insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','CREOAL',2,'QUART',.37,.74,'GENERAL STORE');
insert into ledger values (
    TO_DATE('23-JAN-1901','DD-MON-YYYY'),
    'SOLD','WOOD',1,'CORD',2,2,'METHODIST CHURCH');
insert into ledger values (
    TO_DATE('24-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','SCHOOLING',1,'TERM',1,1,'SCHOOL');
insert into ledger values (
    TO_DATE('24-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','HOMINY',186,'TERM',.01,1.86,'GENERAL STORE');
insert into ledger values (
    TO_DATE('28-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','GRINDING',1,'EACH',.9,.9,'MILL');
insert into ledger values (
    TO_DATE('28-JAN-1901','DD-MON-YYYY'),
    'BOUGHT','POPCORN',5,'LB',.04,.2,'GENERAL STORE');
insert into ledger values (
    TO_DATE('02-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','SULPHUR',5,'LB',.25,1.25,'GENERAL STORE');
insert into ledger values (
    TO_DATE('03-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','OIL',4,'GALLON',.13,.52,'GENERAL STORE');
insert into ledger values (
    TO_DATE('03-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','SWAMP ROOT',1,'BOTTLE',.75,.75,'GENERAL STORE');
insert into ledger values (
    TO_DATE('04-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','SHOEING NED',1,'EACH',.5,.5,'BLACKSMITH');
insert into ledger values (

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    TO_DATE('04-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','GRINDING',1,'EACH',.47,.47,'MILL');
insert into ledger values (
    TO_DATE('05-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','PILLS',1,'BOX',.25,.25,'GENERAL STORE');
insert into ledger values (
    TO_DATE('07-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','THREAD',2,'SPOOLS',.05,.1,'GENERAL STORE');
insert into ledger values (
    TO_DATE('08-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','SHIRTS',2,'EACH',.5,1,'GENERAL STORE');
insert into ledger values (
    TO_DATE('10-FEB-1901','DD-MON-YYYY'),
    'SOLD','BUTTER',9,'LB',.25,2.25,'GENERAL STORE');
insert into ledger values (
    TO_DATE('18-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','HORSE MEDISON',1,'ENVELOPE',.13,.13,'GENERAL STORE');
insert into ledger values (
    TO_DATE('18-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','ELBO STOVE PIPE',1,'EACH',.15,.15,'GENERAL STORE');
insert into ledger values (
    TO_DATE('18-FEB-1901','DD-MON-YYYY'),
    'SOLD','CALF',1,'EACH',4,4,'LILY CARLSTROM');
insert into ledger values (
    TO_DATE('25-FEB-1901','DD-MON-YYYY'),
    'SOLD','BUTTER',21,'LB',.25,5.25,'GENERAL STORE');
insert into ledger values (
    TO_DATE('28-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','SWAMP ROOT',1,'BOTTLE',.75,.75,'GENERAL STORE');
insert into ledger values (
    TO_DATE('28-FEB-1901','DD-MON-YYYY'),
    'BOUGHT','LIVER PILLS',1,'BOX',.2,.2,'GENERAL STORE');
insert into ledger values (
    TO_DATE('28-FEB-1901','DD-MON-YYYY'),
    'SOLD','BUTTER',3,'LB',.25,.75,'HELEN BRANDT');
insert into ledger values (
    TO_DATE('01-APR-1901','DD-MON-YYYY'),
    'BOUGHT','GRINDING',1,'EACH',.45,.45,'MILL');
insert into ledger values (
    TO_DATE('06-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','MEDISON FOR INDIGESTION',1,'BOTTLE',.4,.4,
'DR. CARLSTROM');
insert into ledger values (
    TO_DATE('06-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','BREADING POWDER',1,'BOX',.9,.9,'MILL');
insert into ledger values (
    TO_DATE('06-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','PANTS',1,'PAIR',.75,.75,'GENERAL STORE');

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insert into ledger values (
    TO_DATE('07-APR-1901','DD-MON-YYYY'),
    'BOUGHT','HOMINY',200,'LB',.01,2,'MILL');
insert into ledger values (
    TO_DATE('08-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','TOBACCO FOR LICE',1,'BOX',.25,.25,'MILL');
insert into ledger values (
    TO_DATE('07-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','SHOEING',1,'EACH',.35,.35,'BLACKSMITH');
insert into ledger values (
    TO_DATE('07-APR-1901','DD-MON-YYYY'),
    'BOUGHT','PINS',1,'BOX',.05,.05,'GENERAL STORE');
insert into ledger values (
    TO_DATE('07-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','MAIL BOX',1,'EACH',1,1,'POST OFFICE');
insert into ledger values (
    TO_DATE('10-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','STOVE PIPE THIMBLES',2,'EACH',.5,1,'VERNA HARDWARE');
insert into ledger values (
    TO_DATE('13-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','THERMOMETER',1,'EACH',.15,.15,'GENERAL STORE');
insert into ledger values (
    TO_DATE('14-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','LOT IN CEMETERY NO. 80',1,'EACH',25,25,'METHODIST CHURCH');
insert into ledger values (
    TO_DATE('14-MAR-1901','DD-MON-YYYY'),
    'PAID','DIGGING OF GRAVE',1,'EACH',3,3,'JED HOPKINS');
insert into ledger values (
    TO_DATE('16-APR-1901','DD-MON-YYYY'),
    'BOUGHT','GRINDING',1,'EACH',.16,.16,'MILL');
insert into ledger values (
    TO_DATE('16-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','GRINDING',1,'EACH',.16,.16,'MILL');
insert into ledger values (
    TO_DATE('23-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','CLOTH FOR DRESS LINING',2,'YARD',.27,.54,'GENERAL STORE');
insert into ledger values (
    TO_DATE('18-AUG-1901','DD-MON-YYYY'),
    'BOUGHT','SYRUP THERMOMETER',1,'EACH',1,1,'GENERAL STORE');
insert into ledger values (
    TO_DATE('25-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','BOOTS FOR SHIRLEY',1,'PAIR',2.5,2.5,'GENERAL STORE');
insert into ledger values (
    TO_DATE('27-APR-1901','DD-MON-YYYY'),
    'BOUGHT','SYRUP CANS',2,'DOZEN',1.07,2.14,'VERNA HARDWARE');
insert into ledger values (
    TO_DATE('22-MAR-1901','DD-MON-YYYY'),
    'BOUGHT','MILK CANS',2,'EACH',2.5,5,'VERNA HARDWARE');

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insert into ledger values (
    TO_DATE('23-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'DUBBLE STRAINER', 1, 'EACH', .95, .95, 'VERNA HARDWARE');
insert into ledger values (
    TO_DATE('25-JUN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'MILK STIRRER', 1, 'EACH', .25, .25, 'VERNA HARDWARE');
insert into ledger values (
    TO_DATE('27-MAR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'HOMINY', 77, 'LB', .01, .77, 'MILL');
insert into ledger values (
    TO_DATE('28-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'CORN', 104, 'LB', .01, 1.04, 'MILL');
insert into ledger values (
    TO_DATE('06-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'FUNERAL', 1, 'EACH', 3.19, 3.19, 'UNDERWOOD BROS');
insert into ledger values (
    TO_DATE('30-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BRUSH', 1, 'EACH', .05, .05, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('30-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SAND', 5, 'BUSHEL', .03, .15, 'QUARRY');
insert into ledger values (
    TO_DATE('31-MAR-1901', 'DD-MON-YYYY'),
    'SOLD', 'MOLASSES', 3, 'GALLON', 1, 3, 'HAROLD SCHOLE');
insert into ledger values (
    TO_DATE('28-MAR-1901', 'DD-MON-YYYY'),
    'SOLD', 'MOLASSES', 1, 'GALLON', 1, 1, 'GERHARDT KENTGEN');
insert into ledger values (
    TO_DATE('30-MAR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'FIXING SHIRLEYS WATCH', 1, 'EACH', .25, .25, 'MANNER JEWELERS');
insert into ledger values (
    TO_DATE('04-APR-1901', 'DD-MON-YYYY'),
    'SOLD', 'BUTTER', 9, 'LB', .23, 2.07, 'HAROLD SCHOLE');
insert into ledger values (
    TO_DATE('05-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SODA', 1, 'BOTTLE', .05, .05, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('05-MAR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'TELEPHONE CALL', 1, 'EACH', .2, .2, 'PHONE COMPANY');
insert into ledger values (
    TO_DATE('06-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'GLOVES', 1, 'PAIR', .25, .25, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('06-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SHOES FOR SHIRLEY', 1, 'PAIR', 2, 2, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('09-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'PEANUTS', 1, 'BAG', .05, .05, 'GENERAL STORE');

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insert into ledger values (
    TO_DATE('11-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BRAN', 300, 'LB', .01, 3, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('15-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SHOEING', 2, 'EACH', .3, .6, 'BLACKSMITH');
insert into ledger values (
    TO_DATE('17-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'HOMINY', 173, 'LB', .01, 1.73, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('17-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BRAN', 450, 'LB', .01, 4.5, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('17-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'CALF MEAL', 110, 'LB', .01, 1.1, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('22-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'HOMINY', 454, 'LB', .01, 4.54, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('22-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'BRAN', 300, 'LB', .01, 3, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('22-APR-1901', 'DD-MON-YYYY'),
    'SOLD', 'CALF', 1, 'EACH', 1, 1, 'PAT LAVAY');
insert into ledger values (
    TO_DATE('25-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'CALF MEAL', 100, 'EACH', .01, 1, 'GENERAL STORE');
insert into ledger values (
    TO_DATE('27-APR-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SHOEING NED', 1, 'EACH', .5, .5, 'BLACKSMITH');
insert into ledger values (
    TO_DATE('07-JUN-1901', 'DD-MON-YYYY'),
    'RECEIVED', 'BREAKING COLT', 1, 'EACH', 5, 5, 'SAM DYE');
insert into ledger values (
    TO_DATE('07-JUN-1901', 'DD-MON-YYYY'),
    'RECEIVED', 'KEEPING COLT', 1, 'EACH', 4, 4, 'SAM DYE');
insert into ledger values (
    TO_DATE('17-JUN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SCHOOL TAX', 1, 'EACH', 6.56, 6.56, 'SCHOOL');
insert into ledger values (
    TO_DATE('17-JUN-1901', 'DD-MON-YYYY'),
    'RECEIVED', 'THRESHING', 2, 'DAY', 1, 2, 'HENRY CHASE');
insert into ledger values (
    TO_DATE('18-JUN-1901', 'DD-MON-YYYY'),
    'PAID', 'THRESHING', .5, 'DAY', 1, .5, 'WILLIAM SWING');
insert into ledger values (
    TO_DATE('18-JUN-1901', 'DD-MON-YYYY'),
    'BOUGHT', 'SHEEP', 22, 'EACH', .87, 19.14, 'BOOLE AND JONES');

```

```

insert into ledger values (
    TO_DATE('15-MAR-1901','DD-MON-YYYY'),
    'SOLD','POTATOES',5,'BUSHEL',.25,1.25,'GENERAL STORE');
insert into ledger values (
    TO_DATE('15-MAR-1901','DD-MON-YYYY'),
    'SOLD','COW',2,'EACH',33,66,'SAM DYE');
insert into ledger values (
    TO_DATE('15-MAR-1901','DD-MON-YYYY'),
    'RECEIVED','BOOT BETWEEN HORSES',1,'EACH',10,10,'ADAH TALBOT');
insert into ledger values (
    TO_DATE('18-MAR-1901','DD-MON-YYYY'),
    'SOLD','WAGON',1,'EACH',5,5,'ADAH TALBOT');
insert into ledger values (
    TO_DATE('04-APR-1901','DD-MON-YYYY'),
    'SOLD','HARNES',1,'EACH',2,2,'ADAH TALBOT');
insert into ledger values (
    TO_DATE('16-APR-1901','DD-MON-YYYY'),
    'SOLD','COW',3,'EACH',30,90,'GEORGE B. MCCORMICK');
insert into ledger values (
    TO_DATE('09-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','USE OF PASTURE',1,'EACH',10,10,'GEORGE B. MCCORMICK');
insert into ledger values (
    TO_DATE('28-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','SHEEP AND BULL',1,'LOT',97.88,97.88,'EDWARD JOHNSON');
insert into ledger values (
    TO_DATE('03-JUL-1901','DD-MON-YYYY'),
    'SOLD','HEIFER',1,'EACH',35,35,'SAM DYE');
insert into ledger values (
    TO_DATE('18-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','MIDDLINGS',180,'LB',.01,1.8,'DEAN FOREMAN');
insert into ledger values (
    TO_DATE('20-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','MIDDLINGS',450,'LB',.01,4.5,'GEORGE OSCAR');
insert into ledger values (
    TO_DATE('22-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','MIDDLINGS',640,'LB',.01,6.4,'EDYTHE GAMMIERE');
insert into ledger values (
    TO_DATE('23-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','MIDDLINGS',110,'LB',.01,1.1,'JOHN AUSTIN');
insert into ledger values (
    TO_DATE('28-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','COMB',1,'EACH',.07,.07,'GENERAL STORE');
insert into ledger values (
    TO_DATE('29-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','BUTTONS',1,'BOX',.1,.1,'GENERAL STORE');
insert into ledger values (
    TO_DATE('05-JUL-1901','DD-MON-YYYY'),
    'BOUGHT','BEANS',6,'LB',.03,.18,'GENERAL STORE');

```

```

insert into ledger values (
    TO_DATE('29-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','RAISONS',3,'LB',.08,.24,'GENERAL STORE');
insert into ledger values (
    TO_DATE('29-MAY-1901','DD-MON-YYYY'),
    'BOUGHT','CHEESE',3,'LB',.09,.27,'GENERAL STORE');
insert into ledger values (
    TO_DATE('04-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','BEER',1,'BOTTLE',.2,.2,'GENERAL STORE');
insert into ledger values (
    TO_DATE('04-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','COUGH SYRUP',1,'BOTTLE',.25,.25,'GENERAL STORE');
insert into ledger values (
    TO_DATE('26-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','SHOE STRING',2,'PAIR',.04,.08,'GENERAL STORE');
insert into ledger values (
    TO_DATE('26-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','CLOSE PINS',1,'BOX',.05,.05,'GENERAL STORE');
insert into ledger values (
    TO_DATE('26-JUN-1901','DD-MON-YYYY'),
    'BOUGHT','CLOSE BRUSH',1,'BOX',.1,.1,'GENERAL STORE');
insert into ledger values (
    TO_DATE('06-MAR-1901','DD-MON-YYYY'),
    'SOLD','EGGS',14,'DOZEN',.12,1.68,'GENERAL STORE');
insert into ledger values (
    TO_DATE('06-MAR-1901','DD-MON-YYYY'),
    'SOLD','HENS',12,'EACH',.5,6,'GENERAL STORE');
insert into ledger values (
    TO_DATE('15-APR-1901','DD-MON-YYYY'),
    'SOLD','EGGS',13,'DOZEN',.1,1.3,'GENERAL STORE');
insert into ledger values (
    TO_DATE('27-APR-1901','DD-MON-YYYY'),
    'PAID','PLOWING',1,'DAY',3,3,'RICHARD KOCH AND BROTHERS');
insert into ledger values (
    TO_DATE('16-APR-1901','DD-MON-YYYY'),
    'PAID','PLOWING',1,'DAY',3,3,'RICHARD KOCH AND BROTHERS');
insert into ledger values (
    TO_DATE('17-DEC-1901','DD-MON-YYYY'),
    'PAID','SAWING',1,'DAY',.75,.75,'DICK JONES');
insert into ledger values (
    TO_DATE('28-JUL-1901','DD-MON-YYYY'),
    'PAID','SAWING',1,'DAY',.75,.75,'DICK JONES');
insert into ledger values (
    TO_DATE('18-AUG-1901','DD-MON-YYYY'),
    'PAID','WEDDING',1,'DAY',.9,.9,'ELBERT TALBOT');
insert into ledger values (
    TO_DATE('29-SEP-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'GERHARDT KENTGEN');

```

```

insert into ledger values (
    TO_DATE('19-JAN-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'GERHARDT KENTGEN');
insert into ledger values (
    TO_DATE('30-JAN-1901','DD-MON-YYYY'),
    'PAID','WORK',.5,'DAY',1,.5,'ELBERT TALBOT');
insert into ledger values (
    TO_DATE('28-FEB-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'ELBERT TALBOT');
insert into ledger values (
    TO_DATE('20-MAR-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'DICK JONES');
insert into ledger values (
    TO_DATE('21-JUL-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1,1,'VICTORIA LYNN');
insert into ledger values (
    TO_DATE('22-OCT-1901','DD-MON-YYYY'),
    'PAID','PLOWING',1,'DAY',1.8,1.8,'DICK JONES');
insert into ledger values (
    TO_DATE('23-SEP-1901','DD-MON-YYYY'),
    'PAID','DISCUS',.5,'DAY',3,1.5,'RICHARD KOCH AND BROTHERS');
insert into ledger values (
    TO_DATE('22-AUG-1901','DD-MON-YYYY'),
    'PAID','SAWING',1,'DAY',1,1,'PETER LAWSON');
insert into ledger values (
    TO_DATE('23-AUG-1901','DD-MON-YYYY'),
    'PAID','SAWING',1,'DAY',1,1,'PETER LAWSON');
insert into ledger values (
    TO_DATE('24-MAY-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1.2,1.2,'WILFRED LOWELL');
insert into ledger values (
    TO_DATE('11-MAY-1901','DD-MON-YYYY'),
    'PAID','WORK',1,'DAY',1.2,1.2,'WILFRED LOWELL');
insert into ledger values (
    TO_DATE('26-JUN-1901','DD-MON-YYYY'),
    'PAID','PAINTING',1,'DAY',1.75,1.75,'KAY AND PALMER WALLBOM');
insert into ledger values (
    TO_DATE('02-JUL-1901','DD-MON-YYYY'),
    'BOUGHT','MIDLINGS',220,'LB',.01,2.2,'EDYTHE GAMMIERE');
insert into ledger values (
    TO_DATE('03-JUL-1901','DD-MON-YYYY'),
    'BOUGHT','PIG',1,'EACH',3,3,'JOHN AUSTIN');
insert into ledger values (
    TO_DATE('08-JUL-1901','DD-MON-YYYY'),
    'BOUGHT','CHEESE',1,'LB',.09,.09,'GENERAL STORE');
insert into ledger values (
    TO_DATE('09-JUL-1901','DD-MON-YYYY'),

```

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```
'BOUGHT', 'BEER', 1, 'BOTTLE', .2, .2, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('02-AUG-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'MILK CANS', 3, 'EACH', 2.5, 7.5, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('05-AUG-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'HOMINY', 120, 'LB', .01, 1.2, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('08-AUG-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'BRUSH', 1, 'EACH', .06, .06, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('12-AUG-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'CORN', 90, 'LB', .01, .9, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('25-MAR-1901', 'DD-MON-YYYY'),
  'SOLD', 'MOLASSES', 5, 'GALLON', 1, 5, 'SAM DYE');
insert into ledger values (
  TO_DATE('29-AUG-1901', 'DD-MON-YYYY'),
  'SOLD', 'BUTTER', 5, 'LB', .23, 1.15, 'GERHARDT KENTGEN');
insert into ledger values (
  TO_DATE('06-SEP-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'TELEPHONE CALL', 1, 'EACH', .2, .2, 'PHONE COMPANY');
insert into ledger values (
  TO_DATE('09-SEP-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'PEANUTS', 1, 'BAG', .05, .05, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('12-SEP-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'BRAN', 170, 'LB', .01, 1.7, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('13-SEP-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'SHOEING', 4, 'EACH', .3, 1.2, 'BLACKSMITH');
insert into ledger values (
  TO_DATE('15-SEP-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'HOMINY', 144, 'LB', .01, 1.44, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('20-APR-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'BRAN', 370, 'LB', .01, 3.7, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('17-JUL-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'CALF MEAL', 90, 'LB', .01, .9, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('20-JUL-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'HOMINY', 300, 'LB', .01, 3, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('25-JUL-1901', 'DD-MON-YYYY'),
  'SOLD', 'CALF', 1, 'EACH', 1, 1, 'SAM DYE');
insert into ledger values (
  TO_DATE('19-SEP-1901', 'DD-MON-YYYY'),
```

```

'BOUGHT', 'BRAN', 100, 'LB', .01, 1, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('23-SEP-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'CALF MEAL', 110, 'LB', .01, 1.1, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('25-SEP-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'HOMINY', 80, 'LB', .01, .8, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('07-OCT-1901', 'DD-MON-YYYY'),
  'PAID', 'WORK', 1, 'DAY', 1, 1, 'JED HOPKINS');
set termout on
prompt Waking up again.
insert into ledger values (
  TO_DATE('12-OCT-1901', 'DD-MON-YYYY'),
  'BOUGHT', 'SHEEP', 12, 'EACH', .9, 10.8, 'BOOLE AND JONES');
insert into ledger values (
  TO_DATE('15-OCT-1901', 'DD-MON-YYYY'),
  'SOLD', 'BEEF', 935, 'LB', .03, 28.05, 'GENERAL STORE');
insert into ledger values (
  TO_DATE('18-OCT-1901', 'DD-MON-YYYY'),
  'RECEIVED', 'BOOT BETWEEN HORSES', 1, 'EACH', 10, 10, 'ADAH TALBOT');
insert into ledger values (
  TO_DATE('12-OCT-1901', 'DD-MON-YYYY'),
  'SOLD', 'HEFER', 1, 'EACH', 35, 35, 'GEORGE B. MCCORMICK');

```

The LOCATION Table

```

drop table LOCATION;
create table LOCATION (
  City          VARCHAR2(25),
  Country       VARCHAR2(25),
  Continent     VARCHAR2(25),
  Latitude      NUMBER,
  NorthSouth   CHAR(1),
  Longitude     NUMBER,
  EastWest     CHAR(1)
);

insert into LOCATION values (
  'ATHENS', 'GREECE', 'EUROPE', 37.58, 'N', 23.43, 'E');
insert into LOCATION values (
  'CHICAGO', 'UNITED STATES', 'NORTH AMERICA', 41.53, 'N', 87.38, 'W');
insert into LOCATION values (
  'CONAKRY', 'GUINEA', 'AFRICA', 9.31, 'N', 13.43, 'W');
insert into LOCATION values (
  'LIMA', 'PERU', 'SOUTH AMERICA', 12.03, 'S', 77.03, 'W');

```

```

insert into LOCATION values (
  'MADRAS', 'INDIA', 'INDIA', 13.05, 'N', 80.17, 'E');
insert into LOCATION values (
  'MANCHESTER', 'ENGLAND', 'EUROPE', 53.30, 'N', 2.15, 'W');
insert into LOCATION values (
  'MOSCOW', 'RUSSIA', 'EUROPE', 55.45, 'N', 37.35, 'E');
insert into LOCATION values (
  'PARIS', 'FRANCE', 'EUROPE', 48.52, 'N', 2.20, 'E');
insert into LOCATION values (
  'SHENYANG', 'CHINA', 'CHINA', 41.48, 'N', 123.27, 'E');
insert into LOCATION values (
  'ROME', 'ITALY', 'EUROPE', 41.54, 'N', 12.29, 'E');
insert into LOCATION values (
  'TOKYO', 'JAPAN', 'ASIA', 35.42, 'N', 139.46, 'E');
insert into LOCATION values (
  'SYDNEY', 'AUSTRALIA', 'AUSTRALIA', 33.52, 'S', 151.13, 'E');
insert into LOCATION values (
  'SPARTA', 'GREECE', 'EUROPE', 37.05, 'N', 22.27, 'E');
insert into LOCATION values (
  'MADRID', 'SPAIN', 'EUROPE', 40.24, 'N', 3.41, 'W');

```

The LODGING Table

```

drop table LODGING;
create table LODGING (
  Lodging          VARCHAR2(15) not null,
  LongName         VARCHAR2(40),
  Manager          VARCHAR2(25),
  Address          VARCHAR2(30)
);

insert into LODGING values (
  'CRANMER', 'CRANMER RETREAT HOUSE', 'THOM CRANMER', 'HILL ST, BERKELEY');
insert into LODGING values (
  'MATTS', 'MATTS LONG BUNK HOUSE', 'ROLAND BRANDT', '3 MILE RD, KEENE');
insert into LODGING values (
  'MULLERS', 'MULLERS COED LODGING', 'KEN MULLER', '120 MAIN, EDMESTON');
insert into LODGING values (
  'PAPA KING', 'PAPA KING ROOMING', 'WILLIAM KING', '127 MAIN, EDMESTON');
insert into LODGING values (
  'ROSE HILL', 'ROSE HILL FOR MEN', 'JOHN PELETIER', 'RFD 3, N. EDMESTON');
insert into LODGING values (
  'WEITBROCHT', 'WEITBROCHT ROOMING', 'EUNICE BENSON', '320 GENEVA,
  KEENE');

```

The LONGTIME Table

```

drop table LONGTIME;
create table LONGTIME(
  Name          VARCHAR2(25) not null,
  Lodging       VARCHAR2(15),
  Age           NUMBER
);

insert into LONGTIME values ('ADAH TALBOT', 'PAPA KING', 23);
insert into LONGTIME values ('DICK JONES', 'ROSE HILL', 18);
insert into LONGTIME values ('DONALD ROLLO', 'MATTS', 16);
insert into LONGTIME values ('ELBERT TALBOT', 'WEITBROCHT', 43);
insert into LONGTIME values ('GEORGE OSCAR', 'ROSE HILL', 41);
insert into LONGTIME values ('PAT LAVAY', 'ROSE HILL', 21);
insert into LONGTIME values ('PETER LAWSON', 'CRANMER', 25);
insert into LONGTIME values ('WILFRED LOWELL', null, 67);

```

The MAGAZINE Table

```

drop table magazine;
create table magazine (
  Name          VARCHAR2(16),
  Title         VARCHAR2(37),
  Author        VARCHAR2(25),
  IssueDate     DATE,
  Page          NUMBER
);

insert into MAGAZINE values (
  'BERTRAND MONTHLY', 'THE BARBERS WHO SHAVE THEMSELVES.',
  'BONHOEFFER, DIETRICH',
  TO_DATE('23-MAY-1988', 'DD-MON-YYYY'), 70);
insert into MAGAZINE values (
  'LIVE FREE OR DIE', "HUNTING THOREAU IN NEW HAMPSHIRE",
  'CHESTERTON, G.K.',
  TO_DATE('26-AUG-1981', 'DD-MON-YYYY'), 320);
insert into MAGAZINE values (
  'PSYCHOLOGICA', 'THE ETHNIC NEIGHBORHOOD',
  'RUTH, GEORGE HERMAN',
  TO_DATE('18-SEP-1919', 'DD-MON-YYYY'), 246);
insert into MAGAZINE values (
  'FADED ISSUES', 'RELATIONAL DESIGN AND ENTHALPY',
  'WHITEHEAD, ALFRED',
  TO_DATE('20-JUN-1926', 'DD-MON-YYYY'), 279);

```

```
insert into MAGAZINE values (  
    'ENTROPY WIT', '"INTERCONTINENTAL RELATIONS."',  
    'CROOKES, WILLIAM',  
    TO_DATE('20-SEP-1950', 'DD-MON-YYYY'), 20);
```

The MATH Table

```
drop table MATH;  
create table MATH (  
    Name          VARCHAR2(12),  
    Above         NUMBER,  
    Below         NUMBER,  
    Empty         NUMBER  
);  
  
insert into MATH values ('WHOLE NUMBER', 11, -22, null);  
insert into MATH values ('LOW DECIMAL', 33.33, -44.44, null);  
insert into MATH values ('MID DECIMAL', 55.5, -55.5, null);  
insert into MATH values ('HIGH DECIMAL', 66.666, -77.777, null);
```

The NAME Table

```
drop table NAME;  
create table NAME (  
    Name          VARCHAR2(25)  
);  
  
insert into NAME values ('HORATIO NELSON');  
insert into NAME values ('VALDO');  
insert into NAME values ('MARIE DE MEDICIS');  
insert into NAME values ('FLAVIUS JOSEPHUS');  
insert into NAME values ('EDYTHE P. M. GAMMIERE');
```

The NEWSPAPER Table

```
drop table NEWSPAPER;  
create table NEWSPAPER (  
    Feature       VARCHAR2(15) not null,  
    Section       CHAR(1),  
    Page          NUMBER  
);  
  
insert into NEWSPAPER values ('National News', 'A', 1);  
insert into NEWSPAPER values ('Sports', 'D', 1);
```

```

insert into NEWSPAPER values ('Editorials', 'A', 12);
insert into NEWSPAPER values ('Business', 'E', 1);
insert into NEWSPAPER values ('Weather', 'C', 2);
insert into NEWSPAPER values ('Television', 'B', 7);
insert into NEWSPAPER values ('Births', 'F', 7);
insert into NEWSPAPER values ('Classified', 'F', 8);
insert into NEWSPAPER values ('Modern Life', 'B', 1);
insert into NEWSPAPER values ('Comics', 'C', 4);
insert into NEWSPAPER values ('Movies', 'B', 4);
insert into NEWSPAPER values ('Bridge', 'B', 2);
insert into NEWSPAPER values ('Obituaries', 'F', 6);
insert into NEWSPAPER values ('Doctor Is In', 'F', 6);

```

The NUMBERTEST Table

```

drop table NUMBERTEST;
create table NUMBERTEST (
Value1          NUMBER,
Value2          NUMBER,
Value3          NUMBER(10,2)
);

insert into NUMBERTEST values (0,0,0);
insert into NUMBERTEST values (.0001,.0001,.0001);
insert into NUMBERTEST values (1234,1234,1234);
insert into NUMBERTEST values (1234.5,1234.5,1234.5);
insert into NUMBERTEST values (null,null,null);
insert into NUMBERTEST values (1234.56,1234.56,1234.56);
insert into NUMBERTEST values (1234.567,1234.567,1234.567);
insert into NUMBERTEST values
(98761234.567,98761234.567,98761234.567);

```

The PAY Table

```

drop table PAY;
create table PAY (
Name            VARCHAR2(25) not null,
DailyRate       NUMBER
);

insert into PAY values ('ADAH TALBOT',1);
insert into PAY values ('ANDREW DYE',.75);
insert into PAY values ('BART SARJEANT',.75);
insert into PAY values ('DICK JONES',1);
insert into PAY values ('GEORGE OSCAR',1.25);
insert into PAY values ('PAT LAVAY',1.25);

```

The PAYDAY Table

```

drop table PAYDAY;
create table PAYDAY (
  CycleDate      DATE
);

insert into PAYDAY values (TO_DATE('15-JAN-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-FEB-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-MAR-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-APR-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-MAY-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-JUN-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-JUL-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-AUG-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-SEP-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-OCT-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-NOV-2000','DD-MON-YYYY'));
insert into PAYDAY values (TO_DATE('15-DEC-2000','DD-MON-YYYY'));

```

The PROPOSAL Table

```

drop table PROPOSAL;
create table PROPOSAL
(Proposal_ID      NUMBER(10) primary key,
 Recipient_Name   VARCHAR2(25),
 Proposal_Name    VARCHAR2(25),
 Short_Description VARCHAR2(1000),
 Proposal_Text    CLOB,
 Budget          BLOB,
 Cover_Letter    BFILE);

```

The PROSPECT Table

```

drop table PROSPECT;
create table PROSPECT (
  Name           VARCHAR2(25) not null,
  Address        VARCHAR2(35)
);

insert into PROSPECT values ('ADAH TALBOT','23 ZWING, EDMESTON');
insert into PROSPECT values ('DORY KENSON','GEN. DEL., BAYBAC');
insert into PROSPECT values ('ELBERT TALBOT','3 MILE ROAD, WALPOLE');
insert into PROSPECT values ('GEORGE PHEPPS','206 POLE, KINGSLEY');

```

```
insert into PROSPECT values ('PAT LAVAY','1 EASY ST, JACKSON');
insert into PROSPECT values ('TED BUTCHER','RFD 1, BRIGHTON');
insert into PROSPECT values ('JED HOPKINS','GEN. DEL., TURBOW');
insert into PROSPECT values ('WILFRED LOWELL',NULL);
```

The RADIUS_VALS Table

```
drop table RADIUS_VALS;
create table RADIUS_VALS
(Radius      NUMBER(5));
```

The ROSE Table

```
drop table ROSE;
create table ROSE (
Lodging      VARCHAR2(12)
);

insert into ROSE values ('ROSELYN');
insert into ROSE values ('ROSE HILL');
insert into ROSE values ('ROSE GARDEN');
insert into ROSE values ('ROSE');
```

The SHIPPING Table

```
drop table SHIPPING;
create table SHIPPING (
Client       VARCHAR2(13),
Weight      NUMBER
);

insert into SHIPPING values ('JOHNSON TOOL',59);
insert into SHIPPING values ('DAGG SOFTWARE',27);
insert into SHIPPING values ('TULLY ANDOVER',NULL);
```

The SKILL Table

```
drop table SKILL;
create table SKILL (
Skill       VARCHAR2(25) not null,
Description VARCHAR2(80)
);
```

```

insert into SKILL values (
  'WOODCUTTER','MARK AND FELL TREES, SPLIT, STACK, HAUL');
insert into SKILL values (
  'COMBINE DRIVER','HARNESS, DRIVE, GROOM HORSES, ADJUST BLADES');
insert into SKILL values (
  'SMITHY','STACK FOR FIRE, RUN BELLOWS, CUT, SHOE HORSES');
insert into SKILL values (
  'GRAVE DIGGER','MARK AND CUT SOD, DIG, SHORE, FILL, RESOD');
insert into SKILL values (
  'DISCUS','HARNESS, DRIVE, GROOM HORSES, BLADE DEPTH');
insert into SKILL values (
  'WORK','GENERAL UNSKILLED LABOR');

```

The STOCK Table

```

drop table STOCK;
create table STOCK (
  Company      VARCHAR2(20),
  Symbol       VARCHAR2(6),
  Industry     VARCHAR2(15),
  CloseYesterday NUMBER(6,2),
  CloseToday   NUMBER(6,2),
  Volume       NUMBER
);

insert into STOCK values (
  'AD SPECIALTY', 'ADSP', 'ADVERTISING', 31.75, 31.75,
  18333876);
insert into STOCK values (
  'APPLE CANNERY', 'APCN', 'AGRICULTURE', 33.75, 36.50,
  25787229);
insert into STOCK values (
  'AT SPACE', 'ATR', 'MEDICAL', 46.75, 48.00,
  11398323);
insert into STOCK values (
  'AUGUST ENTERPRISES', 'AGE', 'MEDICAL', 15.00, 15.00,
  12221711);
insert into STOCK values (
  'BRANDON ELLIPSIS', 'BELP', 'SPACE', 32.75, 33.50,
  25789769);
insert into STOCK values (
  'GENERAL ENTROPY', 'GENT', 'SPACE', 64.25, 66.00,
  7598562);
insert into STOCK values (
  'GENEVA ROCKETRY', 'GENR', 'SPACE', 22.75, 27.25,
  22533944);

```

```

insert into STOCK values (
  'HAYWARD ANTISEPTIC', 'HAYW', 'MEDICAL', 104.25, 106.00,
  3358561);
insert into STOCK values (
  'IDK', 'IDK', 'ELECTRONICS', 95.00, 95.25,
  9443523);
insert into STOCK values (
  'INDIA COSMETICS', 'INDI', 'COSMETICS', 30.75, 30.75,
  8134878);
insert into STOCK values (
  'ISAIAH JAMES STORAGE', 'IJS', 'TRANSPORTATION', 13.25, 13.75,
  22112171);
insert into STOCK values (
  'KDK AIRLINES', 'KDK', 'TRANSPORTATION', 85.00, 85.25,
  7481566);
insert into STOCK values (
  'KENTGEN BIOPHYSICS', 'KENT', 'MEDICAL', 18.25, 19.50,
  6636863);
insert into STOCK values (
  'LAVAY COSMETICS', 'LAVA', 'COSMETICS', 21.50, 22.00,
  3341542);
insert into STOCK values (
  'LOCAL DEVELOPMENT', 'LOCD', 'AGRICULTURE', 26.75, 27.25,
  2596934);
insert into STOCK values (
  'MAXTIDE', 'MAXT', 'TRANSPORTATION', 8.25, 8.00,
  2836893);
insert into STOCK values (
  'MBK COMMUNICATIONS', 'MBK', 'ADVERTISING', 43.25, 41.00,
  10022980);
insert into STOCK values (
  'MEMORY GRAPHICS', 'MEMG', 'ELECTRONICS', 15.50, 14.25,
  4557992);
insert into STOCK values (
  'MICRO TOKEN', 'MICT', 'ELECTRONICS', 77.00, 76.50,
  25205667);
insert into STOCK values (
  'NANCY LEE FEATURES', 'NLF', 'ADVERTISING', 13.50, 14.25,
  14222692);
insert into STOCK values (
  'NORTHERN BOREAL', 'NBOR', 'SPACE', 26.75, 28.00,
  1348323);
insert into STOCK values (
  'OCKHAM SYSTEMS', 'OCKS', 'SPACE', 21.50, 22.00,
  7052990);
insert into STOCK values (
  'OSCAR COAL DRAYAGE', 'OCD', 'TRANSPORTATION', 87.00, 88.50,

```

```
25798992);
insert into STOCK values (
  'ROBERT JAMES APPAREL', 'RJAP', 'GARMENT', 23.25, 24.00,
  19032481);
insert into STOCK values (
  'SOUP SENSATIONS', 'SOUP', 'AGRICULTURE', 16.25, 16.75,
  22574879);
insert into STOCK values (
  'WONDER LABS', 'WOND', 'SPACE', 5.00, 5.00,
  2553712);
```

The TROUBLE Table

```
drop table TROUBLE;
create table TROUBLE (
  City          VARCHAR2(13) NOT NULL,
  SampleDate   DATE NOT NULL,
  Noon         NUMBER(4,1),
  Midnight     NUMBER(4,1),
  Precipitation NUMBER
);

insert into TROUBLE values ('PLEASANT LAKE',
  TO_DATE('21-MAR-1999','DD-MON-YYYY'), 39.99, -1.31, 3.6);
insert into TROUBLE values ('PLEASANT LAKE',
  TO_DATE('22-JUN-1999','DD-MON-YYYY'), 101.44, 86.2, 1.63);
insert into TROUBLE values ('PLEASANT LAKE',
  TO_DATE('23-SEP-1999','DD-MON-YYYY'), 92.85, 79.6, 1.00003);
insert into TROUBLE values ('PLEASANT LAKE',
  TO_DATE('22-DEC-1999','DD-MON-YYYY'), -17.445, -10.4, 2.4);
```

The TWONAME Table

```
drop table TWONAME;
create table TWONAME (
  FirstName   VARCHAR2(25),
  LastName    VARCHAR2(25)
);
```

The WEATHER Table

```
drop table WEATHER;
create table WEATHER (
```

```

City          VARCHAR2(11),
Temperature  NUMBER,
Humidity     NUMBER,
Condition    VARCHAR2(9)
);

insert into WEATHER values ('LIMA',45,79,'RAIN');
insert into WEATHER values ('PARIS',81,62,'CLOUDY');
insert into WEATHER values ('MANCHESTER',66,98,'FOG');
insert into WEATHER values ('ATHENS',97,89,'SUNNY');
insert into WEATHER values ('CHICAGO',66,88,'RAIN');
insert into WEATHER values ('SYDNEY',29,12,'SNOW');
insert into WEATHER values ('SPARTA',74,63,'CLOUDY');

```

The WORKER Table

```

drop table WORKER;
create table WORKER (
Name          VARCHAR2(25) not null,
Age          NUMBER,
Lodging      VARCHAR2(15)
);

insert into WORKER values ('BART SARJEANT',22,'CRANMER');
insert into WORKER values ('ELBERT TALBOT',43,'WEITBROCHT');
insert into WORKER values ('DONALD ROLLO',16,'MATTS');
insert into WORKER values ('JED HOPKINS',33,'MATTS');
insert into WORKER values ('WILLIAM SWING',15,'CRANMER');
insert into WORKER values ('JOHN PEARSON',27,'ROSE HILL');
insert into WORKER values ('GEORGE OSCAR',41,'ROSE HILL');
insert into WORKER values ('KAY AND PALMER WALLBOM',
null,'ROSE HILL');
insert into WORKER values ('PAT LAVAY',21,'ROSE HILL');
insert into WORKER values ('RICHARD KOCH AND BROTHERS',
null,'WEITBROCHT');
insert into WORKER values ('DICK JONES',18,'ROSE HILL');
insert into WORKER values ('ADAH TALBOT',23,'PAPA KING');
insert into WORKER values ('ROLAND BRANDT',35,'MATTS');
insert into WORKER values ('PETER LAWSON',25,'CRANMER');
insert into WORKER values ('VICTORIA LYNN',32,'MULLERS');
insert into WORKER values ('WILFRED LOWELL',67,null);
insert into WORKER values ('HELEN BRANDT',15,null);
insert into WORKER values ('GERHARDT KENTGEN',55,'PAPA KING');
insert into WORKER values ('ANDREW DYE',29,'ROSE HILL');

```

The WORKERSKILL Table

```
drop table WORKERSKILL;
create table WORKERSKILL (
  Name          VARCHAR2(25) not null,
  Skill         VARCHAR2(25) not null,
  Ability       VARCHAR2(15)
);

insert into WORKERSKILL values ('DICK JONES', 'SMITHY', 'EXCELLENT');
insert into WORKERSKILL values ('JOHN PEARSON', 'COMBINE DRIVER', null);
insert into WORKERSKILL values ('JOHN PEARSON', 'SMITHY', 'AVERAGE');
insert into WORKERSKILL values ('HELEN BRANDT', 'COMBINE DRIVER', 'VERY
    FAST');

insert into WORKERSKILL values ('JOHN PEARSON', 'WOODCUTTER', 'GOOD');
insert into WORKERSKILL values ('VICTORIA LYNN', 'SMITHY', 'PRECISE');
insert into WORKERSKILL values ('ADAH TALBOT', 'WORK', 'GOOD');
insert into WORKERSKILL values ('WILFRED LOWELL', 'WORK', 'AVERAGE');
insert into WORKERSKILL values ('ELBERT TALBOT', 'DISCUS', 'SLOW');
insert into WORKERSKILL values ('WILFRED LOWELL', 'DISCUS', 'AVERAGE');
```