Name: Daymon Wu

CUNYID: 23556290

Last 4 Digits: 6290

Session: CSCI 331 32[33506] MW 8PM

Professor Daniel Levitt

Submission Date: 3/29/2023

Project 2

Professor Leavitt

Database 331 Project 2

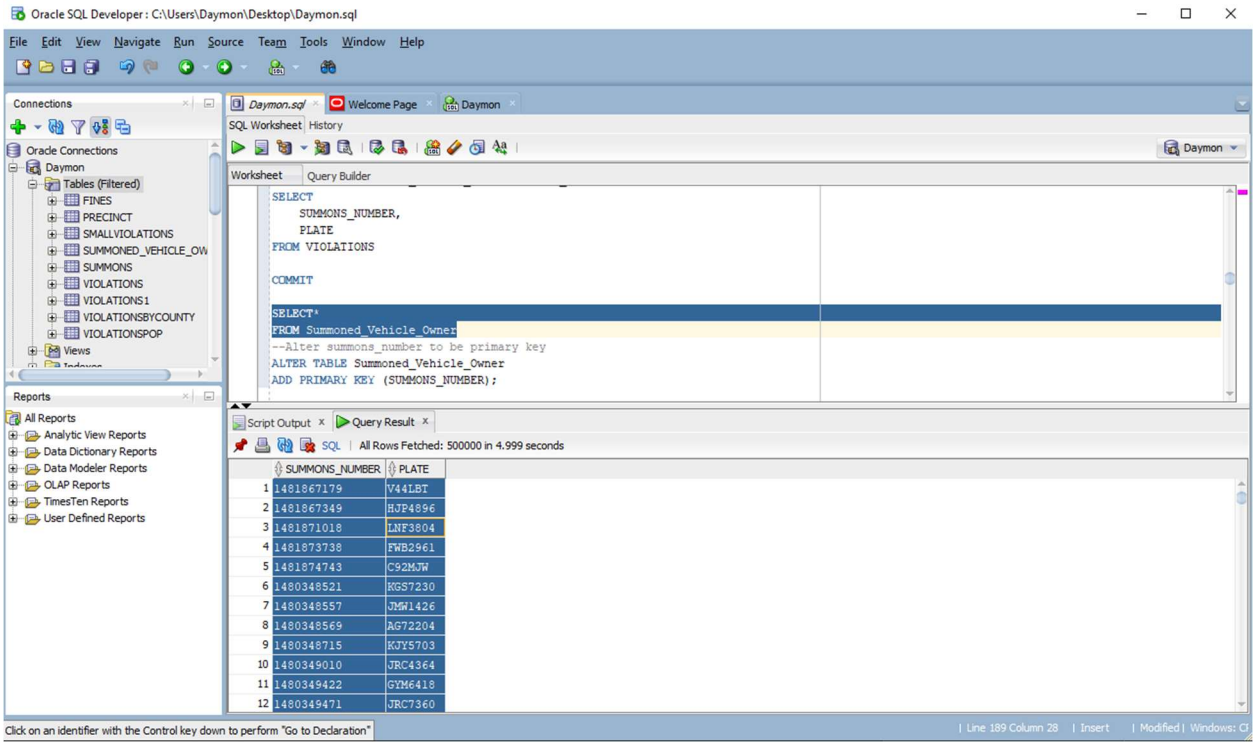
Daymon Wu

23556290

Normalization:

TABLE 1: SUMMONED VEHICLE OWNER

```
CREATE TABLE Summoned_Vehicle_Owner(
    SUMMONS_NUMBER VARCHAR2(36 Byte),
    PLATE VARCHAR2(26 Byte)
);
INSERT INTO Summoned_Vehicle_Owner(SUMMONS_NUMBER, PLATE)
SELECT
    SUMMONS_NUMBER,
    PLATE
FROM VIOLATIONS
--Alter summons_number to be primary key
ALTER TABLE Summoned_Vehicle_Owner
ADD PRIMARY KEY (SUMMONS_NUMBER);
```

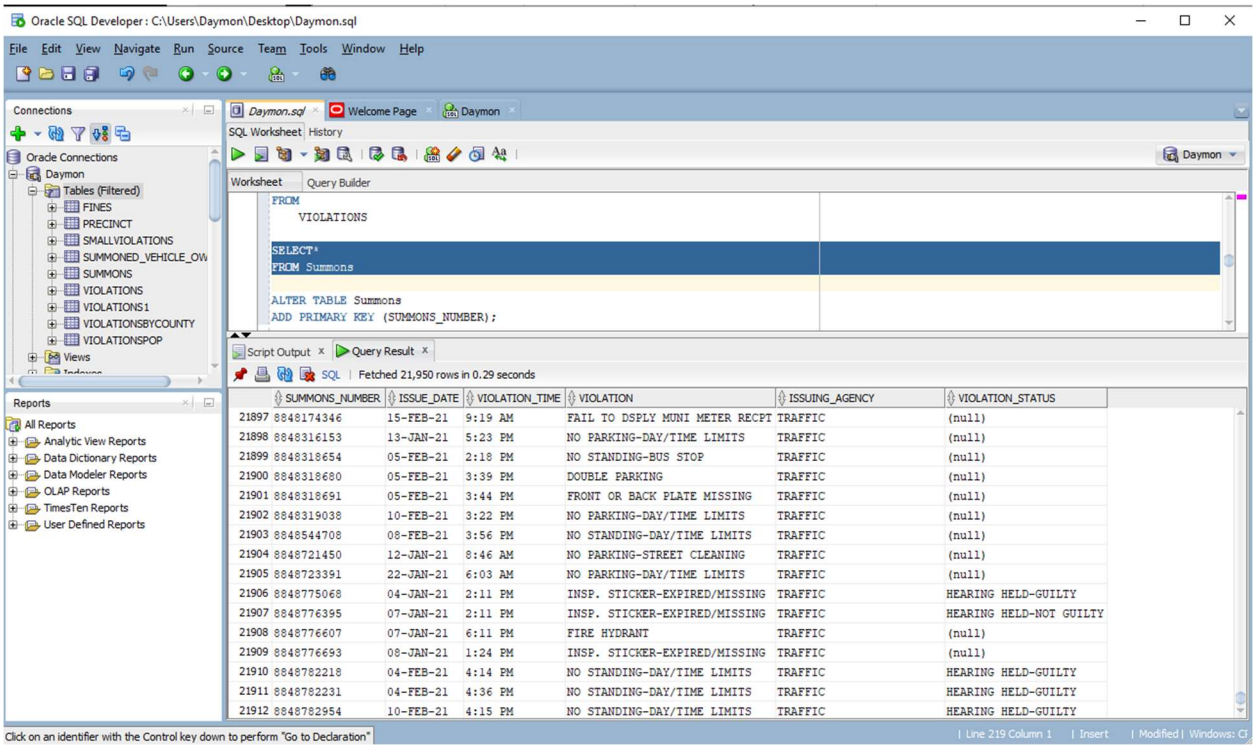


PRINTOUT OF TABLE 1:

SUMMONS_NUMBER	PLATE
1481867179	V44LBT
1481867349	HJP4896
1481871018	LNF3804
1481873738	FWB2961
1481874743	C92MJW
1480348521	KGS7230
1480348557	JMW1426
1480348569	AG72204
1480348715	KJY5703
1480349010	JRC4364
1480349422	GYM6418
1480349471	JRC7360
1480349495	AY31507
1480349501	T682740C
1480349562	HYS4820
1480349604	JJM2468
1480349630	HCL1992
1472224887	KGG3094
1480349690	JRW1845
1480350266	934YTM
1480351430	KKG3236
1480351441	HVY8308
1480351570	KEH3049
1480359580	JGZ9947
1480359634	JNB1833
1480359646	KKT1206

TABLE 2: SUMMONS

```
CREATE TABLE Summons(
   SUMMONS_NUMBER VARCHAR2(36 Byte),
   ISSUE_DATE DATE,
   VIOLATION_TIME VARCHAR2(26 Byte),
   VIOLATION VARCHAR2(128 Byte),
   ISSUING_AGENCY VARCHAR2(40 Byte),
   VIOLATION_STATUS VARCHAR2(128 Byte)
);
INSERT INTO
Summons(SUMMONS_NUMBER,ISSUE_DATE,VIOLATION_TIME,VIOLATION,ISSUING
_AGENCY,VIOLATION_STATUS)
SELECT
   SUMMONS_NUMBER,
   ISSUE_DATE,
   VIOLATION_TIME,
   VIOLATION,
   ISSUING_AGENCY,
   VIOLATION_STATUS
FROM
   VIOLATIONS
ALTER TABLE Summons
ADD PRIMARY KEY (SUMMONS_NUMBER);
```



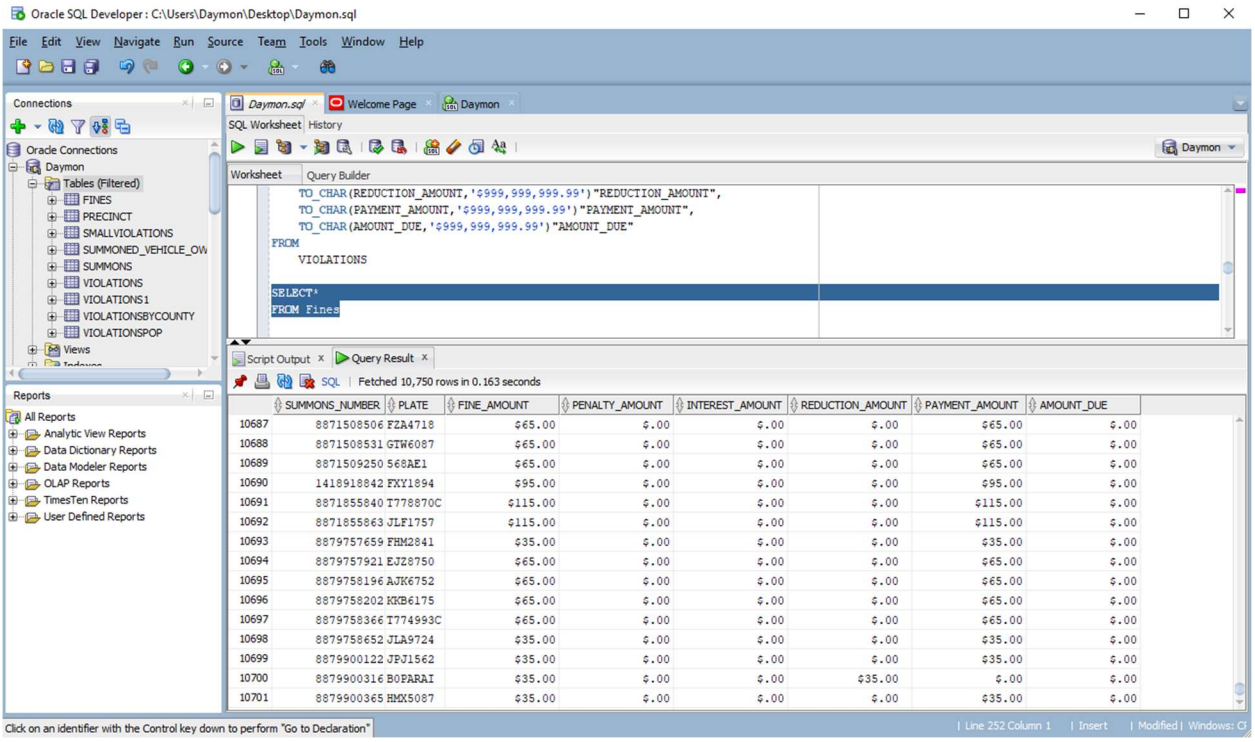
PRINTOUT OF TABLE 2:

SUMMONS_NUMBER	ISSUE_DATE	VIOLATION_TIME	VIOLATION	ISSUING_AGENCY	VIOLATION_STATUS
1471785932	8-Mar-21	6:02 AM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	
1466147623	15-Jan-21	10:01 AM	NO STANDING-EXC. AUTH. VEHICLE	OTHER/UNKNOWN AGENCIES	
1472358259	5-Feb-21	3:13 AM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	HEARING HELD-GUILTY
1472362627	10-Feb-21	3:00 AM	STORAGE-3HR COMMERCIAL	POLICE DEPARTMENT	
1472408937	10-Feb-21	10:25 PM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	
1472435783	9-Feb-21	5:39 AM	FIRE HYDRANT	POLICE DEPARTMENT	
1479981096	16-Feb-21	7:38 AM	NO PARKING-STREET CLEANING	DEPARTMENT OF SANITATION	
1476108810	6-Feb-21	8:20 AM	TRAFFIC LANE	POLICE DEPARTMENT	
1471499686	2-Jan-21	2:05 AM	FIRE HYDRANT	POLICE DEPARTMENT	
1477852566	22-Feb-21	4:10 AM	FIRE HYDRANT	DEPARTMENT OF SANITATION	

1478728395	16-Feb-21	4:12 AM	NO PARKING-DAY/TIME LIMITS	OTHER/UNKNOWN AGENCIES	
1471771519	22-Feb-21	7:30 PM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	
1472470515	7-Feb-21	8:58 AM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	
1472492444	10-Feb-21	7:13 PM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	
1476723989	2-Mar-21	4:22 PM	NO STANDING-DAY/TIME LIMITS	POLICE DEPARTMENT	
1471720494	3-Jan-21	8:26 PM	STORAGE-3HR COMMERCIAL	POLICE DEPARTMENT	
1471547887	13-Jan-21	6:21 AM	FIRE HYDRANT	POLICE DEPARTMENT	HEARING HELD-NOT GUILTY
1482394339	9-Mar-21	7:12 PM	NO STANDING-BUS STOP	POLICE DEPARTMENT	
1471775069	4-Jan-21	6:55 PM	NO STANDING-BUS STOP	POLICE DEPARTMENT	HEARING HELD-NOT GUILTY
1482394390	10-Mar-21	5:35 PM	NO STANDING-BUS STOP	POLICE DEPARTMENT	HEARING HELD-NOT GUILTY
1473222552	4-Jan-21	11:30 AM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	
1472301882	1-Jan-21	5:42 PM	INSP. STICKER-EXPIRED/MISSING	POLICE DEPARTMENT	
1472335193	3-Jan-21	10:45 PM	OBSTRUCTING DRIVEWAY	POLICE DEPARTMENT	

TABLE 3: FINES

```
CREATE TABLE Fines(
   SUMMONS_NUMBER VARCHAR2(36 Byte),
   PLATE VARCHAR2(26 Byte),
   FINE_AMOUNT NUMBER(38,0),
   PENALTY_AMOUNT NUMBER(38,0),
   INTEREST_AMOUNT NUMBER(38,2),
   REDUCTION_AMOUNT NUMBER(38,2),
   PAYMENT_AMOUNT NUMBER(38,2),
   AMOUNT_DUE NUMBER(38,0)
);
INSERT INTO
Fines(SUMMONS_NUMBER,PLATE,FINE_AMOUNT,PENALTY_AMOUNT,INTEREST_A
MOUNT,REDUCTION_AMOUNT,PAYMENT_AMOUNT,AMOUNT_DUE)
SELECT
   SUMMONS_NUMBER,
   PLATE,
   TO_CHAR(FINE_AMOUNT,'$999,999,999.99')"FINE_AMOUNT",
   TO_CHAR(PENALTY_AMOUNT,'$999,999,999.99')"PENALTY_AMOUNT",
   TO_CHAR(INTEREST_AMOUNT,'$999,999,999.99')"INTEREST_AMOUNT",
   TO_CHAR(REDUCTION_AMOUNT,'$999,999,999.99')"REDUCTION_AMOUNT",
   TO_CHAR(PAYMENT_AMOUNT,'$999,999,999.99')"PAYMENT_AMOUNT",
   TO_CHAR(AMOUNT_DUE,'$999,999,999.99')"AMOUNT_DUE"
FROM
   VIOLATIONS
ALTER TABLE Summons
ADD PRIMARY KEY (SUMMONS_NUMBER);
```



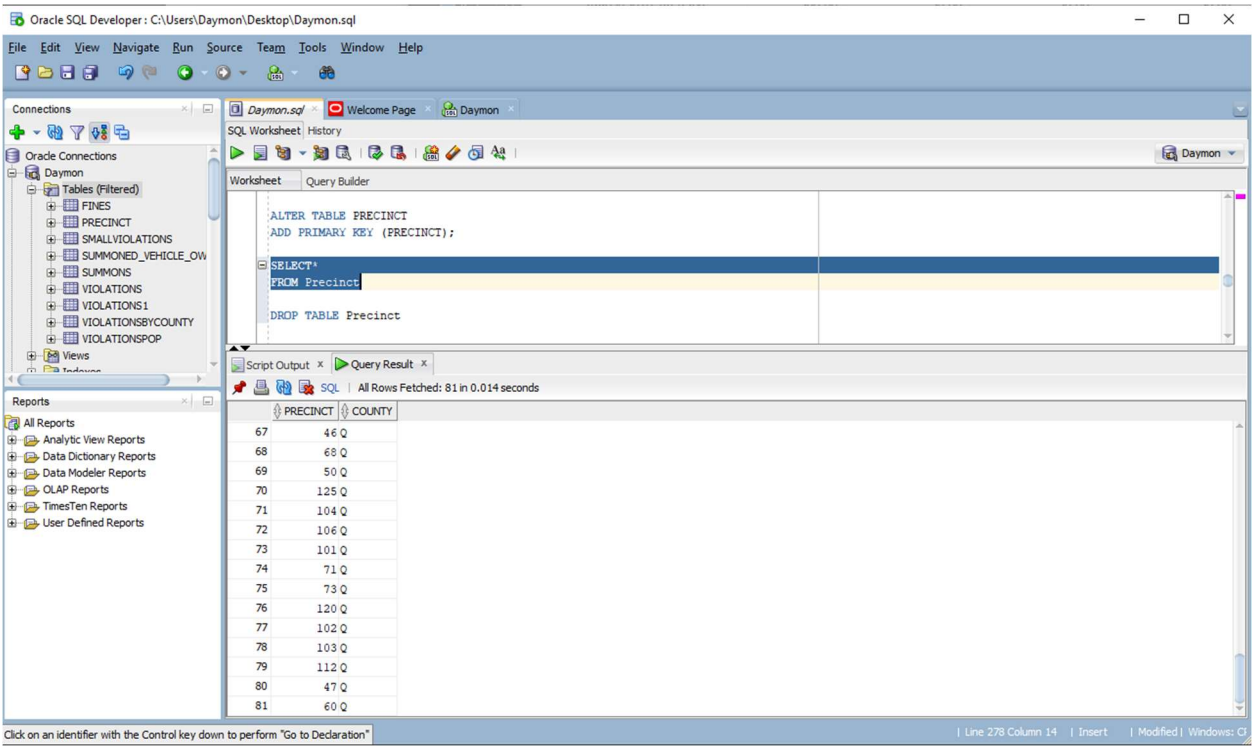
PRINTOUT OF TABLE 3:

SUMMONS_NUMBER	PLATE	FINE_AMOUNT	PENALTY_AMOUNT	INTEREST_AMOUNT	REDUCTION_AMOUNT	PAYMENT_AMOUNT	AMOUNT_DUE
1481867179	V44LBT	$95.00	$0.00	$0.00	$0.00	$95.00	$0.00
1481867349	HJP4896	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1481871018	LNF3804	$95.00	$0.00	$0.00	$0.00	$95.00	$0.00
1481873738	FWB2961	$115.00	$0.00	$0.00	$0.00	$115.00	$0.00
1481874743	C92MJW	$115.00	$0.00	$0.00	$0.00	$115.00	$0.00
1480348521	KGS7230	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480348557	JMW1426	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480348569	AG72204	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480348715	KJY5703	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480349010	JRC4364	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480349422	GYM6418	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480349471	JRC7360	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480349495	AY31507	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00

1480349501	T682 740C	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480349562	HYS 4820	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480349604	JJM2 468	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480349630	HCL 1992	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1472224887	KGG 3094	$95.00	$0.00	$0.00	$0.00	$95.00	$0.00
1480349690	JRW 1845	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480350266	934Y TM	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480351430	KKG 3236	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480351441	HVY 8308	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480351570	KEH 3049	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480359580	JGZ9 947	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480359634	JNB1 833	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480359646	KKT 1206	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480359853	FER1 320	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480360843	JCJ6 076	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480360934	FPA1 551	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480360983	JMZ8 472	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1480365312	JRU2 230	$60.00	$0.00	$0.00	$0.00	$60.00	$0.00
1307574671	KFM 5558	$95.00	$0.00	$0.00	$0.00	$95.00	$0.00

TABLE 4: PRECINCT

```
CREATE TABLE Precinct(
   PRECINCT NUMBER(38,0),
   COUNTY VARCHAR2(26 BYTE)
);
INSERT INTO Precinct(PRECINCT,COUNTY)
SELECT
DISTINCT
   PRECINCT,
   COUNTY
FROM VIOLATIONS
ALTER TABLE PRECINCT
ADD PRIMARY KEY (PRECINCT);
```

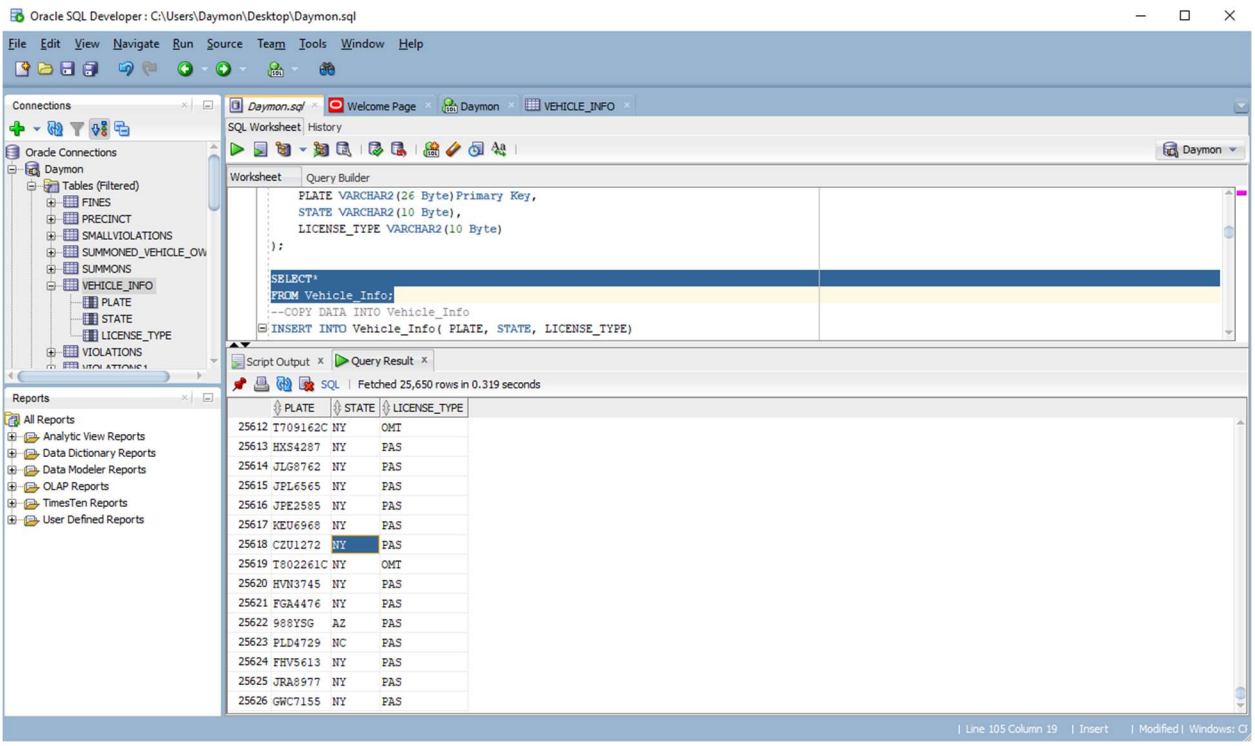


PRINTOUT OF TABLE 4:

PRECINCT	COUNTY
108	Q
107	Q
61	Q
119	Q
9	Q
100	Q
75	Q
14	Q
170	Q
26	Q
72	Q
105	Q
83	Q
116	Q
44	Q
174	Q
19	Q
0	Q
25	Q
165	Q
114	Q
118	Q
70	Q
40	Q
63	Q
77	Q

TABLE 5: VEHICLE_INFO

```
CREATE TABLE Vehicle_Info(
   PLATE VARCHAR2(26 Byte)Primary Key,
   STATE VARCHAR2(10 Byte),
   LICENSE_TYPE VARCHAR2(10 Byte)
);
INSERT INTO Vehicle_Info( PLATE, STATE, LICENSE_TYPE)
SELECT
DISTINCT
   PLATE,
   STATE,
   LICENSE_TYPE
FROM
   VIOLATIONS
ALTER TABLE Vehicle_Info
ADD PRIMARY KEY(PLATE);
```



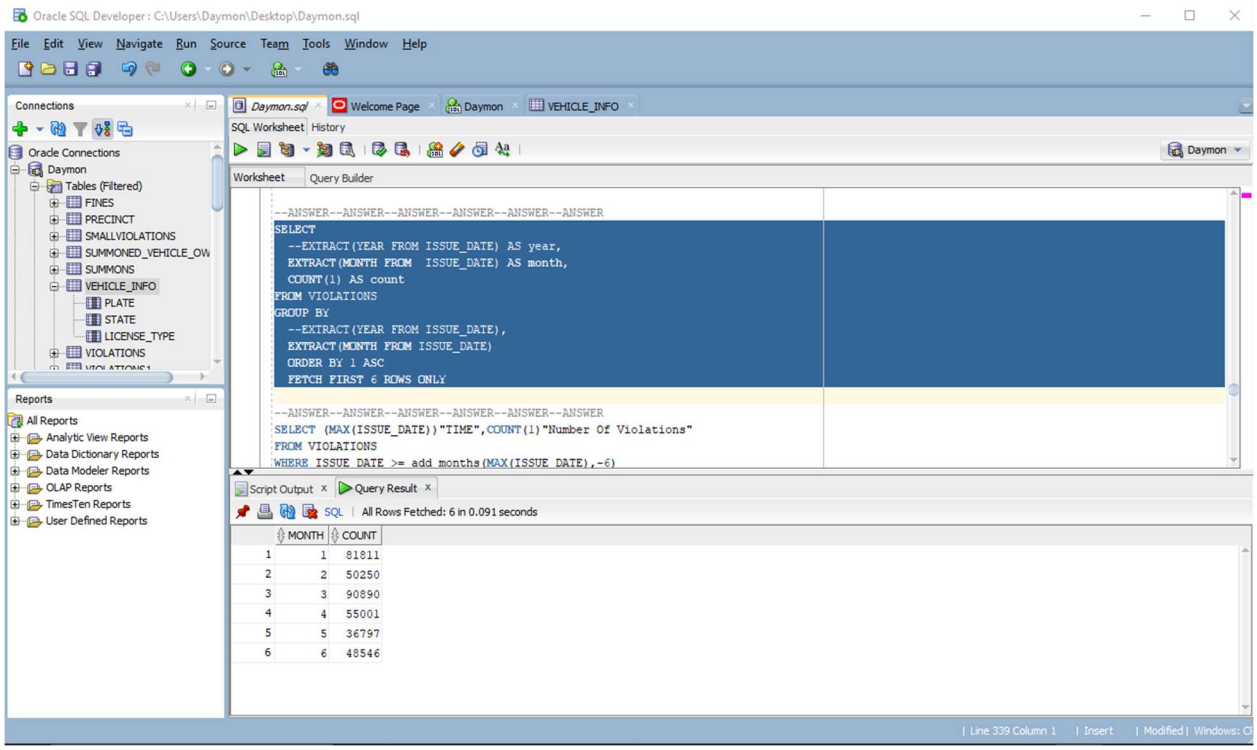
PRINTOUT OF TABLE 5:

PLATE	STATE	LICENSE_TYPE
JJM6670	NY	PAS
JEJ4142	NY	PAS
JDZ7865	NY	PAS
JMU5567	NY	PAS
JPD8137	NY	PAS
LLW8518	PA	PAS
T765242C	NY	OMT
GPK9309	NY	PAS
GTY1542	NY	PAS
KDD1813	NY	PAS
JRC7603	NY	PAS
M068821	OH	PAS
JAU8279	NY	PAS
GXF9181	NY	PAS
DCS8240	NY	PAS
HZK4891	NY	PAS
F70LYM	NJ	PAS
ELL4422	NY	PAS
HVY7042	NY	PAS
HAC2627	NY	PAS
T709493C	NY	OMT
JRC7027	NY	PAS
JFG7449	NY	PAS
EAZ8950	NY	PAS
HYX9917	NY	PAS
JFZ8187	NY	PAS

QUESTIONS:

1. Identify the number of violations for a 6-month period. Display 1 row with the number of violations.

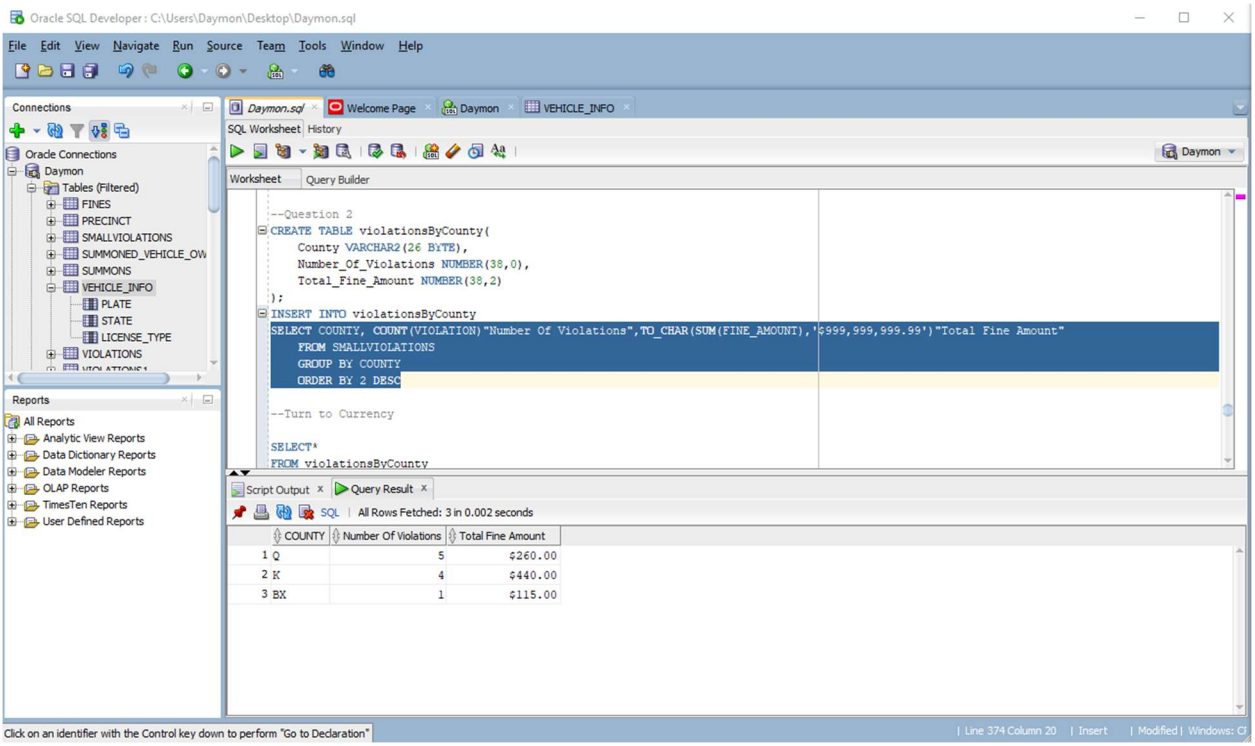
```
SELECT
  EXTRACT(MONTH FROM  ISSUE_DATE) AS month,
  COUNT(1) AS count
FROM VIOLATIONS
GROUP BY
  EXTRACT(MONTH FROM ISSUE_DATE)
  ORDER BY 1 ASC
  FETCH FIRST 6 ROWS ONLY
```



MONTH	COUNT
1	81811
2	50250
3	90890
4	55001
5	36797
6	48546

2. Identify the violations by county. Display 3 columns: county, number of violations, total fine amount. The county with the largest number of violations is displayed first. Display 1 row for each distinct county.

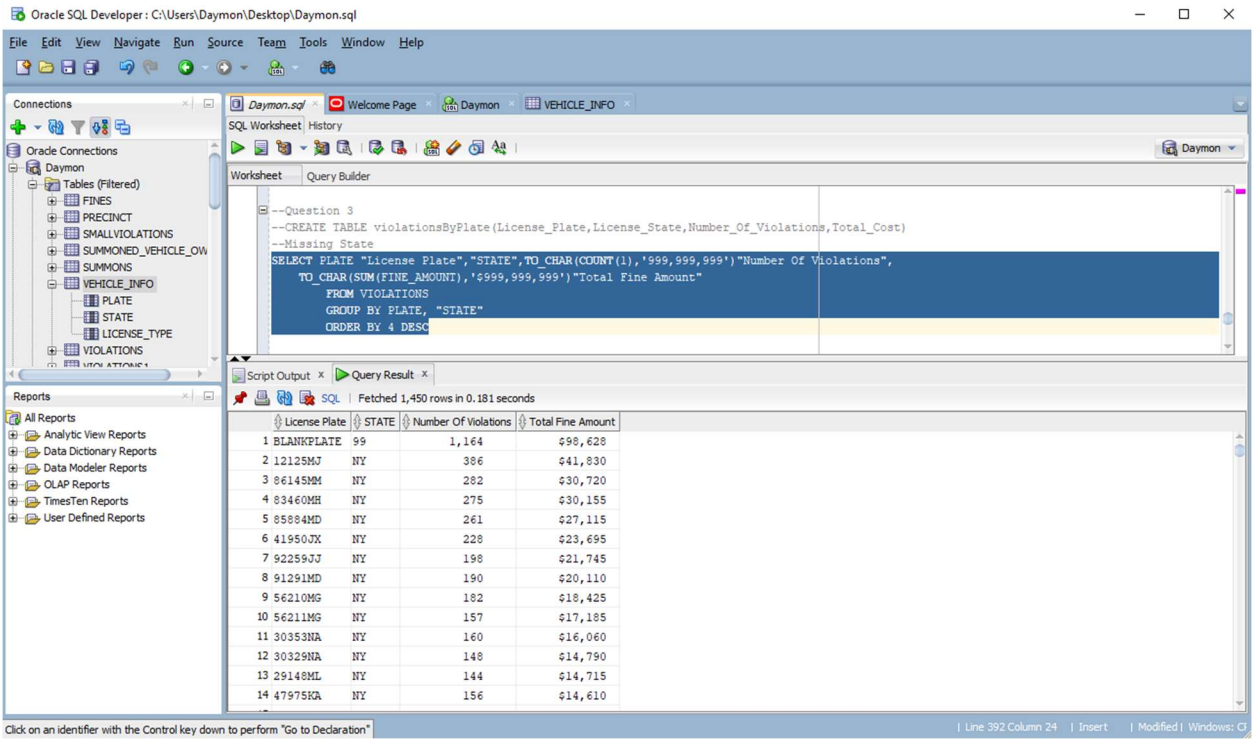
```
SELECT COUNTY, COUNT(VIOLATION)"Number Of
Violations",TO_CHAR(SUM(FINE_AMOUNT),'$999,999,999.99')"Total Fine Amount"
   FROM SMALLVIOLATIONS
   GROUP BY COUNTY
   ORDER BY 2 DESC
```



COUNTY	Number Of Violations	Total Fine Amount
Q	5	$260.00
K	4	$440.00
BX	1	$115.00

3. Identify the violations by license plate. Display 4 columns: License plate, license state, number of violations and total cost. The license plate with the most violations is displayed first. Display 1 row for each distinct license plate.

```
SELECT PLATE "License Plate","STATE",TO_CHAR(COUNT(1),'999,999,999')"Number Of Violations",
   TO_CHAR(SUM(FINE_AMOUNT),'$999,999,999')"Total Fine Amount"
      FROM VIOLATIONS
      GROUP BY PLATE, "STATE"
      ORDER BY 4 DESC
```

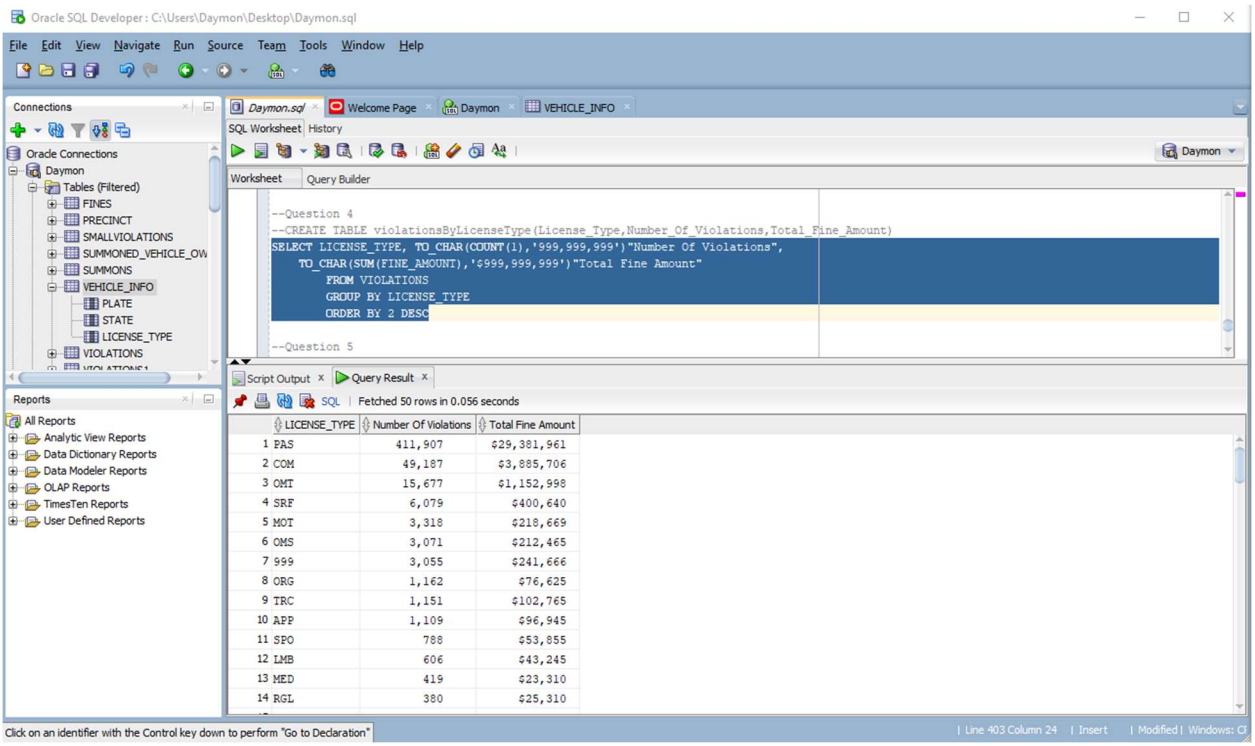


License Plate	STATE	Number Of Violations	Total Fine Amount
BLANKPLATE	99	1,164	$98,628
12125MJ	NY	386	$41,830
86145MM	NY	282	$30,720
83460MH	NY	275	$30,155
85884MD	NY	261	$27,115
41950JX	NY	228	$23,695
92259JJ	NY	198	$21,745
91291MD	NY	190	$20,110
56210MG	NY	182	$18,425
56211MG	NY	157	$17,185
30353NA	NY	160	$16,060
30329NA	NY	148	$14,790

29148ML	NY	144	$14,715
47975KA	NY	156	$14,610
92253JJ	NY	145	$14,085
75142MB	NY	147	$13,985
66788ME	NY	131	$13,245
41962JX	NY	121	$11,940
44184MK	NY	124	$11,890
95492MD	NY	119	$11,285
12039MJ	NY	103	$10,125
88502JU	NY	127	$10,125
62189MM	NY	96	$9,840
28559MH	NY	101	$9,790
85849MD	NY	93	$9,695
66783ME	NY	115	$9,565
62191MM	NY	90	$9,490
41825JX	NY	88	$9,075
41958JX	NY	91	$9,030
12922JB	NY	87	$8,860
22215MM	NY	82	$8,660
44119MK	NY	94	$8,570
62227MM	NY	79	$8,530
26302TC	NY	98	$8,500
44139MK	NY	80	$8,270
30248NA	NY	80	$8,225
60304MD	NY	79	$8,015
88356JX	NY	70	$7,400
80635JW	NY	88	$7,395
59907MJ	NY	80	$7,385
58915MM	NY	75	$7,065
11761ME	NY	115	$6,785
58912MM	NY	67	$6,705
52511JZ	NY	74	$6,695
12349JB	NY	62	$6,680
29159ML	NY	69	$6,670
12343MG	NY	60	$6,345
22171MM	NY	73	$6,205
12341MG	NY	64	$6,200
89365MJ	NY	64	$6,160
44141MK	NY	60	$6,120
12121MJ	NY	63	$6,115
86008JV	NY	57	$6,105
22212MM	NY	58	$6,055
86615MG	NY	66	$6,020
18420JU	NY	60	$6,020
67655MC	NY	58	$6,020
62273MM	NY	64	$6,010

4. Identify the violations by license type. Display 3 columns: license type, number of violations and total fine amount. The license type with the most violations is displayed first. Display 1 row for each distinct license type.

```
SELECT LICENSE_TYPE, TO_CHAR(COUNT(1),'999,999,999')"Number Of Violations",
    TO_CHAR(SUM(FINE_AMOUNT),'$999,999,999')"Total Fine Amount"
        FROM VIOLATIONS
        GROUP BY LICENSE_TYPE
        ORDER BY 2 DESC
```

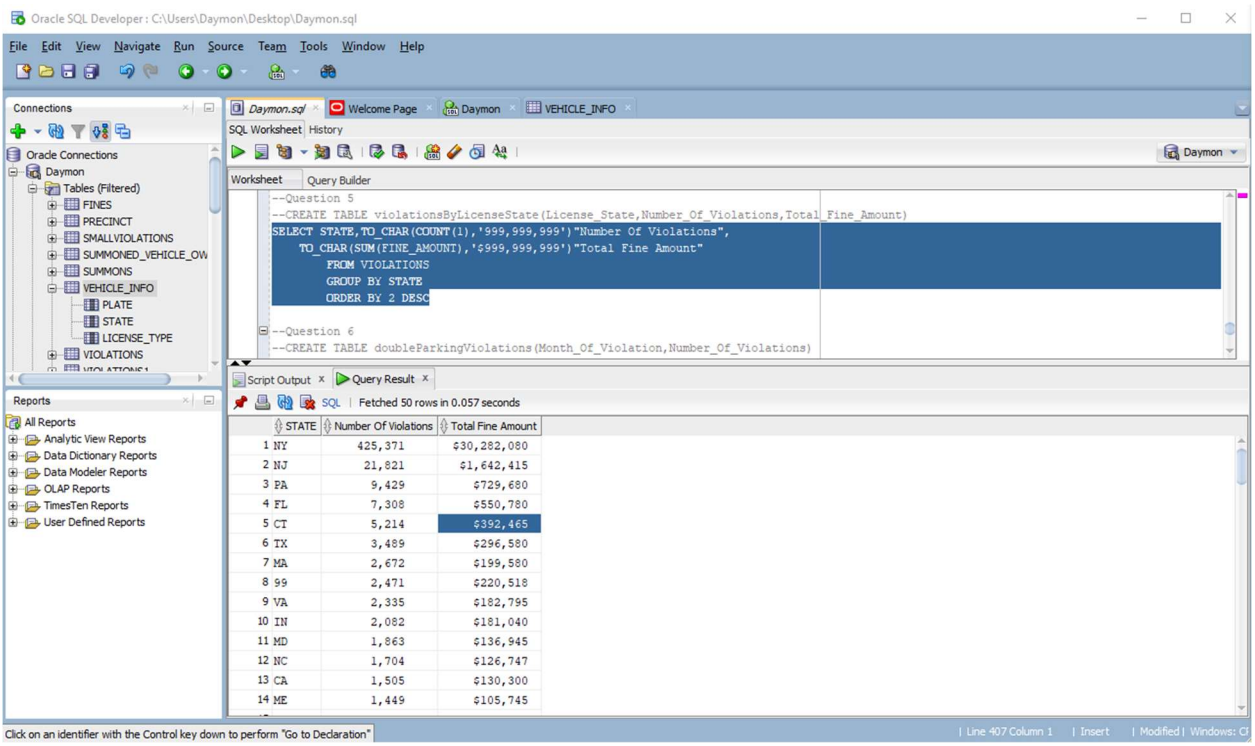


LICENSE_TYPE	Number Of Violations	Total Fine Amount
PAS	411,907	$29,381,961
COM	49,187	$3,885,706
OMT	15,677	$1,152,998
SRF	6,079	$400,640
MOT	3,318	$218,669
OMS	3,071	$212,465
999	3,055	$241,666
ORG	1,162	$76,625
TRC	1,151	$102,765
APP	1,109	$96,945
SPO	788	$53,855

LMB	606	$43,245
MED	419	$23,310
RGL	380	$25,310
OMR	362	$22,845
TRL	248	$13,670
CMB	247	$17,595
TOW	241	$18,355
ITP	139	$9,350
DLR	138	$9,020
OML	129	$9,770
HIS	104	$6,900
SCL	87	$4,465
VAS	61	$3,885
TRA	61	$5,190
SRN	53	$3,395
IRP	50	$5,770
MCL	37	$2,560
MCD	25	$1,715
OMV	14	$685
SEM	12	$590
STG	9	$545
HAM	8	$565
AGR	8	$615
PHS	8	$560
BOB	7	$575
SPC	6	$570
LTR	5	$245
NLM	4	$260
AYG	4	$310
ARG	4	$310
SOS	3	$225
RGC	3	$160
NYC	2	$230
NYS	2	$130
CHC	2	$180
BOT	1	$65
CSP	1	$115
LUA	1	$115
AMB	1	$35
CMH	1	$65
LMC	1	$65
AGC	1	$65

5. Identify violations by license plate state. Display 3 columns: state, number of violations and total fine amount. The state with the most violations is displayed first. Display 1 row for each distinct state.

```
SELECT STATE,TO_CHAR(COUNT(1),'999,999,999')"Number Of Violations",
   TO_CHAR(SUM(FINE_AMOUNT),'$999,999,999')"Total Fine Amount"
      FROM VIOLATIONS
      GROUP BY STATE
      ORDER BY 2 DESC
```

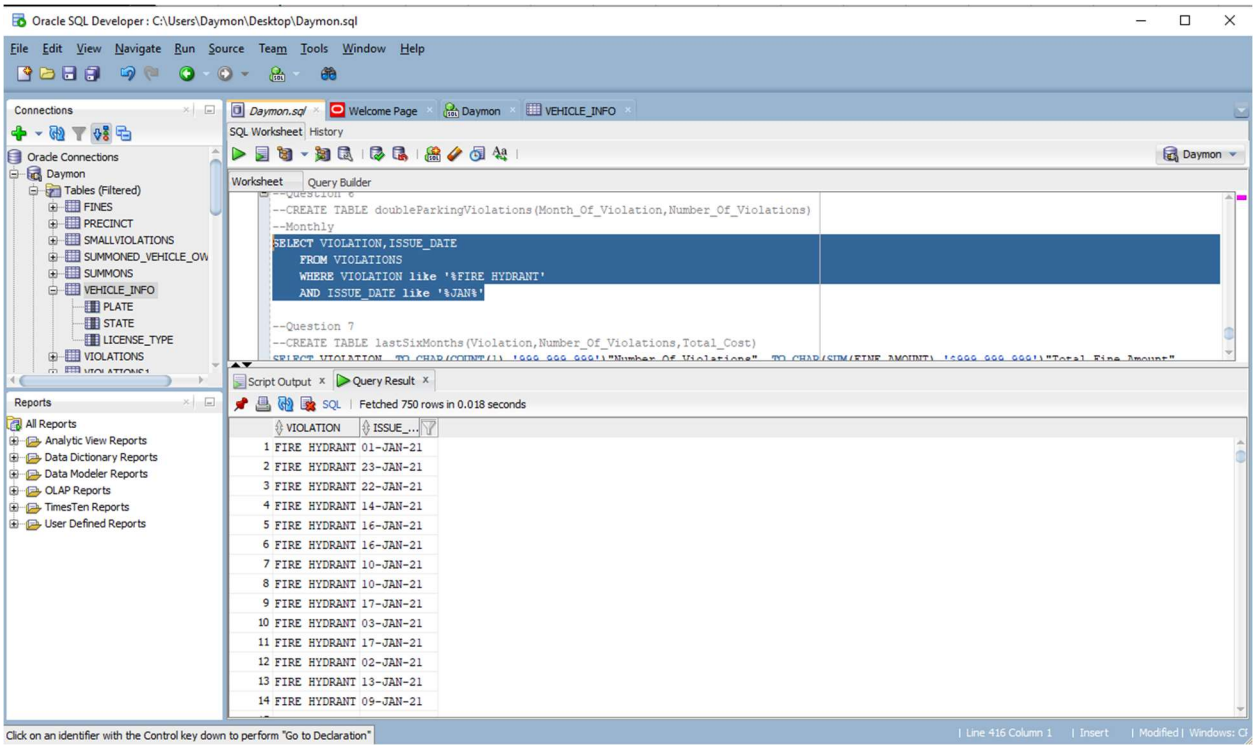


STATE	Number Of Violations	Total Fine Amount
NY	425,371	$30,282,080
NJ	21,821	$1,642,415
PA	9,429	$729,680
FL	7,308	$550,780
CT	5,214	$392,465
TX	3,489	$296,580
MA	2,672	$199,580
99	2,471	$220,518
VA	2,335	$182,795
IN	2,082	$181,040
MD	1,863	$136,945
NC	1,704	$126,747
CA	1,505	$130,300
ME	1,449	$105,745
IL	1,392	$115,795

GA	1,262	$96,435
OH	949	$73,665
AZ	855	$67,505
TN	759	$55,465
SC	673	$53,095
MI	556	$41,795
WI	471	$40,210
DE	436	$33,565
RI	363	$26,685
WA	363	$27,950
AL	294	$22,820
NH	281	$20,530
OK	232	$18,175
MN	230	$18,055
VT	207	$14,795
CO	190	$14,790
MO	187	$14,915
KY	168	$12,835
OR	153	$13,040
LA	135	$10,270
ON	114	$8,115
MS	100	$7,175
IA	89	$6,820
AR	88	$6,600
WV	88	$6,645
SD	82	$7,355
UT	63	$5,280
KS	59	$4,520
NE	58	$4,475
DC	57	$4,500
NV	54	$4,655
NM	43	$3,350
DP	39	$2,960
MT	39	$3,290
QB	34	$2,350
ID	26	$2,105
WY	25	$2,060
ND	21	$1,535
HI	13	$870
AK	11	$960
AB	7	$650
PR	5	$350
NB	5	$375
GV	3	$245
BC	3	$345
FO	2	$70
NT	2	$160
NS	1	$115

6. Identify FIRE HYDRANT violations by JAN. Display 2 columns: JAN and number of violations. Order by JAN.

```
SELECT VIOLATION,ISSUE_DATE
   FROM VIOLATIONS
   WHERE VIOLATION like '%FIRE HYDRANT'
   AND ISSUE_DATE like '%JAN%'
```

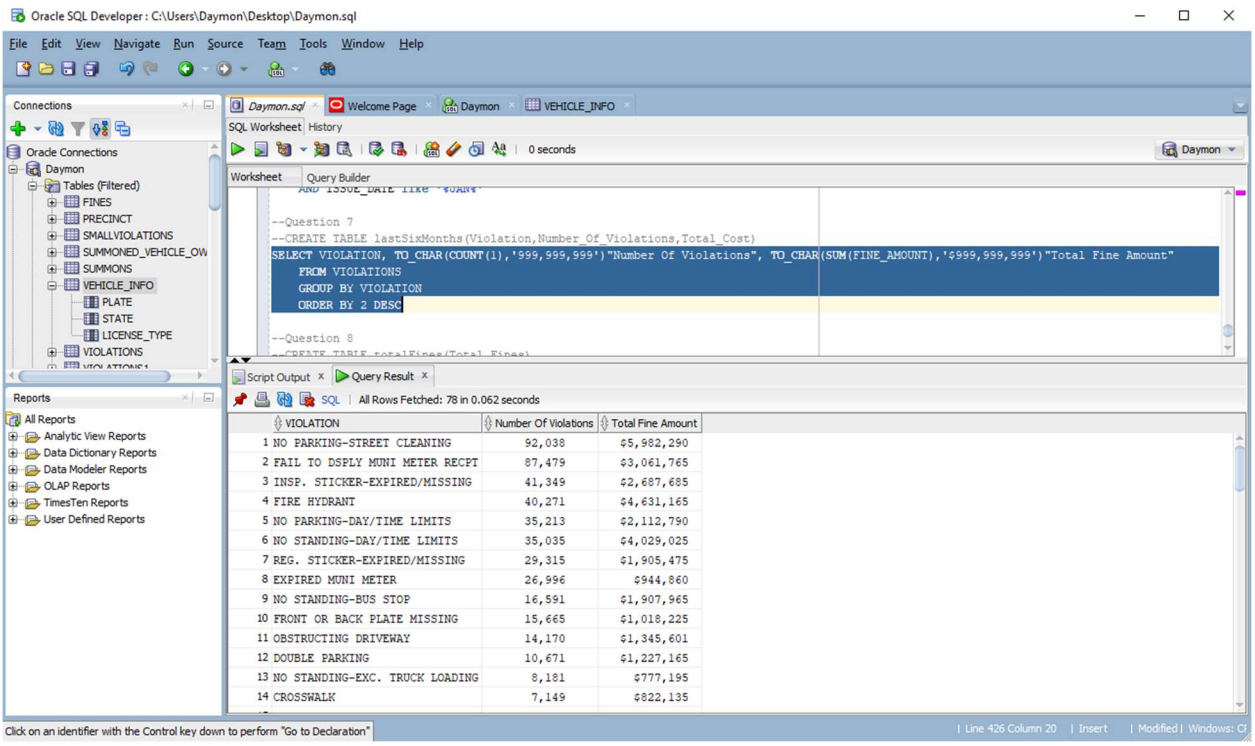


VIOLATION	ISSUE_DATE
FIRE HYDRANT	1-Jan-21
FIRE HYDRANT	23-Jan-21
FIRE HYDRANT	22-Jan-21
FIRE HYDRANT	14-Jan-21
FIRE HYDRANT	16-Jan-21
FIRE HYDRANT	16-Jan-21
FIRE HYDRANT	10-Jan-21
FIRE HYDRANT	10-Jan-21
FIRE HYDRANT	17-Jan-21
FIRE HYDRANT	3-Jan-21
FIRE HYDRANT	17-Jan-21
FIRE HYDRANT	2-Jan-21
FIRE HYDRANT	13-Jan-21
FIRE HYDRANT	9-Jan-21
FIRE HYDRANT	22-Jan-21
FIRE HYDRANT	17-Jan-21

FIRE HYDRANT	6-Jan-21
FIRE HYDRANT	3-Jan-21
FIRE HYDRANT	7-Jan-21
FIRE HYDRANT	7-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	18-Jan-21
FIRE HYDRANT	20-Jan-21
FIRE HYDRANT	31-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	3-Jan-21
FIRE HYDRANT	6-Jan-21
FIRE HYDRANT	7-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	27-Jan-21
FIRE HYDRANT	7-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	27-Jan-21
FIRE HYDRANT	2-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	1-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	23-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	3-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	2-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	4-Jan-21
FIRE HYDRANT	2-Jan-21
FIRE HYDRANT	5-Jan-21
FIRE HYDRANT	6-Jan-21
FIRE HYDRANT	6-Jan-21

7. Identify violations for the last 6 months. Display 3 columns: violation, number of violations and total cost. The most violations will be displayed first. Display 1 row for each distinct violation.

```
SELECT VIOLATION, TO_CHAR(COUNT(1),'999,999,999')"Number Of Violations",
TO_CHAR(SUM(FINE_AMOUNT),'$999,999,999')"Total Fine Amount"
   FROM VIOLATIONS
   GROUP BY VIOLATION
   ORDER BY 2 DESC
```



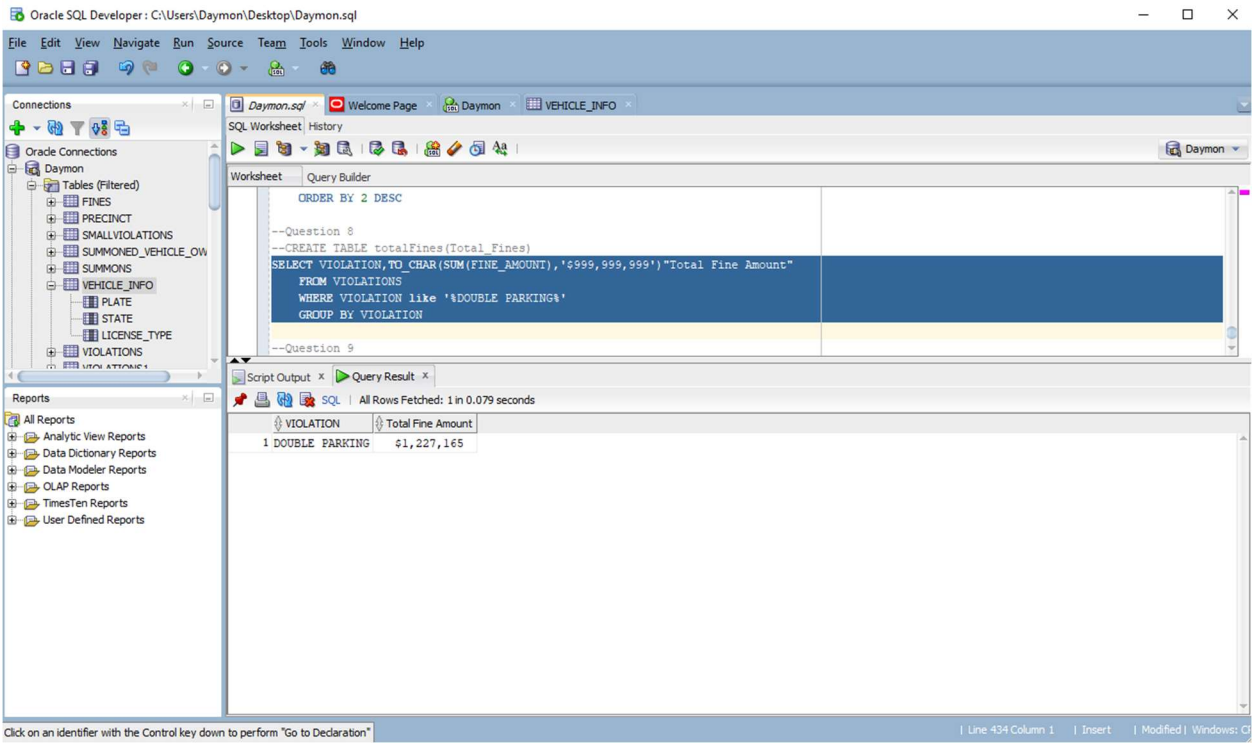
VIOLATION	Number Of Violations	Total Fine Amount
NO PARKING-STREET CLEANING	92,038	$5,982,290
FAIL TO DSPLY MUNI METER RECPT	87,479	$3,061,765
INSP. STICKER-EXPIRED/MISSING	41,349	$2,687,685
FIRE HYDRANT	40,271	$4,631,165
NO PARKING-DAY/TIME LIMITS	35,213	$2,112,790
NO STANDING-DAY/TIME LIMITS	35,035	$4,029,025
REG. STICKER-EXPIRED/MISSING	29,315	$1,905,475
EXPIRED MUNI METER	26,996	$944,860
NO STANDING-BUS STOP	16,591	$1,907,965
FRONT OR BACK PLATE MISSING	15,665	$1,018,225
OBSTRUCTING DRIVEWAY	14,170	$1,345,601
DOUBLE PARKING	10,671	$1,227,165

NO STANDING-EXC. TRUCK LOADING	8,181	$777,195
CROSSWALK	7,149	$822,135
NGHT PKG ON RESID STR-COMM VEH	5,511	$358,215
SIDEWALK	4,623	$531,386
NO STANDING-EXC. AUTH. VEHICLE	3,729	$354,255
NO STANDING-COMM METER ZONE	2,900	$333,500
BIKE LANE	1,822	$209,510
SAFETY ZONE	1,534	$176,210
STORAGE-3HR COMMERCIAL	1,453	$94,445
WRONG WAY	1,355	$60,975
PLTFRM LFTS LWRD POS COMM VEH	1,222	$54,990
DETACHED TRAILER	1,173	$52,780
INSP STICKER-MUTILATED/C'FEIT	1,161	$75,465
NON-COMPLIANCE W/ POSTED SIGN	1,116	$66,960
NO MATCH-PLATE/STICKER	1,092	$70,977
NIGHTTIME STD/ PKG IN A PARK	1,090	$103,488
PEDESTRIAN RAMP	1,025	$169,095
COMML PLATES-UNALTERED VEHICLE	1,011	$116,265
NO STANDING-TAXI STAND	898	$103,270
NO STOPPING-DAY/TIME LIMITS	852	$97,873
ANGLE PARKING	666	$29,970
OTHER	637	$48,895
NO STANDING-BUS LANE	525	$60,375
OVERNIGHT TRACTOR TRAILER PKG	465	$120,250
FAIL TO DISP. MUNI METER RECPT	464	$16,240
BEYOND MARKED SPACE	372	$16,797
NO PARKING-EXC. HOTEL LOADING	308	$35,370
NO PARKING-EXC. HNDICAP PERMIT	296	$53,280
FEEDING METER	281	$18,265
REG STICKER-MUTILATED/C'FEIT	263	$17,095
PARKED BUS-EXC. DESIG. AREA	239	$10,755
TRAFFIC LANE	202	$23,230
IMPROPER REGISTRATION	181	$11,765
NO PARKING-EXC. AUTH. VEHICLE	146	$8,760
MISSING EQUIPMENT	139	$6,255
DIVIDED HIGHWAY	136	$15,640
VEHICLE FOR SALE(DEALERS ONLY)	133	$5,985
NO STANDING-COMMUTER VAN STOP	128	$14,720
VIN OBSCURED	110	$7,145
INTERSECTION	94	$10,810
OVERTIME PKG-TIME LIMIT POSTED	89	$5,320
OBSTRUCTING TRAFFIC/INTERSECT	72	$8,240
NO STANDING-HOTEL LOADING	59	$6,785

	49	$1,540
NO STANDING-FOR HIRE VEH STOP	47	$5,405
EXPIRED MUNI MTR-COMM MTR ZN	43	$1,505
UNAUTHORIZED BUS LAYOVER	35	$4,025
EXCAVATION-VEHICLE OBSTR TRAFF	26	$2,440
IDLING	22	$2,530
RAILROAD CROSSING	17	$1,529
UNALTERED COMM VEHICLE	14	$910
WASH/REPAIR VEHCL-REPAIR ONLY	7	$315
VEH-SALE/WSHNG/RPRNG/DRIVEWAY	7	$175
OVERTIME STDG D/S	7	$434
VACANT LOT	6	$270
SELLING/OFFERING MCHNDSE-METER	5	$175
ANGLE PARKING-COMM VEHICLE	5	$575
BUS PARKING IN LOWER MANHATTAN	4	$420
NO STANDING EXCP D/S	3	$225
NO PARKING-TAXI STAND	2	$120
PKG IN EXC. OF LIM-COMM MTR ZN	1	$35
NO STANDING-OFF-STREET LOT	1	$115
BUS LANE VIOLATION	1	$115
EXPIRED METER-COMM METER ZONE	1	$35
NO STANDING-SNOW EMERGENCY	1	$115
EXPIRED METER	1	$35

8. Identify total fines for double parking. Display the total fines.

```
SELECT VIOLATION,TO_CHAR(SUM(FINE_AMOUNT),'$999,999,999')"Total Fine
Amount"
   FROM VIOLATIONS
   WHERE VIOLATION like '%DOUBLE PARKING%'
   GROUP BY VIOLATION
```

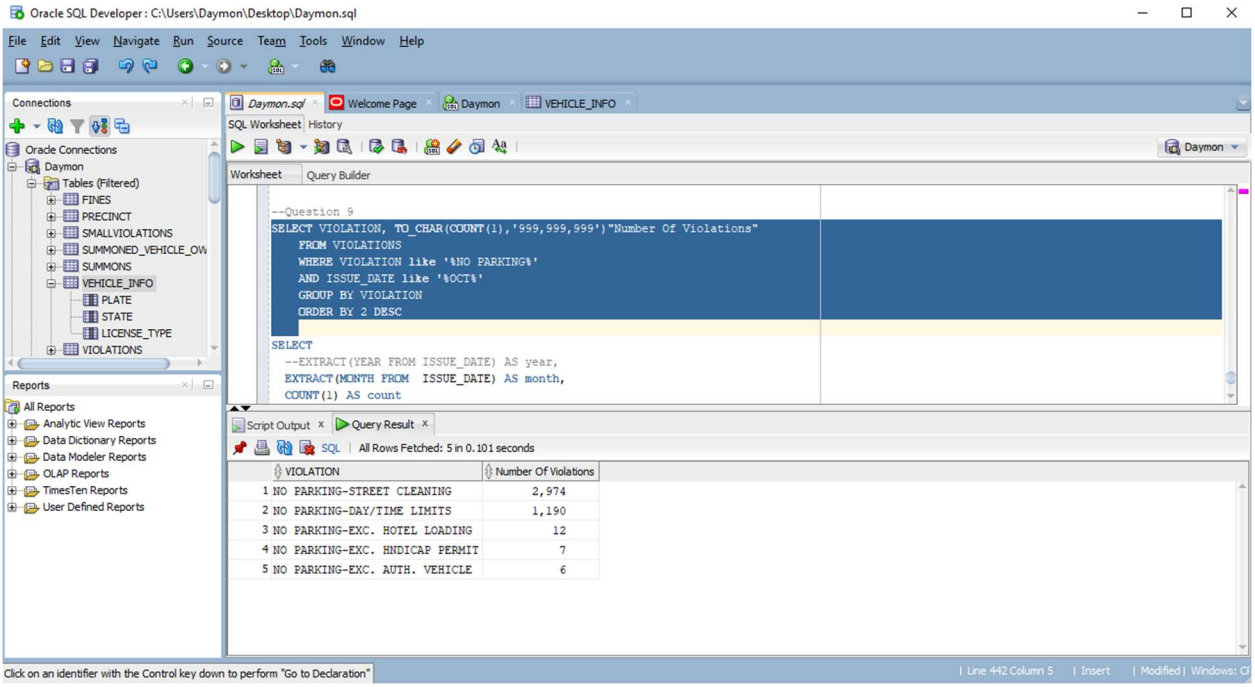


VIOLATION	Total Fine Amount
DOUBLE PARKING	$1,227,165

9. Perform an analysis of your own choosing.

Identify the violations with keyword “parking” in OCTOBER. DISPLAY two columns: the Violation and number of violations.

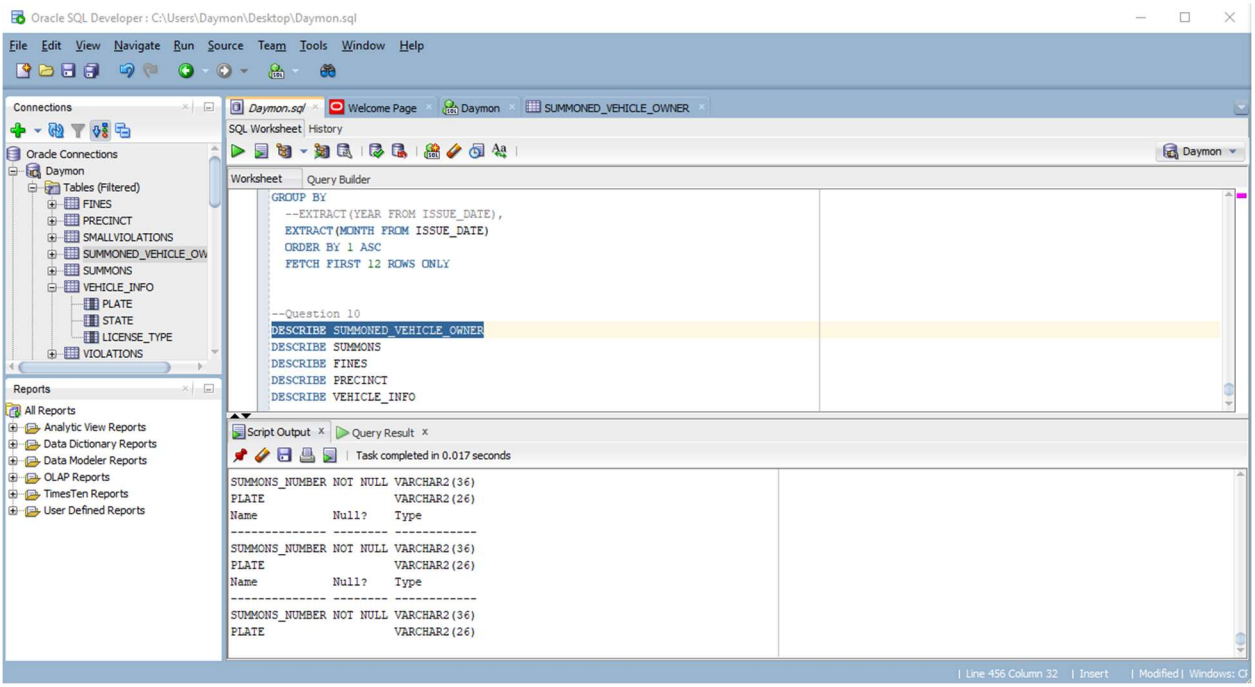
```
SELECT VIOLATION, TO_CHAR(COUNT(1),'999,999,999')"Number Of Violations"
   FROM VIOLATIONS
   WHERE VIOLATION like '%NO PARKING%'
   AND ISSUE_DATE like '%OCT%'
   GROUP BY VIOLATION
   ORDER BY 2 DESC
```



VIOLATION	Number Of Violations
NO PARKING-STREET CLEANING	2,974
NO PARKING-DAY/TIME LIMITS	1,190
NO PARKING-EXC. HOTEL LOADING	12
NO PARKING-EXC. HNDICAP PERMIT	7
NO PARKING-EXC. AUTH. VEHICLE	6

10. Display the structure of ALL tables using SQL Describe.

TABLE 1: SUMMONED_VECHICLE_OWNER



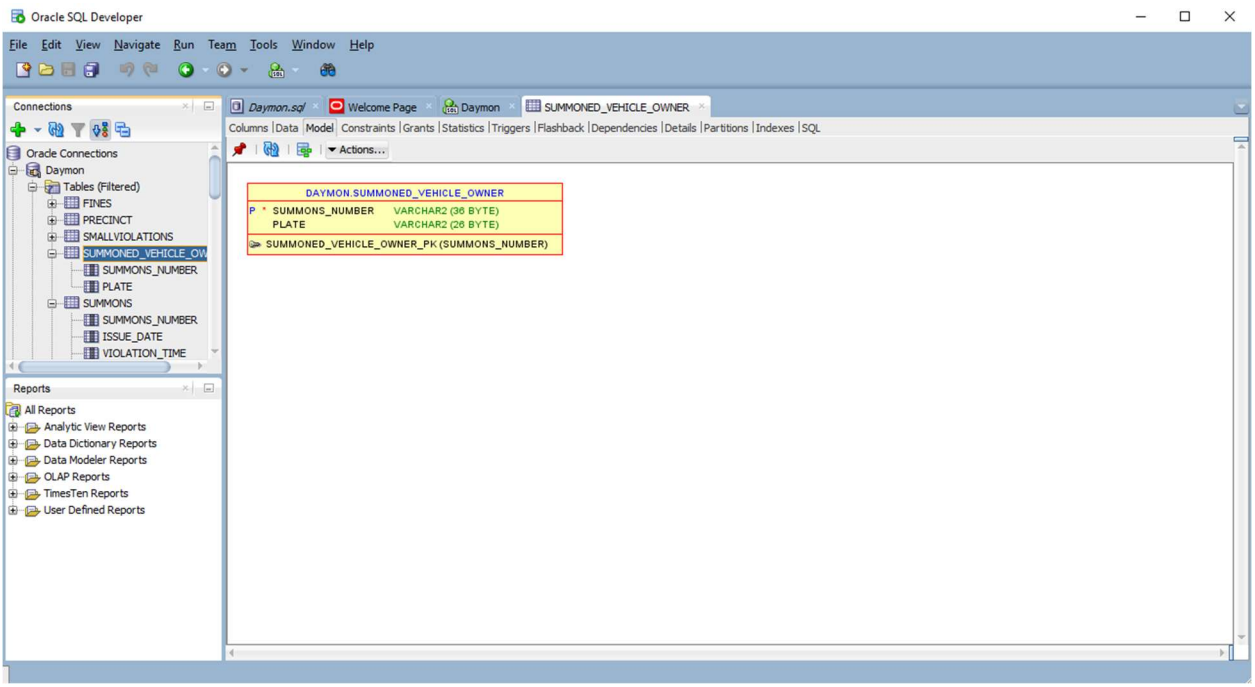
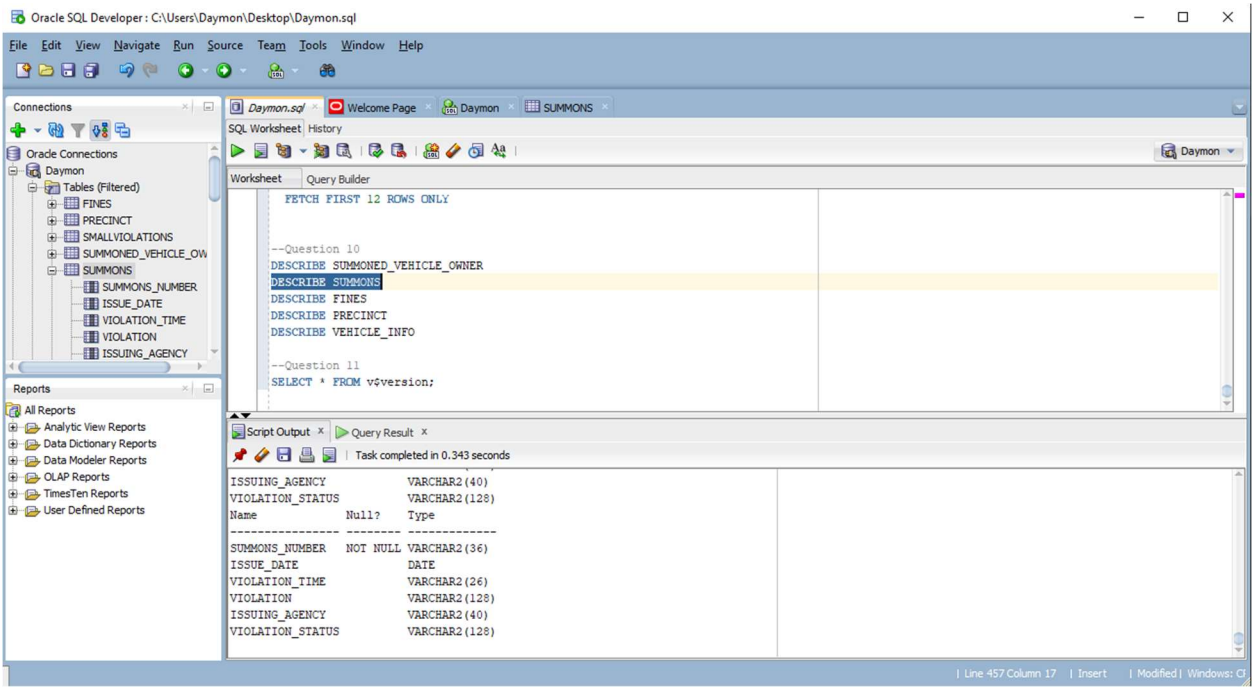


TABLE 2: SUMMONS



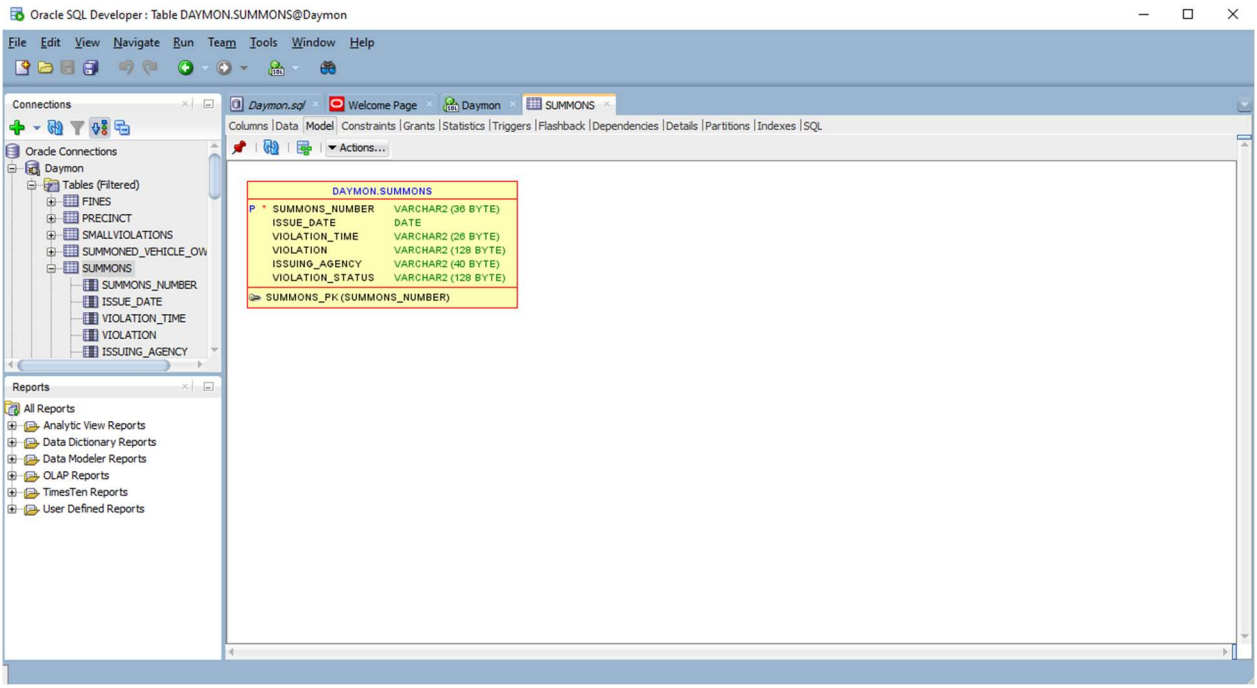
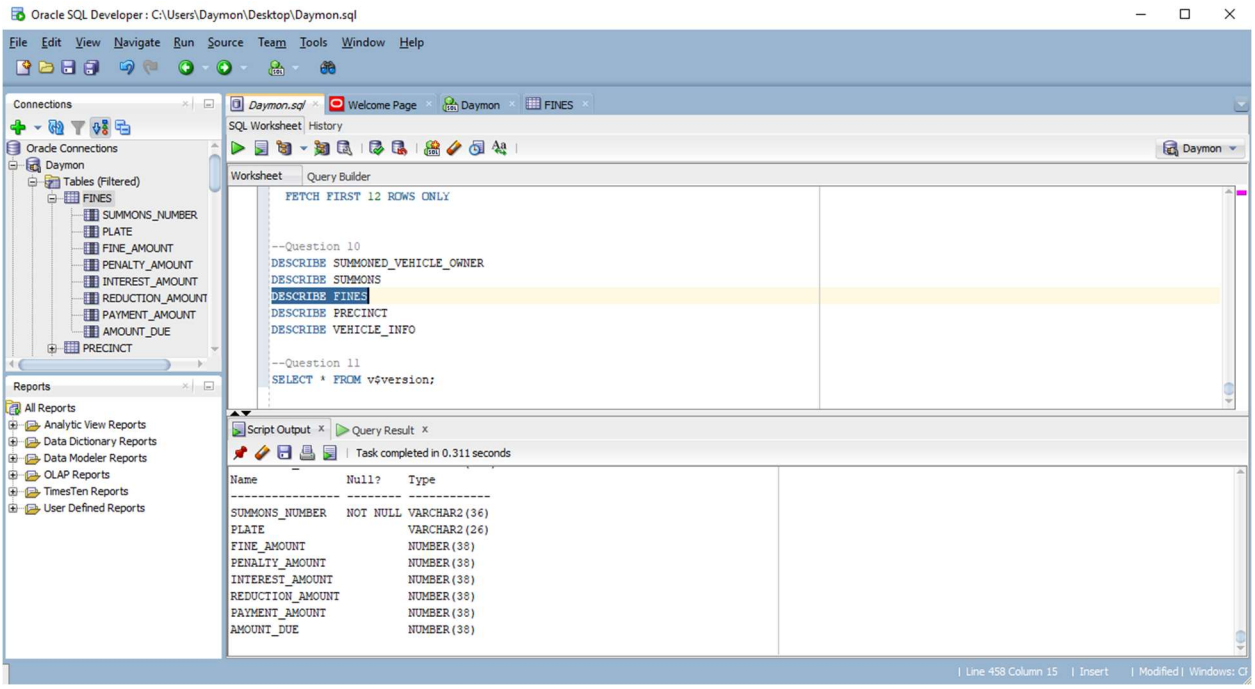


TABLE 3:FINES



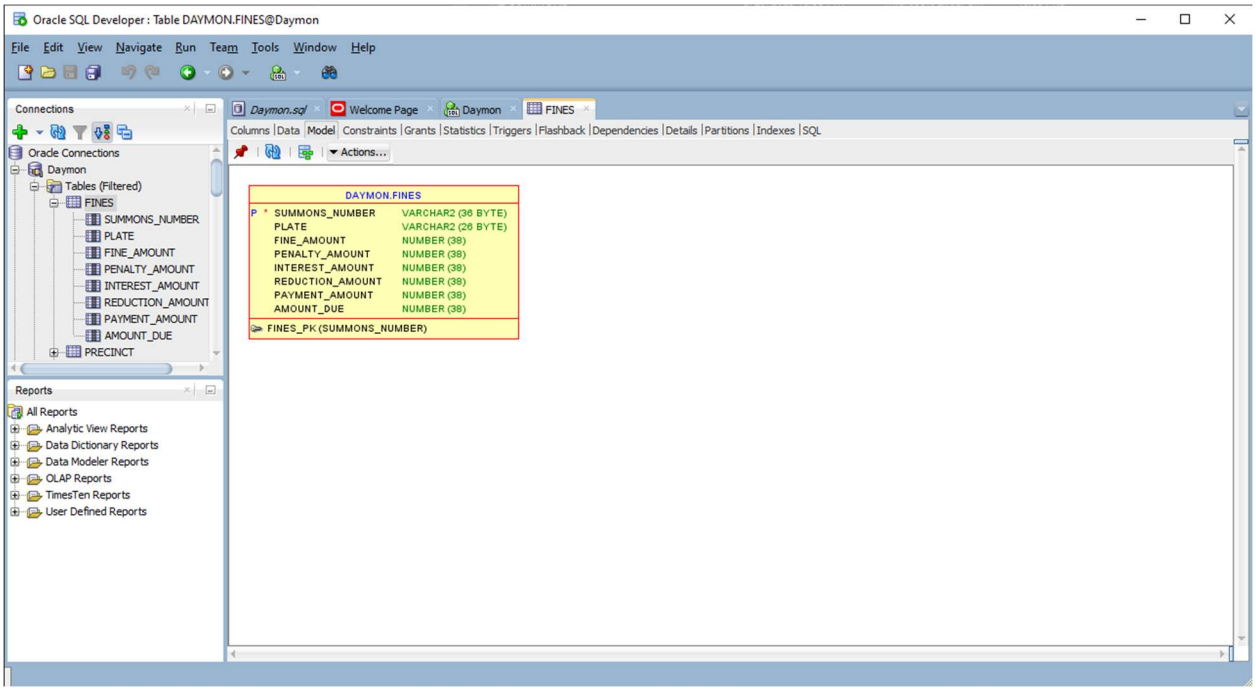
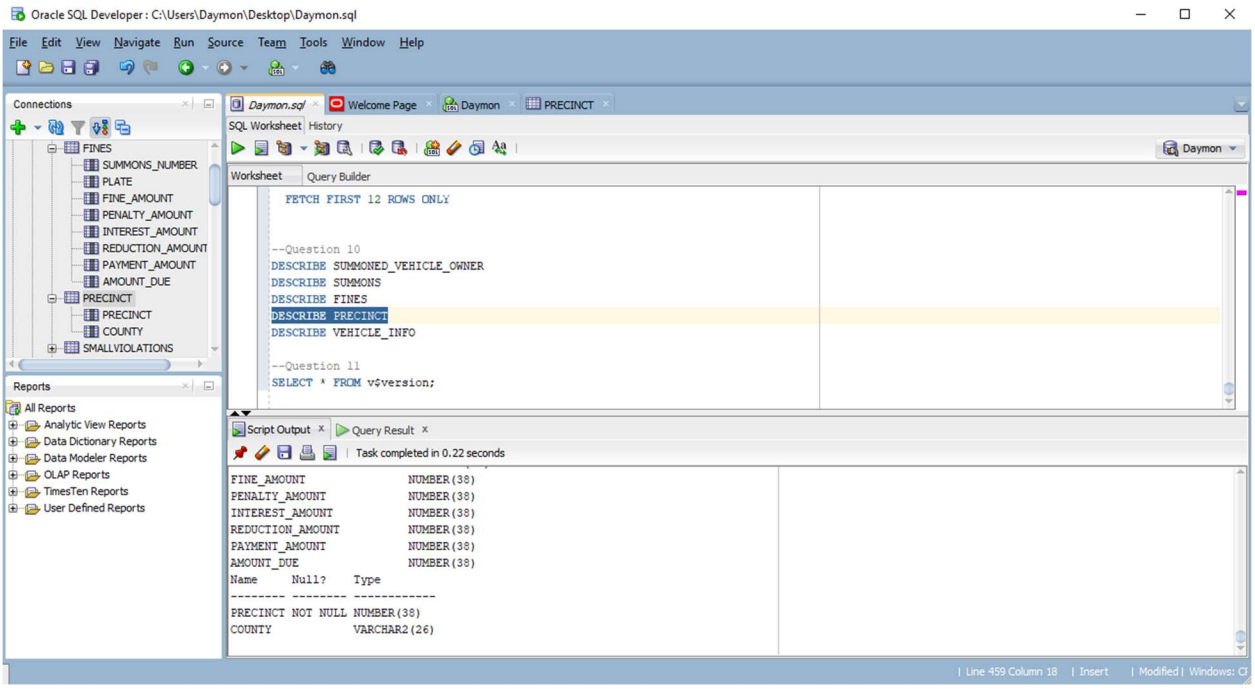


TABLE 4:PRECINCT



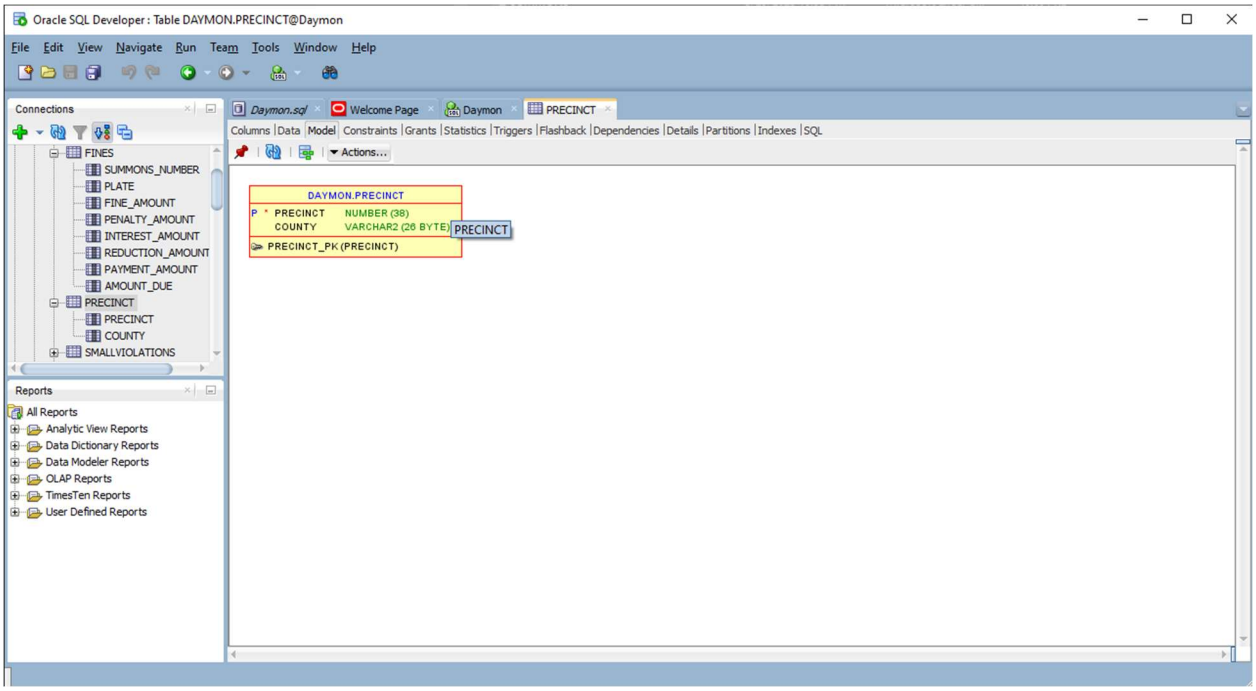
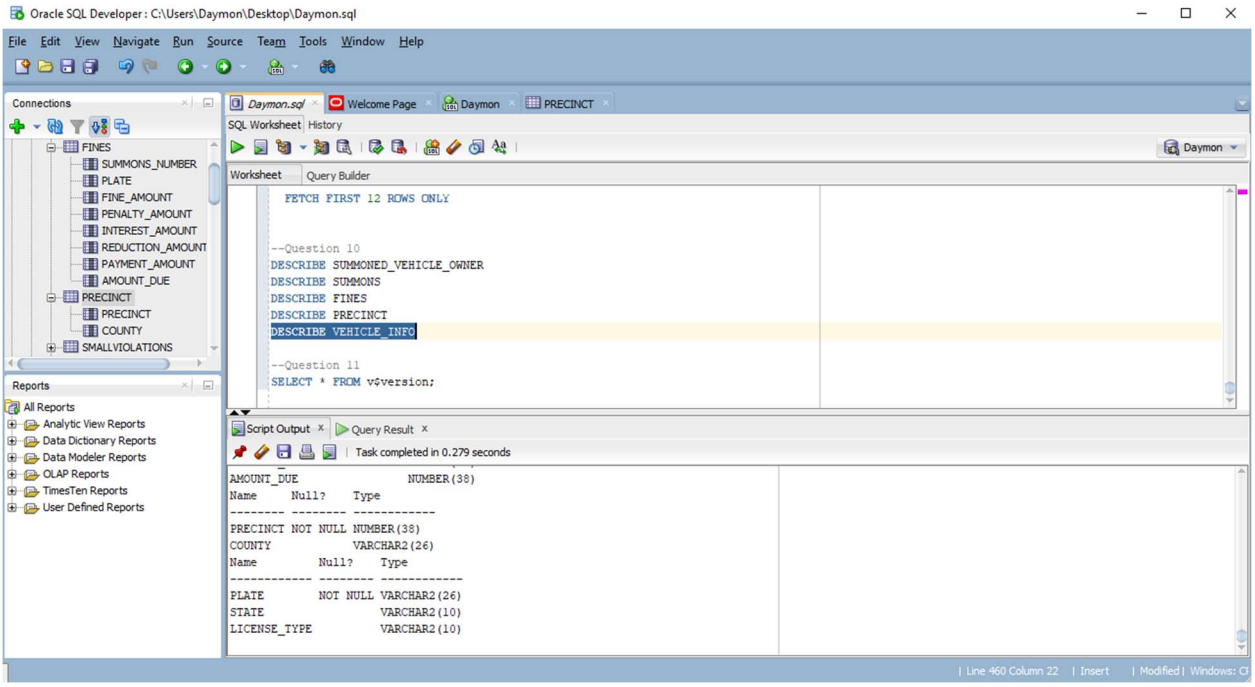
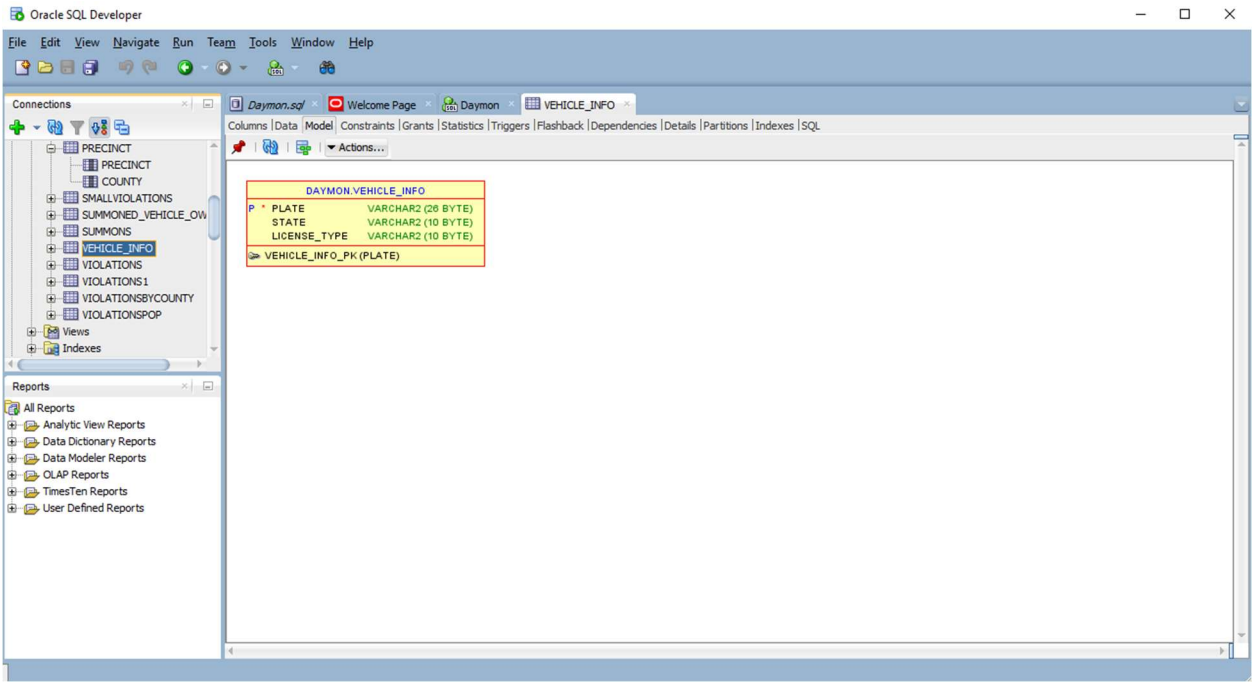
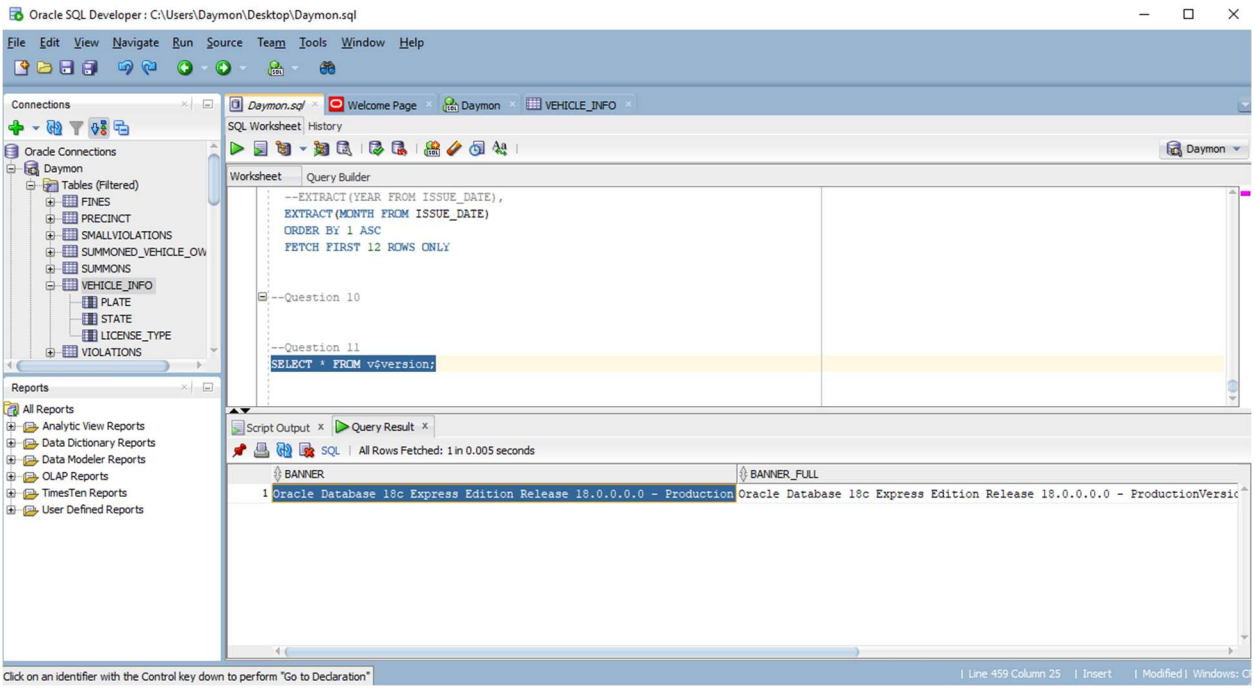


TABLE 5: VEHICLE_INFO





11. Display the version of Oracle. Enter:



BANNER	BANNER_FULL	BANNER_LEGACY	CON_ID
Oracle Database 18c Express Edition Release 18.0.0.0.0 - Production	Oracle Database 18c Express Edition Release 18.0.0.0.0 - Production Version 18.4.0.0.0	Oracle Database 18c Express Edition Release 18.0.0.0.0 - Production	0