

# Kosta Nikopoulos

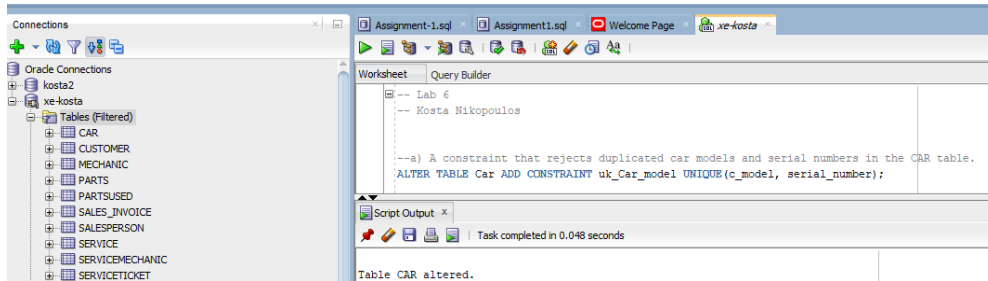
## February 19<sup>th</sup>, 2021

### Lab 6

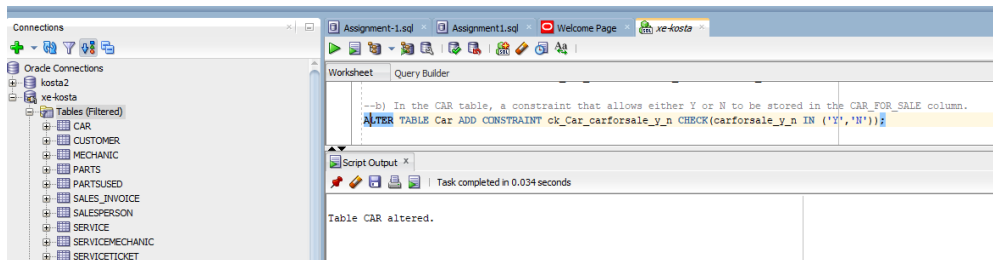
A.

1.

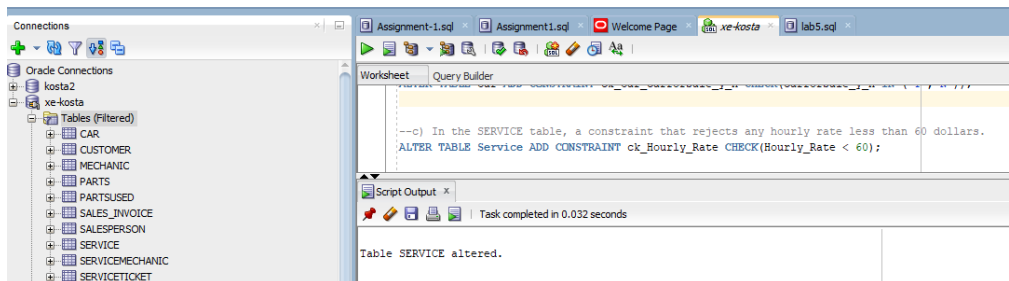
a)



b)



c)



d)

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane shows a connection to 'xe-kosta'. The 'Tables (Filtered)' list includes CAR, CUSTOMER, MECHANIC, PARTS, PARTSUSED, SALES\_INVOICE, SALESPERSON, SERVICE, SERVICE MECHANIC, and SERVICE TICKET. The main window displays a SQL script in the 'Worksheet' tab:

```
--d) In the PARTS table, a constraint that rejects duplicated part numbers.  
ALTER TABLE parts ADD CONSTRAINT uk_Part_number UNIQUE(Part_number);
```

The 'Script Output' pane at the bottom shows the results of the execution:

```
Table CAR altered.  
  
Table CAR altered.  
  
Table PARTS altered.
```

e)

The screenshot shows the Oracle SQL Developer interface with a SQL script in the 'Worksheet' tab. The script includes comments and SQL statements for Lab 6:

```
-- Lab 6  
-- Kosta Nikopoulos  
  
--a) A constraint that rejects duplicated car models and serial numbers in the CAR table.  
ALTER TABLE Car ADD CONSTRAINT uk_Car_model UNIQUE(c_model, serial_number);  
  
--b) In the CAR table, a constraint that allows either Y or N to be stored in the CAR_FOR_SALE column.  
ALTER TABLE Car ADD CONSTRAINT ck_Car_carforsale_y_n CHECK(carforsale_y_n IN ('Y','N'));  
  
--c) In the SERVICE table, a constraint that rejects any hourly rate less than 60 dollars.  
ALTER TABLE Service ADD CONSTRAINT ck_Hourly_Rate CHECK(Hourly_Rate < 60);  
  
--d) In the PARTS table, a constraint that rejects duplicated part numbers.  
ALTER TABLE parts ADD CONSTRAINT uk_Part_number UNIQUE(Part_number);  
  
--e) A constraint that rejects any retail price greater than purchase price in the PARTS table.  
ALTER TABLE parts ADD CONSTRAINT ck_Retail_Price CHECK(Retail_Price > Purchase_Price);
```

The 'Script Output' pane at the bottom shows the results of the execution:

```
Table PARTS altered.
```

B.

1.

a)

The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema for 'xe-kosta', including tables like CAR, CUSTOMER, MECHANIC, PARTS, PARTSUSED, SALES\_INVOICE, SALESPERSON, SERVICE, SERVICEMECHANIC, and SERVICE\_TOKET. The main workspace is in 'Worksheet' mode, showing a SQL script with the following commands:

```
--a) A constraint that rejects duplicated car models and serial numbers in the CAR table.
ALTER TABLE Car ADD CONSTRAINT uk_Car_model UNIQUE(c_model, serial_number);

--b) In the CAR table, a constraint that allows either Y or N to be stored in the CAR_FOR_SALE column.
ALTER TABLE Car ADD CONSTRAINT ck_Car_carforsale_y_n CHECK(carforsale_y_n IN ('Y','N'));

--c) In the SERVICE table, a constraint that rejects any hourly rate less than 60 dollars.
ALTER TABLE Service ADD CONSTRAINT ck_Hourly_Rate CHECK(Hourly_Rate < 60);

--d) In the PARTS table, a constraint that rejects duplicated part numbers.
ALTER TABLE parts ADD CONSTRAINT uk_Part_number UNIQUE(Part_number);

--e) A constraint that rejects any retail price greater than purchase price in the PARTS table.
ALTER TABLE parts ADD CONSTRAINT ck_Retail_Price CHECK(Retail_Price > Purchase_Price);

--Display Table Constraints
--Car Table
SELECT constraint_name, constraint_type, search_condition, r_constraint_name
FROM user_constraints
WHERE table_name = 'Car';
```

The 'Script Output' pane at the bottom shows the results of the last query, displaying columns for constraint names and search conditions.

b)

The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema for 'xe-kosta'. The main workspace is in 'Worksheet' mode, showing a SQL script with the following commands:

```
-- Lab 6
-- Kosta Nikopoulos

--a) A constraint that rejects duplicated car models and serial numbers in the CAR table.
ALTER TABLE Car ADD CONSTRAINT uk_Car_model UNIQUE(c_model, serial_number);

--b) In the CAR table, a constraint that allows either Y or N to be stored in the CAR_FOR_SALE column.
ALTER TABLE Car ADD CONSTRAINT ck_Car_carforsale_y_n CHECK(carforsale_y_n IN ('Y','N'));

--c) In the SERVICE table, a constraint that rejects any hourly rate less than 60 dollars.
ALTER TABLE Service ADD CONSTRAINT ck_Hourly_Rate CHECK(Hourly_Rate < 60);

--d) In the PARTS table, a constraint that rejects duplicated part numbers.
ALTER TABLE parts ADD CONSTRAINT uk_Part_number UNIQUE(Part_number);

--e) A constraint that rejects any retail price greater than purchase price in the PARTS table.
ALTER TABLE parts ADD CONSTRAINT ck_Retail_Price CHECK(Retail_Price > Purchase_Price);

--Display Table Constraints
--Car Table
SELECT constraint_name, constraint_type, search_condition, r_constraint_name
FROM user_constraints
WHERE table_name = 'Car';

--Parts Table
SELECT constraint_name, constraint_type, search_condition, r_constraint_name
FROM user_constraints
WHERE table_name = 'parts';
```

The 'Script Output' pane at the bottom shows the results of the last query, displaying columns for constraint names and search conditions.