



Consider the following relations for the Car Manufacturing database:

CONTINENTS (Contid, continent)

COUNTRIES (Countryid, countryname, continent)

CAR_MAKERS (Id, maker, lname Country)

MODEL_DETAILS (Modelid, Maker, model)

CAR_NAMES (Id, model, descr)

CAR_DETAILS (Id, mpg, cylinders, edispl, horsepower, weight, accel, year)

Note:

- Use implicit/explicit cursor wherever required.
- Use IN, OUT, INOUT as parameter type wherever needed.
- A function should return the value, not display any messages.

Write a PL/SQL stored procedure for the following:

- Engine capacity or engine displacement is the engine power which is measured in cubic inches or cc (cubic centimeter) or liters. Small cars are measured using cc (up to 2000 cc). Liters are used for large cars.

1 cubic inch = 16.3871 cc

1 cubic inch = 0.0164 liters

Using the above metric, display the engine capacity in cc or liters and categorize into small or large car respectively for the given car id.

- Taking a road trip can be the ideal way to see the countryside.

You have planned for a trip to a holiday spot on weekend.
Select the best car among the given model to reach the spot.
The best car is determined by the lowest fuel consumption
cost to the trip. Input the distance (miles) to reach the spot and
fuel cost (\$ / gallons of gas).

Fuel consumption cost = (miles / mpg) x fuel cost.

Print the recommendation as shown below:

***** Model: Opel

Destination: San Bay

Distance (miles): 100

Price (\$/gallons): \$ 2.3

Car ID	Description	MPG	Fuel Cost
58	opel 1900	28	8.21
126	opel manta	24	9.58
151	opel manta	26	8.84
191	opel 1900	25	9.20

CAR ID: 58, Name: opel 1900 is the best car for the trip!

Enjoy your trip with the lowest fuel consumption cost...

3. The power-to-weight ratio formula for an engine is the power (hp) generated by the engine divided by the weight (lbs). This is commonly applied to engines and is used as a measurement of performance of a vehicle as whole. Display the car name that has highest, lowest power-to- weight ratio.
4. Develop a stored function which returns the car that exactly or nearly matches the given mpg and acceleration of the car. If no car matches, then return the car that matches either mpg or acceleration.
5. Consider the problem 2. Rewrite it into stored function that returns the car ID which consumes minimum fuel cost.

What you have to submit:

1. Schema Diagram with constraints
2. Demo script file

