**DROP DATABASE IF EXISTS travel;**

**CREATE DATABASE travel;**

**USE travel;**

**CREATE TABLE manufacturers (**

**manufacturer\_id INT UNSIGNED NOT NULL,**

**manufacturer VARCHAR(50) NOT NULL,**

**create\_date TIMESTAMP NOT NULL DEFAULT CURRENT\_TIMESTAMP,**

**last\_update TIMESTAMP NOT NULL**

**DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,**

**PRIMARY KEY (manufacturer\_id)**

**);**

**CREATE TABLE airplanes (**

**plane\_id INT UNSIGNED NOT NULL,**

**plane VARCHAR(50) NOT NULL,**

**manufacturer\_id INT UNSIGNED NOT NULL,**

**engine\_type VARCHAR(50) NOT NULL,**

**engine\_count TINYINT NOT NULL,**

**max\_weight MEDIUMINT UNSIGNED NOT NULL,**

**wingspan DECIMAL(5,2) NOT NULL,**

**plane\_length DECIMAL(5,2) NOT NULL,**

**parking\_area INT GENERATED ALWAYS AS ((wingspan \* plane\_length)) STORED,**

**icao\_code CHAR(4) NOT NULL,**

**create\_date TIMESTAMP NOT NULL DEFAULT CURRENT\_TIMESTAMP,**

**last\_update TIMESTAMP NOT NULL**

**DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,**

**PRIMARY KEY (plane\_id),**

**CONSTRAINT fk\_manufacturer\_id FOREIGN KEY (manufacturer\_id)**

**REFERENCES manufacturers (manufacturer\_id)**

**);**

**INSERT INTO manufacturers (manufacturer\_id, manufacturer) VALUES**

**(101,'Airbus'),**

**(102,'Beagle Aircraft Limited'),**

**(103,'Beechcraft'),**

**(104,'Boeing'),**

**(105,'Bombardier'),**

**(106,'Cessna'),**

**(107,'Embraer');**

**INSERT INTO airplanes**

**(plane\_id, plane, manufacturer\_id, engine\_type, engine\_count,**

**wingspan, plane\_length, max\_weight, icao\_code)**

**VALUES**

**(1001,'A340-600',101,'Jet',4,208.17,247.24,837756,'A346'),**

**(1002,'A350-800 XWB',101,'Jet',2,212.42,198.58,546700,'A358'),**

**(1003,'A350-900',101,'Jet',2,212.42,219.16,617295,'A359'),**

**(1004,'A380-800',101,'Jet',4,261.65,238.62,1267658,'A388'),**

**(1005,'A380-843F',101,'Jet',4,261.65,238.62,1300000,'A38F'),**

**(1006,'A.109 Airedale',102,'Piston',1,36.33,26.33,2750,'AIRD'),**

**(1007,'A.61 Terrier',102,'Piston',1,36,23.25,2400,'AUS6'),**

**(1008,'B.121 Pup',102,'Piston',1,31,23.17,1600,'PUP'),**

**(1009,'B.206',102,'Piston',2,55,33.67,7500,'BASS'),**

**(1010,'D.5-108 Husky',102,'Piston',1,36,23.17,2400,'D5'),**

**(1011,'Baron 56 TC Turbo Baron',103,'Piston',2,37.83,28,5990,'BE56'),**

**(1012,'Baron 58 (and current G58)',103,'Piston',2,37.83,29.83,5500,'BE58'),**

**(1013,'Beechjet 400 (same as MU-300-10 Diamond II)',103,'Jet',2,43.5,48.42,15780,'BE40'),**

**(1014,'Bonanza 33 (F33A)',103,'Piston',1,33.5,26.67,3500,'BE33'),**

**(1015,'Bonanza 35 (G35)',103,'Piston',1,32.83,25.17,3125,'BE35'),**

**(1016,'747-8F',104,'Jet',4,224.42,250.17,987000,'B748'),**

**(1017,'747-SP',104,'Jet',4,195.67,184.75,696000,'B74S'),**

**(1018,'757-300',104,'Jet',2,124.83,178.58,270000,'B753'),**

**(1019,'767-200',104,'Jet',2,156.08,159.17,315000,'B762'),**

**(1020,'767-200ER',104,'Jet',2,156.08,159.17,395000,'B762'),**

**(1021,'Learjet 24',105,'Jet',2,35.58,43.25,13000,'LJ24'),**

**(1022,'Learjet 24A',105,'Jet',2,35.58,43.25,12499,'LJ24'),**

**(1023,'Challenger (BD-100-1A10) 350',105,'Jet',2,69,68.75,40600,'CL30'),**

**(1024,'Challenger (CL-600-1A11) 600',105,'Jet',2,64.33,68.42,36000,'CL60'),**

**(1025,'Challenger (CL-600-2A12) 601',105,'Jet',2,64.33,68.42,42100,'CL60'),**

**(1026,'414A Chancellor',106,'Piston',2,44.17,36.42,6750,'C414'),**

**(1027,'421C Golden Eagle',106,'Piston',2,44.17,36.42,7450,'C421'),**

**(1028,'425 Corsair-Conquest I',106,'Turboprop',2,44.17,35.83,8600,'C425'),**

**(1029,'441 Conquest II',106,'Turboprop',2,49.33,39,9850,'C441'),**

**(1030,'Citation CJ1 (Model C525)',106,'Jet',2,46.92,42.58,10600,'C525'),**

**(1031,'EMB 175 LR',107,'Jet',2,85.33,103.92,85517,'E170'),**

**(1032,'EMB 175 Standard',107,'Jet',2,85.33,103.92,82673,'E170'),**

**(1033,'EMB 175-E2',107,'Jet',2,101.67,106,98767,'E170'),**

**(1034,'EMB 190 AR',107,'Jet',2,94.25,118.92,114199,'E190'),**

**(1035,'EMB 190 LR',107,'Jet',2,94.25,118.92,110892,'E190');**

1. **Retrieve the list of all airplane manufacturers along with the count of airplanes they have produced.**
2. **Find the airplanes with a wingspan greater than 220 and sort them by wingspan in descending order.**
3. **Calculate the average wingspan and plane length for each manufacturer.**
4. **List the manufacturers that produce airplanes with more than two engines.**
5. **Find the airplanes with a parking area greater than 500,00 square units and their manufacturers.**
6. **Calculate the total maximum weight of airplanes for each manufacturer.**
7. **List the manufacturers and their airplanes that have an ICAO code starting with 'A38'.**
8. **Find the manufacturers and their airplanes with the highest parking area.**
9. **Retrieve the airplanes with a plane length less than 30 and a wingspan greater than 200.**
10. **Calculate the average parking area for all airplanes produced by each manufacturer.**