

Database

1. การติดตั้งและการตั้งค่า MySQL Server (.pdf)

1.1. คำสั่งติดตั้ง MySQLServer

```
sudo apt update
```

```
sudo apt install mysql-server
```

```
sudo systemctl status mysql
```

1.2. การตั้งค่าenvให้กับ docker เพื่อกำหนด my.cnf และตำแหน่งที่เก็บข้อมูลบนhost

```
Dockerfile x docker-compose.yml
Dockerfile > ...
1 FROM mysql
2 COPY ./scripts ./scripts
3 ENV MYSQL_ROOT_PASSWORD=Newnismo_2001
4 EXPOSE 3306
```

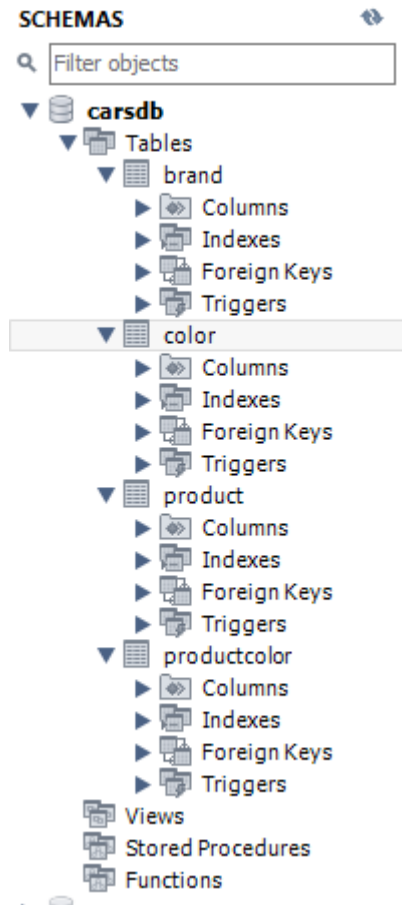
```
Dockerfile x docker-compose.yml x
docker-compose.yml
1 version: '3'
2 services:
3   database:
4     container_name: database
5     build: .
6     image: database
7     environment:
8       MYSQL_ROOT_USER: root
9       MYSQL_ROOT_PASSWORD: Newnismo_2001
10      MYSQL_DATABASE: carsdb
11     volumes:
12       - "./scripts/carsdb.sql:/docker-entrypoint-initdb.d/carsdb.sql"
13       - "./scripts/user_grant.sql:/docker-entrypoint-initdb.d/user_grant.sql"
14     ports:
15       - "3306:3306"
16
17 networks:
18   default:
19     external:
20       name: allnetwork
```

```
projectcars@projectcars:~/database/INT221_Integrated_Project_Database$ ls -la
total 28
drwxrwxr-x 5 projectcars projectcars 4096 May  8 12:42 .
drwxrwxr-x 3 projectcars projectcars 4096 May  8 12:36 ..
drwxrwxr-x 8 projectcars projectcars 4096 May  8 12:42 .git
-rw-rw-r-- 1 projectcars projectcars  91 May  8 12:42 Dockerfile
-rw-rw-r-- 1 projectcars projectcars  429 May  8 12:42 docker-compose.yml
drwxrwxr-x 2 projectcars projectcars 4096 May  8 12:36 scripts
drwxrwxr-x 2 projectcars projectcars 4096 May  8 12:36 'scripts file'
projectcars@projectcars:~/database/INT221_Integrated_Project_Database$
```

1.3. หน้าจอสถานะของ Container ของ MySQLServer

```
d35d0379ba9c  database  "docker-entrypoint.s..."  41 hours ago  Up 41 hours  0.0.0.0:3306->3306/tcp, :::3306->3306/tcp, 33060/tcp  database
```

1.4. หน้าจอการเชื่อมต่อกับ MySQLServer แสดงข้อมูลทั้งหมด



```
mysql> show databases;
+-----+
| Database |
+-----+
| carsdb   |
| information_schema |
| mysql    |
| performance_schema |
| sys      |
+-----+
5 rows in set (0.01 sec)
```

```
Database changed
mysql> show tables;
+-----+
| Tables_in_carsdb |
+-----+
| brand             |
| color             |
| product           |
| productcolor      |
+-----+
4 rows in set (0.00 sec)
```

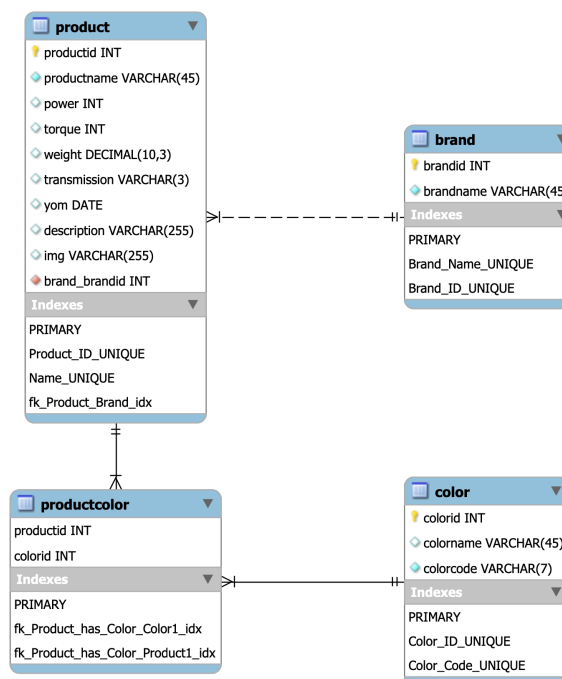
1.5. หน้าจอการใช้คำสั่ง SELECT เพื่อดูข้อมูลในตารางหลักของระบบ เช่น ตาราง customer

The screenshot shows a database application window titled 'product'. The query bar contains the SQL statement: `SELECT * FROM carsdb.product;`. The result grid displays 17 rows of data with columns: productid, productname, power, torque, weight, transmission, yom, and description. The data includes various car models like 124 Spider, 695 Biposto, Fiat 131, 595 Esseeesse, NSX, RSX Type-S, Integra Type-R, Stelvio Quadrifoglio, Giulia Quadrifoglio, 4C, 8C Competizione, 33 Stradale, Giulia TZ2, Giulia Sprint GTA S..., Class 10 Race Car, Germlin X, and Javelin AMX.

productid	productname	power	torque	weight	transmission	yom	description
30001	124 Spider	123	250	1.124	RWD	2017-04-22	The 124 Spider was first introduced in 2016 as
30002	695 Biposto	139	249	0.997	FWD	2016-12-05	Using technology derived from the 695 Assetto
30003	Fiat 131	104	176	0.980	RWD	1980-03-21	Carlo Abarth is rightfully famous for applying th
30004	595 Esseeesse	21	46	0.570	RWD	1968-06-15	What it lacks in power and refinement it makes
30005	NSX	427	845	1.725	AWD	2017-08-22	Sold as a Honda model outside of North Americ
30006	RSX Type-S	149	193	1.279	FWD	2002-04-25	The Acura RSX is the successor to the Acura Ir
30007	Integra Type-R	145	176	1.197	FWD	2001-01-13	The Type-R is the top-of-the-line model of the
30008	Stelvio Quadrifoglio	337	600	1.978	AWD	2018-12-12	The 2018 Alfa Romeo Stelvio Quadrifoglio, abb
30009	Giulia Quadrifoglio	377	600	1.701	RWD	2017-08-15	The Giulia Quadrifoglio is the high-performance
30010	4C	179	323	0.940	RWD	2014-01-09	The 4C is a lightweight sports car by Alfa Rome
30011	8C Competizione	336	480	1.585	RWD	2007-05-03	The Alfa Romeo 8C Competizione is a sports ca
30012	33 Stradale	183	201	0.700	RWD	1968-10-23	One of the most beautiful cars ever built, the li
30013	Giulia TZ2	127	176	0.620	RWD	1965-03-14	Based on the success of the TZ1, a lightweight
30014	Giulia Sprint GTA S...	86	142	0.760	RWD	1965-06-07	The Alfa Romeo Giulia Sprint GTA Stradale is a
30015	Class 10 Race Car	146	258	0.998	RWD	2015-08-14	Consistency on any terrain is what the Alumi C
30016	Germlin X	112	332	1.288	RWD	1973-07-19	Described by AMC as "the first American-built i
30017	Javelin AMX	246	584	1.563	RWD	1971-11-03	Those huge fender arches? They're to fit over:

2. การออกแบบและการใช้งานฐานข้อมูล (.pdf)

2.1. แผนภาพ Entity Relationship Diagram [ระนุ Data Type ของ MySQL]



2.2. Data Dictionary

ตาราง brand :

Column	Data_type	Constaint	Description
brandid	INT	PK	รหัสแบรนด์
brandname	Varchar	Not Null	ชื่อแบรนด์

ตาราง product :

Column	Data_type	Constaint	Description
productid	INT	PK	รหัสรถ
productname	Varchar	Not Null	ชื่อรถ
power	INT		กำลัง(kW)
torque	INT		แรงบิด(Nm)
weight	Decimal		น้ำหนัก(t)
transmission	Varchar		ระบบช่วงล่าง
yom	Date		วัน-เดือน-ปีที่ผลิต
description	Varchar		คำอธิบาย
img	Varchar		รหัสรูปภาพ
brand_brandid	INT	FK	รหัสแบรนด์

ตาราง productcolor :

Column	Data_type	Constaint	Description
productid	INT	PK,FK	รหัสรถ
colorid	INT	PK,FK	รหัสสี

ตาราง color :

Column	Data_type	Constaint	Description
colorid	INT	PK	รหัสสี
colorname	Varchar	Not Null	ชื่อสี
colorcode	Varchar	Not Null	รหัสสี(#ffffff)

3. คำสั่งสร้างและนำเข้าข้อมูลและการกำหนดค่าผู้ใช้งานข้อมูล(.pdf)

3.1. คำสั่งสร้างและการนำเข้าข้อมูล

คำสั่งสร้าง

```
1  -- MySQL dump 10.13  Distrib 8.0.21, for Win64 (x86_64)
2  --
3  -- Host: localhost    Database: carsdb
4  --
5  -- Server version      8.0.21
6
7  /*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
8  /*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
9  /*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
10 /*!50503 SET NAMES utf8 */;
11 /*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
12 /*!40103 SET TIME_ZONE='+00:00' */;
13 /*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
14 /*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
15 /*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
16 /*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;
17
18 --
19 -- Table structure for table `brand`
20 --
21
22 DROP TABLE IF EXISTS `brand`;
23 /*!40101 SET @saved_cs_client      = @@character_set_client */;
24 /*!50503 SET character_set_client = utf8mb4 */;
25 CREATE TABLE `brand` (
26   `brandid` int NOT NULL,
27   `brandname` varchar(45) NOT NULL,
28   PRIMARY KEY (`brandid`),
29   UNIQUE KEY `Brand_Name_UNIQUE` (`brandname`),
30   UNIQUE KEY `Brand_ID_UNIQUE` (`brandid`)
31 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
32 /*!40101 SET character_set_client = @saved_cs_client */;
33
34 --
35 -- Dumping data for table `brand`
36 --
```

```
37
38 LOCK TABLES `brand` WRITE;
39 /*!40000 ALTER TABLE `brand` DISABLE KEYS */;
40 INSERT INTO `brand` VALUES (10001,'ABARTH'),(10002,'ACURA'),(10003,'ALFA ROMEO'),(10004,'ALUMI CRAFT'),(10005,'AMC'),(10006,'AMG Transport Dynamics'),(10007,'AF
41 /*!40000 ALTER TABLE `brand` ENABLE KEYS */;
42 UNLOCK TABLES;
43
44 --
45 -- Table structure for table `color`
46 --
47
48 DROP TABLE IF EXISTS `color`;
49 /*!40101 SET @saved_cs_client      = @@character_set_client */;
50 /*!50503 SET character_set_client = utf8mb4 */;
51 CREATE TABLE `color` (
52   `colorid` int NOT NULL,
53   `colorname` varchar(45) DEFAULT NULL,
54   `colorcode` varchar(7) NOT NULL,
55   PRIMARY KEY (`colorid`),
56   UNIQUE KEY `Color_ID_UNIQUE` (`colorid`),
57   UNIQUE KEY `Color_Code_UNIQUE` (`colorcode`)
58 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
59 /*!40101 SET character_set_client = @saved_cs_client */;
60
61 --
62 -- Dumping data for table `color`
63 --
64
65 LOCK TABLES `color` WRITE;
66 /*!40000 ALTER TABLE `color` DISABLE KEYS */;
67 INSERT INTO `color` VALUES (20001,'IndianRed','#CD5C5C'),(20002,'LightCoral','#F08080'),(20003,'Salmon','#FA8072'),(20004,'DarkSalmon','#E9967A'),(20005,'LightS
68 /*!40000 ALTER TABLE `color` ENABLE KEYS */;
69 UNLOCK TABLES;
70
71 --
72 -- Table structure for table `product`
73 --
```

```

74
75 DROP TABLE IF EXISTS `product`;
76 /*!40101 SET @saved_cs_client      = @@character_set_client */;
77 /*!50503 SET character_set_client = utf8mb4 */;
78 CREATE TABLE `product` (
79   `productid` int NOT NULL,
80   `productname` varchar(45) NOT NULL,
81   `power` int DEFAULT NULL,
82   `torque` int DEFAULT NULL,
83   `weight` decimal(10,3) DEFAULT NULL,
84   `transmission` varchar(3) DEFAULT NULL,
85   `yom` date DEFAULT NULL,
86   `description` varchar(255) DEFAULT NULL,
87   `img` varchar(255) DEFAULT NULL,
88   `brand_brandid` int NOT NULL,
89   PRIMARY KEY (`productid`),
90   UNIQUE KEY `Product_ID_UNIQUE` (`productid`),
91   UNIQUE KEY `Name_UNIQUE` (`productname`),
92   KEY `fk_Product_Brand_idx` (`brand_brandid`),
93   CONSTRAINT `fk_Product_Brand` FOREIGN KEY (`brand_brandid`) REFERENCES `brand` (`brandid`)
94 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
95 /*!40101 SET character_set_client = @saved_cs_client */;
96
97 --
98 -- Dumping data for table `product`
99 --
100
101 LOCK TABLES `product` WRITE;
102 /*!40000 ALTER TABLE `product` DISABLE KEYS */;
103 INSERT INTO `product` VALUES (30001,'124 Spider',123,250,1.124,'RWD','2017-04-22','The 124 Spider was first introduced in 2016 as a homage to the 50th anniversary
104 of the 124 Spider');
105 UNLOCK TABLES;
106
107 --
108 -- Table structure for table `productcolor`
109 --

```

```

110
111 DROP TABLE IF EXISTS `productcolor`;
112 /*!40101 SET @saved_cs_client      = @@character_set_client */;
113 /*!50503 SET character_set_client = utf8mb4 */;
114 CREATE TABLE `productcolor` (
115   `productid` int NOT NULL,
116   `colorid` int NOT NULL,
117   PRIMARY KEY (`productid`,`colorid`),
118   KEY `fk_Product_has_Color_Color1_idx` (`colorid`),
119   KEY `fk_Product_has_Color_Product1_idx` (`productid`),
120   CONSTRAINT `fk_Product_has_Color_Color1` FOREIGN KEY (`colorid`) REFERENCES `color` (`colorid`),
121   CONSTRAINT `fk_Product_has_Color_Product1` FOREIGN KEY (`productid`) REFERENCES `product` (`productid`)
122 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
123 /*!40101 SET character_set_client = @saved_cs_client */;
124
125 --
126 -- Dumping data for table `productcolor`
127 --
128
129 LOCK TABLES `productcolor` WRITE;
130 /*!40000 ALTER TABLE `productcolor` DISABLE KEYS */;
131 INSERT INTO `productcolor` VALUES (30001,20007),(30003,20007),(30005,20007),(30006,20007),(30008,20007),(30009,20007),(30010,20007),(30011,20007),(30012,20007),
132 (30013,20007),(30014,20007),(30015,20007),(30016,20007),(30017,20007),(30018,20007),(30019,20007),(30020,20007),(30021,20007),(30022,20007),(30023,20007),(30024,20007),
133 (30025,20007),(30026,20007),(30027,20007),(30028,20007),(30029,20007),(30030,20007),(30031,20007),(30032,20007),(30033,20007),(30034,20007),(30035,20007),(30036,20007),
134 (30037,20007),(30038,20007),(30039,20007),(30040,20007),(30041,20007),(30042,20007),(30043,20007),(30044,20007),(30045,20007),(30046,20007),(30047,20007),(30048,20007),
135 (30049,20007),(30050,20007),(30051,20007),(30052,20007),(30053,20007),(30054,20007),(30055,20007),(30056,20007),(30057,20007),(30058,20007),(30059,20007),(30060,20007),
136 (30061,20007),(30062,20007),(30063,20007),(30064,20007),(30065,20007),(30066,20007),(30067,20007),(30068,20007),(30069,20007),(30070,20007),(30071,20007),(30072,20007),
137 (30073,20007),(30074,20007),(30075,20007),(30076,20007),(30077,20007),(30078,20007),(30079,20007),(30080,20007),(30081,20007),(30082,20007),(30083,20007),(30084,20007),
138 (30085,20007),(30086,20007),(30087,20007),(30088,20007),(30089,20007),(30090,20007),(30091,20007),(30092,20007),(30093,20007),(30094,20007),(30095,20007),(30096,20007),
139 (30097,20007),(30098,20007),(30099,20007),(30100,20007),(30101,20007),(30102,20007),(30103,20007),(30104,20007),(30105,20007),(30106,20007),(30107,20007),(30108,20007),
140 (30109,20007),(30110,20007),(30111,20007),(30112,20007),(30113,20007),(30114,20007),(30115,20007),(30116,20007),(30117,20007),(30118,20007),(30119,20007),(30120,20007),
141 (30121,20007),(30122,20007),(30123,20007),(30124,20007),(30125,20007),(30126,20007),(30127,20007),(30128,20007),(30129,20007),(30130,20007),(30131,20007),(30132,20007),
142 (30133,20007),(30134,20007),(30135,20007),(30136,20007),(30137,20007),(30138,20007),(30139,20007),(30140,20007),(30141,20007),(30142,20007),(30143,20007),(30144,20007),
143 (30145,20007),(30146,20007),(30147,20007),(30148,20007),(30149,20007),(30150,20007),(30151,20007),(30152,20007),(30153,20007),(30154,20007),(30155,20007),(30156,20007),
144 (30157,20007),(30158,20007),(30159,20007),(30160,20007),(30161,20007),(30162,20007),(30163,20007),(30164,20007),(30165,20007),(30166,20007),(30167,20007),(30168,20007),
145 (30169,20007),(30170,20007),(30171,20007),(30172,20007),(30173,20007),(30174,20007),(30175,20007),(30176,20007),(30177,20007),(30178,20007),(30179,20007),(30180,20007),
146 (30181,20007),(30182,20007),(30183,20007),(30184,20007),(30185,20007),(30186,20007),(30187,20007),(30188,20007),(30189,20007),(30190,20007),(30191,20007),(30192,20007),
147 (30193,20007),(30194,20007),(30195,20007),(30196,20007),(30197,20007),(30198,20007),(30199,20007),(30200,20007),(30201,20007),(30202,20007),(30203,20007),(30204,20007),
148 (30205,20007),(30206,20007),(30207,20007),(30208,20007),(30209,20007),(30210,20007),(30211,20007),(30212,20007),(30213,20007),(30214,20007),(30215,20007),(30216,20007),
149 (30217,20007),(30218,20007),(30219,20007),(30220,20007),(30221,20007),(30222,20007),(30223,20007),(30224,20007),(30225,20007),(30226,20007),(30227,20007),(30228,20007),
150 (30229,20007),(30230,20007),(30231,20007),(30232,20007),(30233,20007),(30234,20007),(30235,20007),(30236,20007),(30237,20007),(30238,20007),(30239,20007),(30240,20007),
151 (30241,20007),(30242,20007),(30243,20007),(30244,20007),(30245,20007),(30246,20007),(30247,20007),(30248,20007),(30249,20007),(30250,20007),(30251,20007),(30252,20007),
152 (30253,20007),(30254,20007),(30255,20007),(30256,20007),(30257,20007),(30258,20007),(30259,20007),(30260,20007),(30261,20007),(30262,20007),(30263,20007),(30264,20007),
153 (30265,20007),(30266,20007),(30267,20007),(30268,20007),(30269,20007),(30270,20007),(30271,20007),(30272,20007),(30273,20007),(30274,20007),(30275,20007),(30276,20007),
154 (30277,20007),(30278,20007),(30279,20007),(30280,20007),(30281,20007),(30282,20007),(30283,20007),(30284,20007),(30285,20007),(30286,20007),(30287,20007),(30288,20007),
155 (30289,20007),(30290,20007),(30291,20007),(30292,20007),(30293,20007),(30294,20007),(30295,20007),(30296,20007),(30297,20007),(30298,20007),(30299,20007),(30300,20007),
156 (30301,20007),(30302,20007),(30303,20007),(30304,20007),(30305,20007),(30306,20007),(30307,20007),(30308,20007),(30309,20007),(30310,20007),(30311,20007),(30312,20007),
157 (30313,20007),(30314,20007),(30315,20007),(30316,20007),(30317,20007),(30318,20007),(30319,20007),(30320,20007),(30321,20007),(30322,20007),(30323,20007),(30324,20007),
158 (30325,20007),(30326,20007),(30327,20007),(30328,20007),(30329,20007),(30330,20007),(30331,20007),(30332,20007),(30333,20007),(30334,20007),(30335,20007),(30336,20007),
159 (30337,20007),(30338,20007),(30339,20007),(30340,20007),(30341,20007),(30342,20007),(30343,20007),(30344,20007),(30345,20007),(30346,20007),(30347,20007),(30348,20007),
160 (30349,20007),(30350,20007),(30351,20007),(30352,20007),(30353,20007),(30354,20007),(30355,20007),(30356,20007),(30357,20007),(30358,20007),(30359,20007),(30360,20007),
161 (30361,20007),(30362,20007),(30363,20007),(30364,20007),(30365,20007),(30366,20007),(30367,20007),(30368,20007),(30369,20007),(30370,20007),(30371,20007),(30372,20007),
162 (30373,20007),(30374,20007),(30375,20007),(30376,20007),(30377,20007),(30378,20007),(30379,20007),(30380,20007),(30381,20007),(30382,20007),(30383,20007),(30384,20007),
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165 (30409,20007),(30410,20007),(30411,20007),(30412,20007),(30413,20007),(30414,20007),(30415,20007),(30416,20007),(30417,20007),(30418,20007),(30419,20007),(30420,20007),
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167 (30433,20007),(30434,20007),(30435,20007),(30436,20007),(30437,20007),(30438,20007),(30439,20007),(30440,20007),(30441,20007),(30442,20007),(30443,20007),(30444,20007),
168 (30445,20007),(30446,20007),(30447,20007),(30448,20007),(30449,20007),(30450,20007),(30451,20007),(30452,20007),(30453,20007),(30454,20007),(30455,20007),(30456,20007),
169 (30457,20007),(30458,20007),(30459,20007),(30460,20007),(30461,20007),(30462,20007),(30463,20007),(30464,20007),(30465,20007),(30466,20007),(30467,20007),(30468,20007),
170 (30469,20007),(30470,20007),(30471,20007),(30472,20007),(30473,20007),(30474,20007),(30475,20007),(30476,20007),(30477,20007),(30478,20007),(30479,20007),(30480,20007),
171 (30481,20007),(30482,20007),(30483,20007),(30484,20007),(30485,20007),(30486,20007),(30487,20007),(30488,20007),(30489,20007),(30490,20007),(30491,20007),(30492,20007),
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174 (30517,20007),(30518,20007),(30519,20007),(30520,20007),(30521,20007),(30522,20007),(30523,20007),(30524,20007),(30525,20007),(30526,20007),(30527,20007),(30528,20007),
175 (30529,20007),(30530,20007),(30531,20007),(30532,20007),(30533,20007),(30534,20007),(30535,20007),(30536,20007),(30537,20007),(30538,20007),(30539,20007),(30540,20007),
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181 (30601,20007),(30602,20007),(30603,20007),(30604,20007),(30605,20007),(30606,20007),(30607,20007),(30608,20007),(30609,20007),(30610,20007),(30611,20007),(30612,20007),
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207 (30913,20007),(30914,20007),(30915,20007),(30916,20007),(30917,20007),(30918,20007),(30919,20007),(30920,20007),(30921,20007),(30922,20007),(30923,20007),(30924,20007),
208 (30925,20007),(30926,20007),(
```

การนำเข้าข้อมูล

brand.sql : ex.

```
1 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10001', 'ABARTH');
2 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10002', 'ACURA');
3 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10003', 'ALFA ROMEO');
4 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10004', 'ALUMI CRAFT');
5 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10005', 'AMC');
6 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10006', 'AMG Transport Dynamics');
7 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10007', 'ARIEL');
8 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10008', 'ASCARI');
9 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10009', 'ASTON MARTIN');
10 INSERT INTO `carsdb`.`brand` (`brandid`, `brandname`) VALUES ('10010', 'AUDI');
```

color.sql : ex.

```
1 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20001', 'IndianRed', '#CD5C5C');
2 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20002', 'LightCoral', '#F08080');
3 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20003', 'Salmon', '#FA8072');
4 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20004', 'DarkSalmon', '#E9967A');
5 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20005', 'LightSalmon', '#FFA07A');
6 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20006', 'Crimson', '#DC143C');
7 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20007', 'Red', '#FF0000');
8 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20008', 'FireBrick', '#B22222');
9 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20009', 'DarkRed', '#8B0000');
10 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20010', 'Pink', '#FFC0CB');
11 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20011', 'LightPink', '#FFB6C1');
12 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20012', 'HotPink', '#FF69B4');
13 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20013', 'DeepPink', '#FF1493');
14 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20014', 'MediumVioletRed', '#C71585');
15 INSERT INTO `carsdb`.`color` (`colorid`, `colorname`, `colorcode`) VALUES ('20015', 'PaleVioletRed', '#DB7093');
```

productcolor.sql : ex

```
1 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30001', '20139');
2 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30001', '20117');
3 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30001', '20007');
4 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30001', '20076');
5 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30002', '20138');
6 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30003', '20007');
7 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30003', '20023');
8 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30003', '20095');
9 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30003', '20117');
10 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30004', '20117');
11 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30005', '20139');
12 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30005', '20117');
13 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30005', '20007');
14 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30005', '20095');
15 INSERT INTO `carsdb`.`productcolor` (`productid`, `colorid`) VALUES ('30006', '20139');
```

product.sql : ex

```
1 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
2 VALUES ('30001', '124 Spider', '123', '250', '1.124', 'RWD', '2017-04-22', 'The 124 Spider was first introduced in 2016 as a homage to the 50th anniversary of t
3 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
4 VALUES ('30002', '695 Biposto', '139', '249', '0.997', 'FWD', '2016-12-05', 'Using technology derived from the 695 Aspetto Corse racing car series, it is curren
5 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
6 VALUES ('30003', 'Fiat 131', '104', '176', '0.98', 'RWD', '1980-03-21', 'Carlo Abarth is rightfully famous for applying the dark art of tuning to some of the mo
7 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
8 VALUES ('30004', '595 Esseesse', '21', '46', '0.57', 'RWD', '1968-06-15', 'What it lacks in power and refinement it makes up for in character and likability. Th
9 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
10 VALUES ('30005', 'NSX', '427', '845', '1.725', 'AWD', '2017-08-22', 'Sold as a Honda model outside of North America, the 2017 NSX is an AWD hybrid supercar that
11 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
12 VALUES ('30006', 'RSX Type-S', '149', '193', '1.279', 'FWD', '2002-04-25', 'The Acura RSX is the successor to the Acura Integra that was sold in North America a
13 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
14 VALUES ('30007', 'Integra Type-R', '145', '176', '1.197', 'FWD', '2001-01-13', 'The Type-R is the top-of-the-line model of the last generation Acura Integra, th
15 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
16 VALUES ('30008', 'Stelvio Quadrifoglio', '337', '600', '1.978', 'AWD', '2018-12-12', 'The 2018 Alfa Romeo Stelvio Quadrifoglio, abbreviated as Alfa Stelvio, is
17 INSERT INTO `carsdb`.`product` (`productid`, `productname`, `power`, `torque`, `weight`, `transmission`, `yom`, `description`, `img`, `brand_brandid`)
18 VALUES ('30009', 'Giulia Quadrifoglio', '377', '600', '1.701', 'RWD', '2017-08-15', 'The Giulia Quadrifoglio is the high-performance model of the new Giulia lin
```

3.2. การกำหนดค่าผู้ใช้งานข้อมูล

```
CREATE USER 'chom'@'%' IDENTIFIED BY 'mysql';  
CREATE USER 'kamin'@'%' IDENTIFIED BY 'mysql';
```

```
GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, RELOAD, EXECUTE, CREATE VIEW, SHOW VIEW,  
    CREATE ROLE, DROP ROLE ON *.* TO `chom`@`%` WITH GRANT OPTION;  
GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, RELOAD, EXECUTE, CREATE VIEW, SHOW VIEW,  
    CREATE ROLE, DROP ROLE ON *.* TO `kamin`@`%` WITH GRANT OPTION;  
  
commit;
```

```
1 CREATE USER 'chom'@'%' IDENTIFIED BY 'mysql';  
2 CREATE USER 'kamin'@'%' IDENTIFIED BY 'mysql';  
3  
4 GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, RELOAD, EXECUTE, CREATE VIEW, SHOW VIEW, CREATE ROLE, DROP ROLE ON *.* TO `chom`@`%` WITH GRANT OPTION;  
5 GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, RELOAD, EXECUTE, CREATE VIEW, SHOW VIEW, CREATE ROLE, DROP ROLE ON *.* TO `kamin`@`%` WITH GRANT OPTION;  
6  
7 commit;
```