

データベース基礎

Primary key と Foreign Key の宣言

```
mysql -u masaya -p

MariaDB [Challenge_db]> select * from user;
+-----+-----+-----+-----+-----+-----+-----+
| userID | name  | tell      | age | birthday | departmentID | stationID |
+-----+-----+-----+-----+-----+-----+-----+
| 1      | 田中 実 | 012-345-6789 | 30  | 1994-02-01 | 3            | 1          |
| 2      | 鈴木 茂 | 090-1122-3344 | 37  | 1987-08-12 | 3            | 4          |
| 3      | 鈴木 実 | 080-5566-7788 | 24  | 2000-12-24 | 2            | 5          |
| 4      | 佐藤 清 | 012-0987-6543 | 19  | 2005-08-01 | 1            | 5          |
| 5      | 高橋 清 | 090-9900-1234 | 24  | 2000-12-24 | 3            | 5          |
+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

MariaDB [Challenge_db]>
```

/*親テーブル「user」の作成(太下線で主キー制約の設定)*/
○ = create table user (userID int **not null primary key**, name varchar(255),
tell varchar(255), age int, birthday date, departmentID int, stationID int);

/*「user」テーブルにレコードを追加する*/
○insert into user values(1,'田中 実','012-345-6789',30,'1994-02-01',3,1);
.....
○insert into user values(5,'高橋 清','090-9900-1234',24,'2000-12-24',3,5);

```
mysql -u masaya -p

MariaDB [Challenge_db]> select * from department;
+-----+-----+
| departmentID | departmentName |
+-----+-----+
|          1 | 開発部         |
|          2 | 営業部         |
|          3 | 総務部         |
+-----+-----+
3 rows in set (0.00 sec)

MariaDB [Challenge_db]>
```

/*子テーブル「department」の作成(太下線で主キー制約の設定)*/
○ = create table department (departmentID int **not null primary key**,
departmentName varchar(255));

/*「department」テーブルにレコードを追加する*/
○ insert into department values(1,'開発部');
.....
○ insert into department values(3,'総務部');

```
mysql -u masaya -p

MariaDB [Challenge_db]> select * from station;
+-----+-----+
| stationID | stationName |
+-----+-----+
|          1 | 九段下      |
|          2 | 永田町      |
|          3 | 渋谷        |
|          4 | 神保町      |
|          5 | 上井草      |
+-----+-----+
5 rows in set (0.03 sec)

MariaDB [Challenge_db]> _
```

/*子テーブル「station」の作成(太下線で主キー制約の設定)*/

○ = create table station (stationID int **not null primary key**,
stationName varchar(255));

/*「station」テーブルにレコードを追加する*/

○insert into station values(1,'九段下');

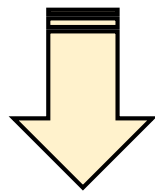
.....

○insert into department values(3,'総務部');

/*外部キーの設定をする*/

○alter table user add foreign key (departmentID) references department (departmentID) on delete cascade on update restrict;

○alter table user add foreign key (stationID) references station (stationID) on delete cascade on update restrict;



```
mysql -u masaya -p

MariaDB [Challenge_db]> select constraint_name,table_name,column_name,referenced_table_name,referenced_column_name from information_schema.key_column_usage;
+-----+-----+-----+-----+-----+
| constraint_name | table_name | column_name | referenced_table_name | referenced_column_name |
+-----+-----+-----+-----+-----+
| PRIMARY        | department | departmentID | NULL                  | NULL                   |
| PRIMARY        | station   | stationID    | NULL                  | NULL                   |
| PRIMARY        | user      | userID       | NULL                  | NULL                   |
| user_ibfk_1    | user      | departmentID | department             | departmentID           |
| user_ibfk_2    | user      | stationID    | station                | stationID              |
+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

MariaDB [Challenge_db]> _
```

主キーと外部キーが設定されているかの確認画面

/*下記select文で情報の確認をする*/

○select
constraint_name,table_name,column_name,referenced_table_name,referenced_table_name,referenced_column_name from
information_schema.key_column_usage;