

Primary Key と Foreign Keyの宣言

■課題における全てのテーブルをCREATEする。

その時、情報に従ってPrimaryKeyとForeignKeyをカラムに適宜付与する。

-- user テーブル

```
mysql> CREATE TABLE user (userID INT primary key, name VARCHAR(255),  
tell VARCHAR(255), age INT, birthday DATE, departmentID INT, stationID  
INT);
```

-- department テーブル

```
mysql> CREATE TABLE department (departmentID INT, departmentName  
VARCHAR(255));  
mysql> ALTER TABLE department ADD Primary Key(departmentID);
```

-- station テーブル

```
mysql> CREATE TABLE station (stationID INT Primary Key, stationName  
VARCHAR(255));
```

-- ForeignKeyの設定

```
mysql> ALTER TABLE user ADD Foreign Key(departmentID) REFERENCES  
department(departmentID);  
mysql> ALTER TABLE user ADD Foreign Key(stationID) REFERENCES  
station(stationID);
```

■課題で定義された全てのレコードを挿入する。

-- user テーブル

```
mysql> INSERT INTO user (userID, name, tell, age, birthday,  
departmentID, stationID) VALUES (1, '田中 実', '012-345-6789', 30,  
'1994-02-01', 3, 1);  
mysql> INSERT INTO user (userID, name, tell, age, birthday,  
departmentID, stationID) VALUES (2, '鈴木 茂', '090-1122-3344', 37,  
'1987-08-12', 3, 4);  
mysql> INSERT INTO user (userID, name, tell, age, birthday,  
departmentID, stationID) VALUES (3, '鈴木 実', '080-5566-7788', 24,  
'2000-12-24', 2, 5);  
mysql> INSERT INTO user (userID, name, tell, age, birthday,  
departmentID, stationID) VALUES (4, '佐藤 清', '012-0987-6519,  
'2005-08-01', 1, 5);  
mysql> INSERT INTO user (userID, name, tell, age, birthday,  
departmentID, stationID) VALUES (5, '高橋 清', '090-9900-1234', 24,  
'2000-12-24', 3, 5);
```

-- department テーブル

```
mysql> INSERT INTO department (departmentID, departmentName) VALUES (1,  
'開発部');  
mysql> INSERT INTO department (departmentID, departmentName) VALUES (2,  
'営業部');  
mysql> INSERT INTO department (departmentID, departmentName) VALUES (3,  
'総務部');
```

ー station テーブル

```
mysql> INSERT INTO station (stationID, stationName) VALUES (1, '九段下');
mysql> INSERT INTO station (stationID, stationName) VALUES (2, '永田町');
mysql> INSERT INTO station (stationID, stationName) VALUES (3, '渋谷');
mysql> INSERT INTO station (stationID, stationName) VALUES (4, '神保町');
mysql> INSERT INTO station (stationID, stationName) VALUES (5, '上井草');
```

■それぞれのテーブルに対して全件検索

```
mysql> 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 | 080-3556-7783 | 24 | 2000-12-24 | 2 | 3 |
| 4 | 佐藤 清 | 012-0937-6543 | 19 | 2005-08-01 | 1 | 3 |
| 5 | 高橋 清 | 090-9990-1234 | 24 | 2000-12-24 | 3 | 3 |
+----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT * FROM department;
+-----+-----+
| departmentID | departmentName |
+-----+-----+
| 1 | 開発部 |
| 2 | 営業部 |
| 3 | 総務部 |
+-----+-----+
3 rows in set (0.00 sec)

mysql> 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 (0.00 sec)
```

ー (userテーブルに於いてのPrimaryKeyとForeignKeyを確認しました)

```
mysql> SHOW CREATE TABLE user;
```

```
user | CREATE TABLE `user` (
  `userID` int(11) NOT NULL,
  `name` varchar(255) DEFAULT NULL,
  `tell` varchar(255) DEFAULT NULL,
  `age` int(11) DEFAULT NULL,
  `birthday` date DEFAULT NULL,
  `departmentID` int(11) DEFAULT NULL,
  `stationID` int(11) DEFAULT NULL,
  PRIMARY KEY (`userID`),
  KEY `departmentID` (`departmentID`),
  KEY `stationID` (`stationID`),
  CONSTRAINT `user_inf_1` FOREIGN KEY (`departmentID`) REFERENCES `department` (`departmentID`),
  CONSTRAINT `user_inf_2` FOREIGN KEY (`stationID`) REFERENCES `station` (`stationID`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```