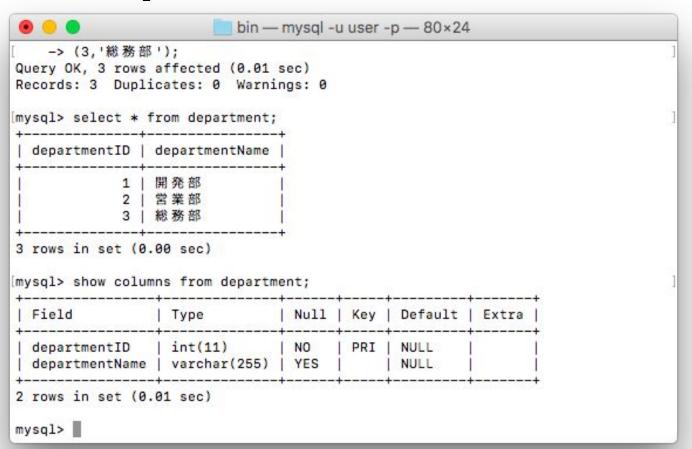# Java/データベース基礎（9/9）

[実行コマンド1]

・table:deartment 作成
・departmentにレコード登録

```
mysql> create table department(departmentID int
primary key, departmentName varchar(255));

mysql> insert into department values(1,'開発部'),
    -> (2,'営業部'),
    -> (3,'総務部');
```

[実行結果1]

```
[    -> (3,'総務部');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

[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> show columns from department;
+----------------+--------------+------+-----+---------+-------+
| Field          | Type         | Null | Key | Default | Extra |
+----------------+--------------+------+-----+---------+-------+
| departmentID   | int(11)      | NO   | PRI | NULL    |       |
| departmentName | varchar(255) | YES  |     | NULL    |       |
+----------------+--------------+------+-----+---------+-------+
2 rows in set (0.01 sec)

mysql>
```

[実行コマンド2]

・table:station 作成
・station にレコード登録

```
mysql> create table station(stationID int primary key, stationName
varchar(255));

mysql> insert into station values(1,'九段下'),
    -> (2,'永田町'),
    -> (3,'渋谷'),
    -> (4,'神保町'),
    -> (5,'上井草');
```

[実行結果2]

```
Records: 5  Duplicates: 0  Warnings: 0

[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)

[mysql> show columns from station;
+-------------+--------------+------+-----+---------+-------+
| Field       | Type         | Null | Key | Default | Extra |
+-------------+--------------+------+-----+---------+-------+
| stationID   | int(11)      | NO   | PRI | NULL    |       |
| stationName | varchar(255) | YES  |     | NULL    |       |
+-------------+--------------+------+-----+---------+-------+
2 rows in set (0.01 sec)

mysql>
```

[実行コマンド3]

・table:user 作成
・user にレコード登録、primal key, foreign key 設定

```
mysql> create table user(userID int primary key, name varchar(255), tell
varchar(255), age int, birthday date, departmentID int, stationID int,
    -> foreign key(departmentID) references department(departmentID),
    -> foreign key(stationID) references station(stationID));

mysql> insert into user values(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);
```

[実行結果3-1] select * from user;

```
 ● ● ●                    bin — mysql -u user -p — 91×25

-----------------------------------------------------------------------------------
------------------------------------------------+
1 row in set (0.00 sec)

mysql> insert into user values(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);
Query OK, 5 rows affected (0.00 sec)
Records: 5  Duplicates: 0  Warnings: 0

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   | 080-5566-7788 |   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)

mysql>
```

[実行結果3-2] show create table user;

```
mysql> show create table user;
+-------+------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
---------------------+
| Table | Create Table


                      |
[+-------+------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
---------------------+
| 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_ibfk_1` FOREIGN KEY (`departmentID`) REFERENCES `department` (`departmentID`),                                            ]
  CONSTRAINT `user_ibfk_2` FOREIGN KEY (`stationID`) REFERENCES `station` (`stationID`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8 |
+-------+------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
---------------------+
```

[実行結果3-3] show columns from user;

```
) ENGINE=InnoDB DEFAULT CHARSET=utf8 |
+-------+-------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------
--------------------------------------+
1 row in set (0.00 sec)

mysql> show columns from user;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| userID       | int(11)      | NO   | PRI | NULL    |       |
| name         | varchar(255) | YES  |     | NULL    |       |
| tell         | varchar(255) | YES  |     | NULL    |       |
| age          | int(11)      | YES  |     | NULL    |       |
| birthday     | date         | YES  |     | NULL    |       |
| departmentID | int(11)      | YES  | MUL | NULL    |       |
| stationID    | int(11)      | YES  | MUL | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
7 rows in set (0.00 sec)

mysql> mysql> show columns from user;
```