1. 实现Mysql 数库表设计，支持中文存储。 (初始化数据也加里面了)

```
SET NAMES utf8mb4;
SET FOREIGN_KEY_CHECKS = 0;

-- ----------------------------
-- Table structure for tb_dept
-- ----------------------------
DROP TABLE IF EXISTS `tb_dept`;
CREATE TABLE `tb_dept`  (
  `dept_id` int(8) NOT NULL AUTO_INCREMENT COMMENT '部门id',
  `dept_name` varchar(50) CHARACTER SET utf8 COLLATE utf8_general_ci NOT
NULL COMMENT '部门名称',
  `dept_comment` varchar(255) CHARACTER SET utf8 COLLATE utf8_general_ci
DEFAULT '' COMMENT '职能描述',
  PRIMARY KEY (`dept_id`) USING BTREE
) ENGINE = InnoDB CHARACTER SET = utf8 COLLATE = utf8_general_ci COMMENT =
'部门表' ROW_FORMAT = Dynamic;

-- ----------------------------
-- Records of tb_dept
-- ----------------------------
INSERT INTO `tb_dept` VALUES (10000, '开发部', '开发部');
INSERT INTO `tb_dept` VALUES (10001, '人力资源部', '人力资源部');
INSERT INTO `tb_dept` VALUES (10002, '财政部', '财政部');
INSERT INTO `tb_dept` VALUES (10003, '风控部', '风控部');

-- ----------------------------
-- Table structure for tb_employee
-- ----------------------------
DROP TABLE IF EXISTS `tb_employee`;
CREATE TABLE `tb_employee`  (
  `employee_id` int(11) NOT NULL AUTO_INCREMENT COMMENT '员工id',
  `employee_name` varchar(32) CHARACTER SET utf8 COLLATE utf8_general_ci NOT
NULL COMMENT '员工姓名',
  `employee_sex` int(11) DEFAULT 0 COMMENT '0表示未知，1表示男性，2表示女性',
  `employee_age` int(11) DEFAULT NULL COMMENT '员工年龄',
  `employee_job_name` varchar(32) CHARACTER SET utf8 COLLATE utf8_general_ci
DEFAULT NULL COMMENT '岗位名称',
  `employee_phone` varchar(11) CHARACTER SET utf8 COLLATE utf8_general_ci
DEFAULT NULL COMMENT '手机号',
  `dept_id` int(8) DEFAULT NULL,
  `dept_name` varchar(50) CHARACTER SET utf8 COLLATE utf8_general_ci DEFAULT
NULL COMMENT '冗余字段， 在某些场景提高查询速率',
  PRIMARY KEY (`employee_id`) USING BTREE,
  INDEX `idx_dept_id`(`dept_id`) USING BTREE
) ENGINE = InnoDB CHARACTER SET = utf8 COLLATE = utf8_general_ci ROW_FORMAT
= Dynamic;

-- ----------------------------
-- Records of tb_employee
-- ----------------------------
```

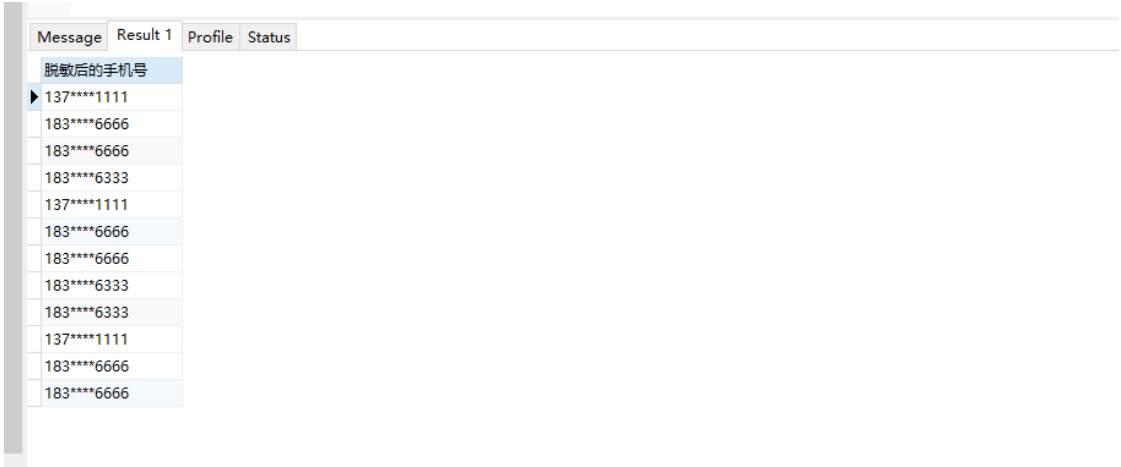
```
INSERT INTO `tb_employee` VALUES (10000000, '张三', 1, 20, 'Java后台',
'13733311111', 10000, '开发部');
INSERT INTO `tb_employee` VALUES (10000001, '李四', 1, 22, 'Java后台',
'18342216666', 10000, '开发部');
INSERT INTO `tb_employee` VALUES (10000003, '王五', 1, 22, 'Java后台',
'18342216666', 10000, '开发部');
INSERT INTO `tb_employee` VALUES (10000004, '赵六', 1, 30, 'HR',
'18342216333', 10001, '人力资源');
INSERT INTO `tb_employee` VALUES (10000005, '张55', 1, 20, 'Java后台',
'13733311111', 10000, '开发部');
INSERT INTO `tb_employee` VALUES (10000006, '李九', 1, 22, 'Java后台',
'18342216666', 10000, '开发部');
INSERT INTO `tb_employee` VALUES (10000007, '王八', 1, 22, 'Java后台',
'18342216666', 10000, '开发部');
INSERT INTO `tb_employee` VALUES (10000008, '张起', 1, 30, 'HR',
'18342216333', 10001, '人力资源');
INSERT INTO `tb_employee` VALUES (10000009, '张起', 1, 50, 'HR',
'18342216333', 10001, '人力资源');
INSERT INTO `tb_employee` VALUES (10000010, '张55', 1, 20, 'Java后台',
'13733311111', 10003, '风控部');
INSERT INTO `tb_employee` VALUES (10000011, '李九', 1, 22, 'Java后台',
'18342216666', 10003, '风控部');
INSERT INTO `tb_employee` VALUES (10000012, '王八', 1, 22, 'Java后台',
'18342216666', 10002, '财政部');

SET FOREIGN_KEY_CHECKS = 1;
```

2. 支持手机号数据脱敏。

```
SELECT INSERT(tb_employee.employee_phone, 4, 4, "****") AS '脱敏后的手机号'
FROM tb_employee;
```

查询结果：



3. SQL 统计各部门的员工人数。

```
SELECT dept_name AS 部门名称, COUNT(employee_id) AS 部门人数 FROM tb_employee
GROUP BY dept_id;
```

查询结果：

Message | Result 1 | Profile | Status

部门名称	部门人数
开发部	6
人力资源	3
财政部	1
风控部	2

4. SQL 查询每个部门年龄最大的员工。

```
SELECT employee_name, employee_age, dept_name
FROM tb_employee a
WHERE employee_age in (SELECT MAX(employee_age) FROM tb_employee b WHERE
a.dept_id = b.dept_id)
GROUP BY dept_id;
```

查询结果

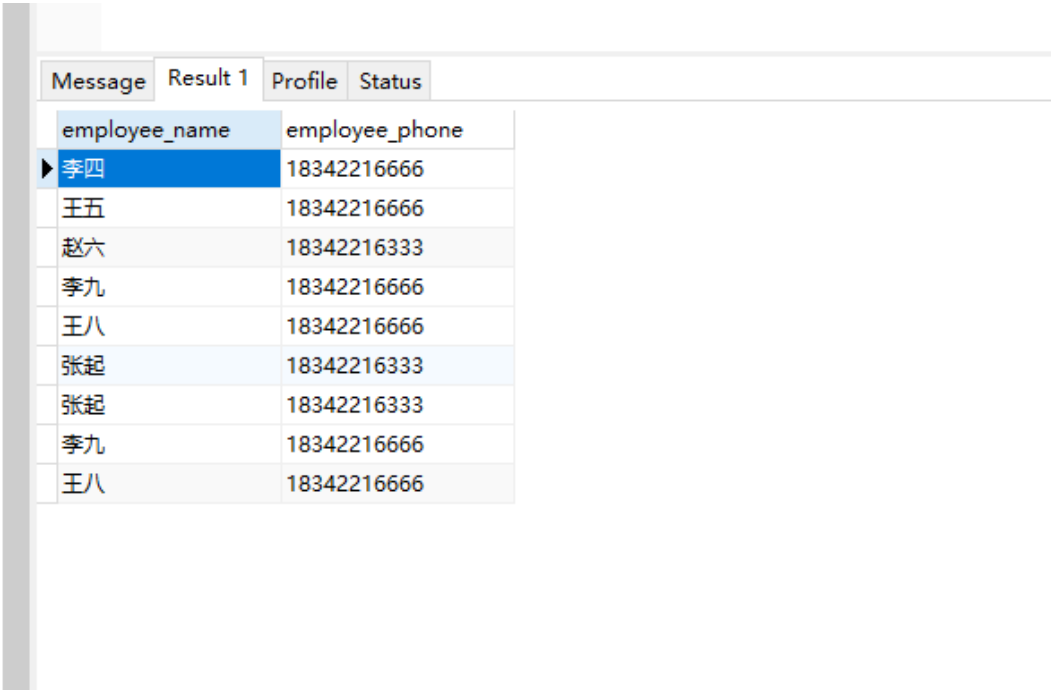
Message | Result 1 | Profile | Status

employee_name	employee_age	dept_name
王八	33	开发部
张起	50	人力资源
王八	22	财政部
李九	66	风控部

5. SQL 手机号模糊查询。

```
SELECT employee_name, employee_phone FROM tb_employee WHERE employee_phone
like '%183%'
```

查询结果



Message | Result 1 | Profile | Status

employee_name	employee_phone
李四	18342216666
王五	18342216666
赵六	18342216333
李九	18342216666
王八	18342216666
张起	18342216333
张起	18342216333
李九	18342216666
王八	18342216666

PS: 如果在电话号码字段上建立了索引，第一个字符不应该使用通配符，否则会导致索引失效