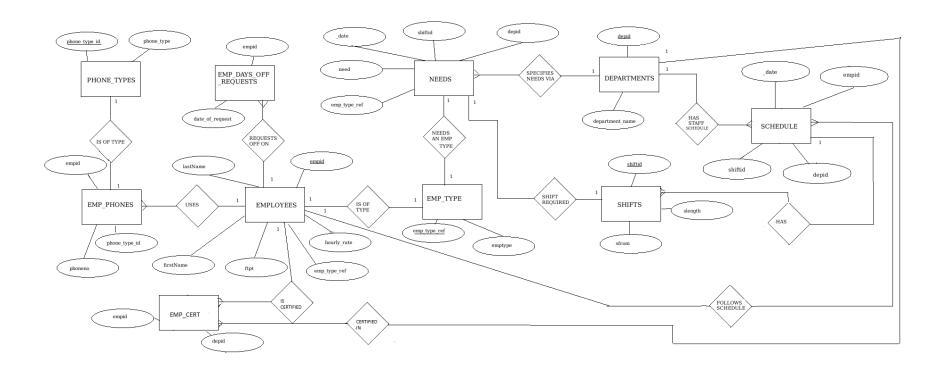
## **ER DIAGRAM**



## **Table Descriptions**

```
mysql> describe shifts;
+-----+
                | Null | Key | Default | Extra
+-----+
| shiftid | bigint(20) unsigned | NO | PRI | NULL | auto increment |
| sfrom | varchar(10)
                  | NO | | NULL |
| slength | int(11)
                 | YES | | NULL |
+----+
3 rows in set (0.00 sec)
mysql> describe schedule;
               | Null | Key | Default | Extra |
+----+
| date | date
                | NO | | NULL |
| empid | int(11)
                NO MULNULL
| depid | bigint(20) unsigned | YES | MUL | NULL
| shiftid | bigint(20) unsigned | YES | MUL | NULL
4 rows in set (0.00 sec)
mysql> describe needs;
+-----+----+
                  | Null | Key | Default | Extra
| Field
depid
       | bigint(20) unsigned | YES | MUL | NULL
```

```
emp type ref | bigint(20) unsigned | YES | MUL | NULL |
        | int(11)
                    | YES |
l need
                           NULL
                          | NULL
| date
         date
                    | YES |
| shiftid
        | bigint(20) unsigned | YES | MUL | NULL |
+-----+
5 rows in set (0.00 sec)
mysql> describe emp cert;
+----+
| Field | Type | Null | Key | Default | Extra |
+----+
empid | int(11) | YES | MUL | NULL
+----+
2 rows in set (0.00 sec)
mysql> describe employees;
                   | Null | Key | Default | Extra
l Field
        I Type
| empid
         | int(11)
                    | NO | PRI | NULL |
| lastName | varchar(50)
                       NO |
                               NULL
| firstName | varchar(50)
                       NO |
                               NULL
emp type_ref | bigint(20) unsigned | YES | MUL | NULL
ftpt
      | varchar(5)
                    | YES |
                           | NULL
| hourly rate | double
                       | NO |
                             | 0
| pref shift | int(11)
                     | YES |
                             NULL
```

7 rows in set (0.01 sec)

```
mysql> describe departments;
                  | Null | Key | Default | Extra
l Field
+----+----+-----+-----+
        | bigint(20) unsigned | NO | PRI | NULL | auto increment |
depid
| department name | varchar(50) | NO | NULL |
+-----+
2 rows in set (0.00 sec)
mysql> describe emp phones;
+-----+
       | Type | Null | Key | Default | Extra |
Field
+----+
        | bigint(11) unsigned | YES | MUL | NULL |
l empid
| phoneno | varchar(20)
                    | NO | | NULL |
| phone_type_id | bigint(20) unsigned | YES | MUL | NULL
+----+
3 rows in set (0.00 sec)
mysql> describe phone types;
+-----+
            | Null | Key | Default | Extra |
l Field
       Type
| phone type id | int(11) | NO | PRI | NULL |
| phone type | varchar(25) | YES | | NULL |
+----+
2 rows in set (0.00 sec)
```

```
mysql> describe emp type;
+-----+
| Field
              | Null | Key | Default | Extra
+-----+
| emp_type_ref | bigint(20) unsigned | NO | PRI | NULL | auto_increment |
| emptype | varchar(5)
                | NO | | NULL |
+-----+
2 rows in set (0.00 sec)
mysql> describe emp days off requests;
+-----+
      | Type | Null | Key | Default | Extra |
Field
+-----+
l empid
       | bigint(20) unsigned | YES | MUL | NULL
| date of request | date
                | NO | | NULL |
+----+
2 rows in set (0.00 sec)
```