

OCTAVIA OLIVIA SUMAILAH HOMEWORK ASSIGNMENT8

PAYROLL MANAGEMENT SYSTEM DATABASE DESIGN

1. DEPARTMENT TABLE

```
SQL> CREATE TABLE department_tbl (dept_id char(5) DEFAULT 0, dept_desc varchar2(35), dept_location varchar(35), emp_id char(5) NOT NULL, CONSTRAINT dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT dept_desc_u  
K UNIQUE (dept_desc));
```

Table created.

```
SQL> DESCRIBE department_tbl  
-----  
Name Null? Type  
-----  
DEPT_ID NOT NULL CHAR(5)  
DEPT_DESC VARCHAR2(35)  
DEPT_LOCATION VARCHAR2(35)  
EMP_ID NOT NULL CHAR(5)
```

```
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```

2. INFORMATION TECHNOLOGY TABLE

```
SQL> CREATE TABLE infor_tech_tbl (dept_id char(5) DEFAULT 5, tech_role varchar2(55), CONSTRAINT infor_tech_dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT infor_tech_tbl_dept_id_fk FOREIGN KEY (dept_id) REF  
ERENCES department_tbl (dept_id));
```

Table created.

```
SQL> DESC infor_tech_tbl  
-----  
Name Null? Type  
-----  
DEPT_ID NOT NULL CHAR(5)  
TECH_ROLE VARCHAR2(55)
```

```
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```

3. HUMAN RESOURCES

```
SQL> CREATE TABLE humanresources_tbl (dept_id char(5) DEFAULT 5, hr_role varchar2(55), CONSTRAINT humanresources_tbl_dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT humanresources_tbl_fk FOREIGN KEY (dept_id)  
) REFERENCES department_tbl (dept_id));
```

Table created.

```
SQL> DESC humanresources_tbl  
-----  
Name Null? Type  
-----  
DEPT_ID NOT NULL CHAR(5)  
HR_ROLE VARCHAR2(55)
```

```
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```

4. FINANCE

```
SQL> CREATE TABLE finance_tbl (dept_id char(5) DEFAULT 5, fin_role varchar2(55), CONSTRAINT finance_tbl_dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT finance_tbl_dept_id_fk FOREIGN KEY (dept_id) REFERENCE  
S department_tbl (dept_id));
```

Table created.

```
SQL> DESC finance_tbl  
-----  
Name Null? Type  
-----  
DEPT_ID NOT NULL CHAR(5)  
FIN_ROLE VARCHAR2(55)
```

```
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```

5. MAINTENANCE

```
SQL> CREATE TABLE maintenance_tbl (dept_id char(5) DEFAULT 5, main_role varchar2(55), CONSTRAINT maintenance_tbl_dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT maintenance_tbl_dept_id_fk FOREIGN KEY (dept_  
id) REFERENCES department_tbl (dept_id));
```

Table created.

```
SQL> DESC maintenance_tbl  
-----  
Name Null? Type  
-----  
DEPT_ID NOT NULL CHAR(5)  
MAIN_ROLE VARCHAR2(55)
```

```
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```

6. MANAGER

```
SQL> CREATE TABLE manager_tbl (dept_id char(5) DEFAULT 5, man_role varchar2(55), CONSTRAINT manger_tbl_dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT manager_tbl_dept_id_fk FOREIGN KEY (dept_id) REFERENCE  
S department_tbl (dept_id));
```

Table created.

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```
SQL> DESC manager_tbl
Name Null? Type
-----
DEPT_ID NOT NULL CHAR(5)
MAN_ROLE VARCHAR2(55)
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```

7. SALARIED EMPLOYEES

```
SQL> CREATE TABLE salariedemployee_tbl (dept_id char(5) DEFAULT 5, CONSTRAINT salemp_tbl_dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT salemp_tbl_dept_id_fk FOREIGN KEY (dept_id) REFERENCES department_tbl (dept_id));
Table created.
SQL> DESC salariedemployee_tbl
Name Null? Type
-----
DEPT_ID NOT NULL CHAR(5)
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```

8. HOURLY EMPLOYEES

```
SQL> CREATE TABLE hourlyemployees_tbl (dept_id char(5) DEFAULT 5, belong_to varchar2(55), trade_union varchar2(55), pay_scale number(5) DEFAULT 5, CONSTRAINT hourlyemp_tbl_dept_id_pk PRIMARY KEY (dept_id), CONSTRAINT hourlyemp_tbl_dept_id_fk FOREIGN KEY (dept_id) REFERENCES department_tbl (dept_id));
Table created.
SQL> DESC hourlyemployees_tbl
Name Null? Type
-----
DEPT_ID NOT NULL CHAR(5)
BELONG_TO VARCHAR2(55)
TRADE_UNION VARCHAR2(55)
PAY_SCALE NUMBER(5)
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```

9. EMPLOYEE TABLE

```
SQL> CREATE TABLE employee_tbl (emp_id char(5), emp_fname varchar2(35), emp_lname varchar2(35), emp_hired_date DATE DEFAULT SYSDATE, emp_address varchar2(55), emp_city varchar2(35), emp_state varchar2(35), emp_zip char(5) NOT NULL, emp_phone number(10) NOT NULL, CONSTRAINT emp_id_pk PRIMARY KEY (emp_id), CONSTRAINT emp_phone_uk UNIQUE (emp_phone));
Table created.
SQL> DESCRIBE employee_tbl
Name Null? Type
-----
EMP_ID NOT NULL CHAR(5)
EMP_FNAME VARCHAR2(35)
EMP_LNAME VARCHAR2(35)
EMP_HIRED_DATE DATE
EMP_ADDRESS VARCHAR2(55)
EMP_CITY VARCHAR2(35)
EMP_STATE VARCHAR2(35)
EMP_ZIP NOT NULL CHAR(5)
EMP_PHONE NOT NULL NUMBER(10)
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```

10. PAYROLL TABLE

```
SQL> CREATE TABLE payroll_tbl (pay_id number(5) DEFAULT(5), sal_grade char(2) DEFAULT 1, salary number(7,2) DEFAULT 1, deduct_id number(5) DEFAULT 0, CONSTRAINT pay_id_pk PRIMARY KEY (pay_id));
Table created.
SQL> DESCRIBE payroll_tbl
Name Null? Type
-----
PAY_ID NOT NULL NUMBER(5)
SAL_GRADE CHAR(2)
SALARY NUMBER(7,2)
DEDUCT_ID NUMBER(5)
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```

11. PAYROLLBENEFITS TABLE

```
SQL> CREATE TABLE payrollbenefits_tbl (pay_id number(5) DEFAULT 5, ben_id number(5) DEFAULT 5, deduct_id number(5) DEFAULT 0, CONSTRAINT pay_id_ben_id_pk PRIMARY KEY (pay_id, ben_id), CONSTRAINT pay_id_fk FOREIGN KEY (pay_id) REFERENCES payroll_tbl (pay_id), CONSTRAINT ben_id_fk FOREIGN KEY (ben_id) REFERENCES benefits_tbl (ben_id), CONSTRAINT deduct_id_uk UNIQUE (deduct_id));
Table created.
SQL> DESC payrollbenefits_tbl
Name Null? Type
-----
PAY_ID NOT NULL NUMBER(5)
BEN_ID NOT NULL NUMBER(5)
DEDUCT_ID NUMBER(5)
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```

12. BENEFITS TABLE

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```
SQL> CREATE TABLE benefits_tbl (ben_id number(5) DEFAULT 5, sal_scale number(7,2), allowance number(7,2), welfare number(7,2), deduct_id number(5) DEFAULT 0, CONSTRAINT ben_id_pk PRIMARY KEY (ben_id));
Table created.

SQL> DESCRIBE benefits_tbl
Name Null? Type
-----
BEN_ID NOT NULL NUMBER(5)
SAL_SCALE NUMBER(7,2)
ALLOWANCE NUMBER(7,2)
WELFARE NUMBER(7,2)
DEDUCT_ID NUMBER(5)

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```

13. EMPLOYEEBENEFITS TABLE

```
SQL> CREATE TABLE employeebenefits_tbl (emp_id char(5), ben_id number(5) DEFAULT 5, ben_acc# number(10) DEFAULT 0, CONSTRAINT emp_id_ben_id_pk PRIMARY KEY (emp_id, ben_id), CONSTRAINT empben_tbl_emp_id_fk FOREIGN KEY (emp_id) REFERENCES employee_tbl (emp_id), CONSTRAINT eben_tbl_emp_id_fk FOREIGN KEY (ben_id) REFERENCES benefits_tbl (ben_id), CONSTRAINT ben_acc#_uk UNIQUE (ben_acc#));
Table created.

SQL> DESC employeebenefits_tbl
Name Null? Type
-----
EMP_ID NOT NULL CHAR(5)
BEN_ID NOT NULL NUMBER(5)
BEN_ACC# NUMBER(10)

SQL>
```

14. HOPITAL TABLE

```
SQL> CREATE TABLE hospital_tbl (hosp_code char(5) DEFAULT 0, hosp_name varchar2(55), CONSTRAINT hosp_tbl_pk PRIMARY KEY (hosp_code));
Table created.

SQL> DESC hospital_tbl
Name Null? Type
-----
HOSP_CODE NOT NULL CHAR(5)
HOSP_NAME VARCHAR2(55)

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```

15. DOCTORS TABLE

```
SQL> CREATE TABLE doctors_tbl (doctor_id char(5) DEFAULT 5, doctor_name varchar2(55), hosp_code char(5) DEFAULT 5, appoint_date DATE DEFAULT SYSDATE, CONSTRAINT doctor_id_pk PRIMARY KEY (doctor_id));
Table created.

SQL> DESC doctors_tbl
Name Null? Type
-----
DOCTOR_ID NOT NULL CHAR(5)
DOCTOR_NAME VARCHAR2(55)
HOSP_CODE CHAR(5)
APPOINT_DATE DATE

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```

16. PATIENT

```
SQL> CREATE TABLE patient_tbl (pat_code char(5) DEFAULT 5, pat_name varchar2(55), appoint_date DATE DEFAULT SYSDATE, doctor_id char(5) DEFAULT 5, hosp_code char(5) DEFAULT 5, CONSTRAINT pat_tbl_pat_code_pk PRIMARY KEY (pat_code), CONSTRAINT pat_tbl_doct_id_fk FOREIGN KEY (doctor_id) REFERENCES doctors_tbl (doctor_id), CONSTRAINT pat_tbl_hosp_code_fk FOREIGN KEY (hosp_code) REFERENCES hospital_tbl (hosp_code));
Table created.

SQL> DESC patient_tbl
Name Null? Type
-----
PAT_CODE NOT NULL CHAR(5)
PAT_NAME VARCHAR2(55)
APPOINT_DATE DATE
DOCTOR_ID CHAR(5)
HOSP_CODE CHAR(5)

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```

17. PATIENT DOCTORS TABLE

```
SQL> CREATE TABLE patientdoctor_tbl (doctor_id char(5) DEFAULT 5, pat_code char(5) DEFAULT 5, appoint_date DATE DEFAULT SYSDATE, CONSTRAINT patdoc_tbl_docid_patid_pk PRIMARY KEY (doctor_id, pat_code));
Table created.

SQL> DESC patientdoctor_tbl
Name Null? Type
-----
DOCTOR_ID NOT NULL CHAR(5)
PAT_CODE NOT NULL CHAR(5)
APPOINT_DATE DATE

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```

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ADDITIONAL CONSTRAINT

```
SQL> ALTER TABLE department_tbl ADD CONSTRAINT department_tbl_emp_id_fk FOREIGN KEY (emp_id) REFERENCES employee_tbl (emp_id);
```

```
Table altered.
```

```
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```

```
SQL> ALTER TABLE doctors_tbl ADD CONSTRAINT doc_hosp_code_fk FOREIGN KEY (hosp_code) REFERENCES hospital_tbl (hosp_code);
```

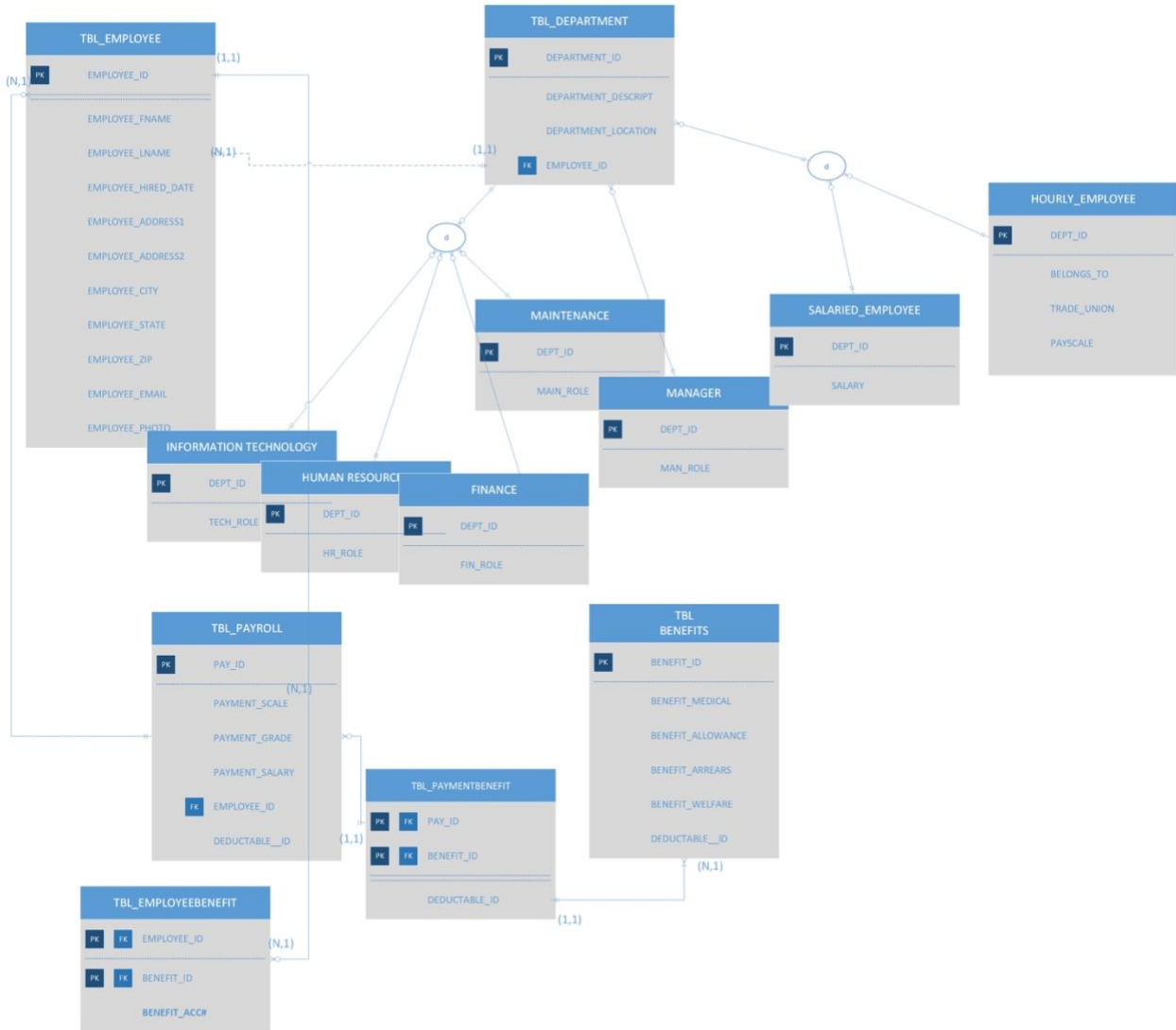
```
Table altered.
```

```
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OLIVIA OCTAVIA SUMAILAH AITS24-P01 HOMEWORK ASSIGNMENT3 SOLUTION

ENTITY RELATIONSHIPS (ER) AND THE EMBEDDED ENTITY RELATIONSHIP DIAGRAM FOR THE PROPOSED PAYROLL MANAGEMENT SYSTEM



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OLIVIA OCTAVIA SUMAILAH ENTITY RELATIONSHIP DIAGRAM FOR CLASS FIVE

