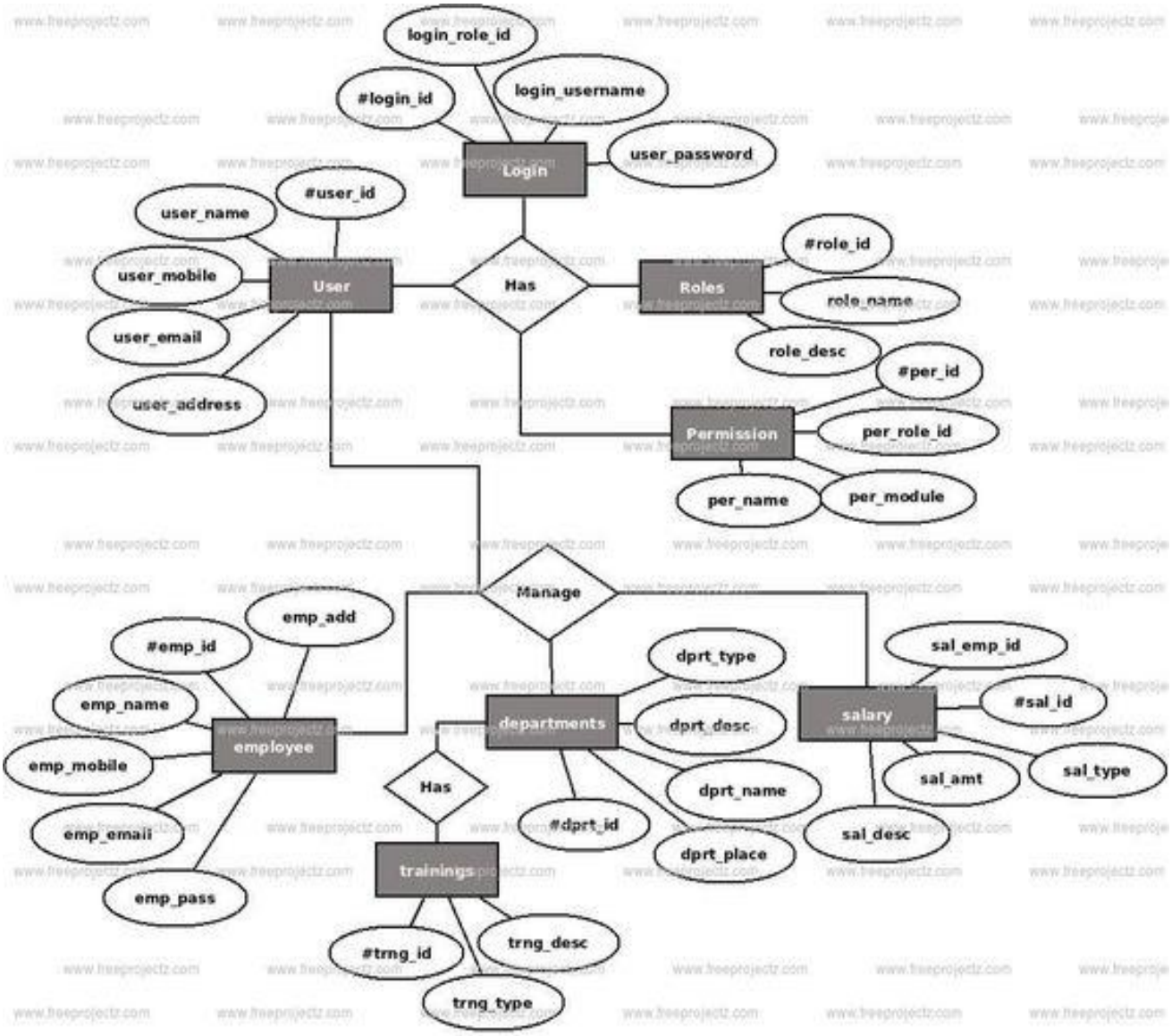
Introduction to Data Analytics For Business
(Human Resource Capstone Project)

Part 1 : Conceptual business model

Construct a conceptual business model for an industry or business that you are familiar with or have interest in .



ER Diagram For Human Resource Management System

Part 2 : Relational data model

Take a subset of the ideas from the conceptual model you constructed in Part 1 and design a simple relationship model .

CREATE TABLE department (DepartmentID INT Primary key, DepartmentName VARCHAR(20));

CREATE TABLE employee (LastName VARCHAR(20), DepartmentID INT references department(DepartmentID));

INSERT INTO department VALUES(31, 'Sales');

INSERT INTO department VALUES(33, 'Engineering');

INSERT INTO department VALUES(34, 'Clerical');

INSERT INTO department VALUES(35, 'Marketing');

INSERT INTO employee VALUES('Rafferty', 31);

INSERT INTO employee VALUES('Jones', 33);

INSERT INTO employee VALUES('Heisenberg', 33);

INSERT INTO employee VALUES('Robinson', 34);

INSERT INTO employee VALUES('Smith', 34);

INSERT INTO employee VALUES('Williams', NULL);

CREATE TABLE dept_manager (emp_no INT NOT NULL, dept_no CHAR(4) NOT NULL, from_date DATE NOT NULL, to_date DATE NOT NULL, FOREIGN KEY (emp_no) REFERENCES employees (emp_no) ON DELETECASCADE, FOREIGN KEY (dept_no) REFERENCES departments (dept_no) ON DELETE CASCADE, PRIMARY KEY (emp_no,dept_no)

);

```
CREATE TABLE dept_emp (emp_no INT  NOT NULL,  dept_no  CHAR(4)  NOT NULL,
from_date   DATE   NOT NULL,  to_date     DATE     NOT NULL, FOREIGN KEY
(emp_no)  REFERENCES employees   (emp_no)  ON DELETE CASCADE,  FOREIGN
KEY (dept_no) REFERENCES departments (dept_no) ON DELETE
CASCADE,PRIMARY KEY (emp_no,dept_no)

);


CREATE TABLE titles (emp_no  INT   NOT NULL,  title      VARCHAR(50)     NOT
NULL, from_date   DATE  NOT NULL, to_date     DATE, FOREIGN KEY (emp_no)
REFERENCES employees (emp_no) ON DELETE CASCADE, PRIMARY KEY
(emp_no,title, from_date) ) ;



CREATE TABLE salaries ( emp_no INT   NOT NULL,  salary  INT   NOT NULL,
from_date   DATE  NOT NULL, to_date   DATE  NOT NULL,  FOREIGN KEY (emp_no)
REFERENCES employees (emp_no) ON DELETE CASCADE, PRIMARY KEY (emp_no,
from_date)) ;

     L ON d.emp_no=l.emp_no AND d.from_date=l.from_date AND l.to_date =
d.to_date;
```

Part 3: SQL queries

Using the data model you constructed in Part 2, come up with two data extracts you think would be interesting, then write SQL queries to provide each one.

- **Join operation performing on the above :**

Created table SELECT employee.LastName, employee.DepartmentID, department.DepartmentName FROM employee INNER JOIN department ON employee.DepartmentID = department.DepartmentID

Part 4 : Sensitive data and data quality issues

Consider the data privacy and data quality implications of the data model you constructed in Part 2 .

Data quality is most important thing for any business model because all interpretation is depends on data if data quality is not good then result will also affected badly.