Al-Aqsa University

Faculty of Computing and IT

Information and Computer Science Dep.

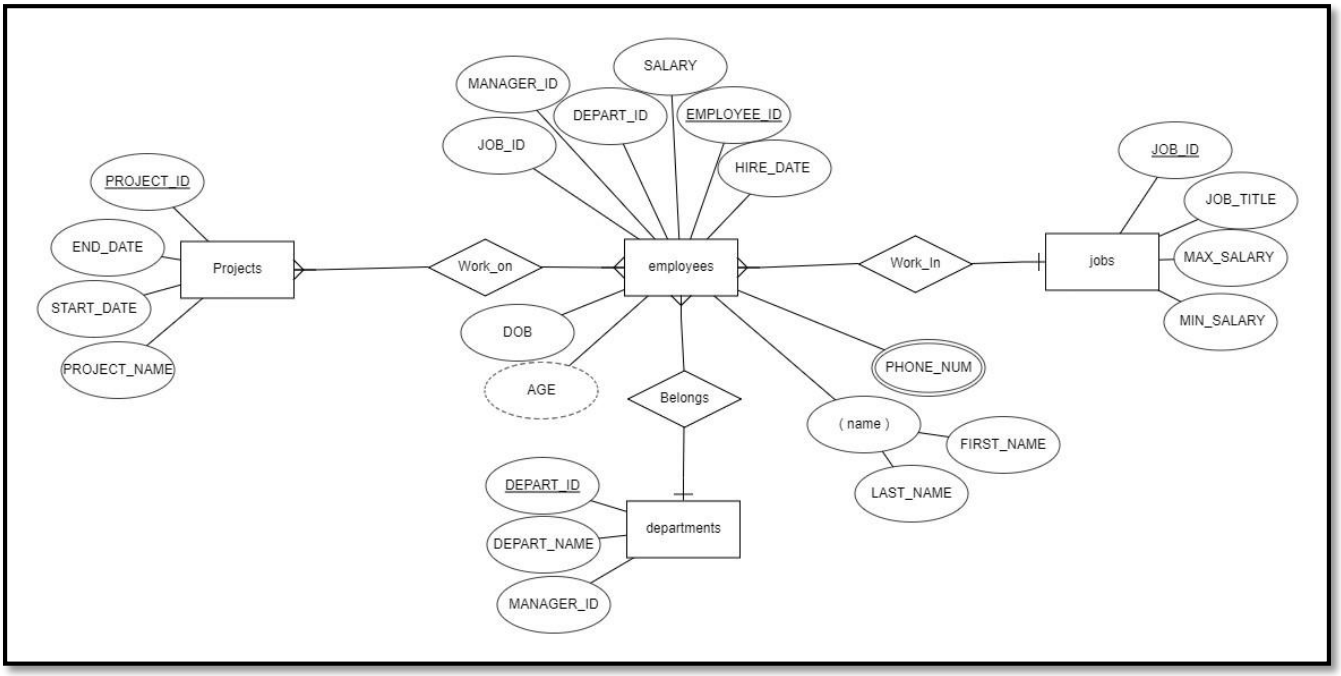
First Semester 2022-2023

Database systems-practical

Instructor: Aya Lubbad

Final Project - HR Database

ER diagram



1- Create database with your name
2- Create tables as in ER diagram
3- Insert the data as in the following images

Table: employees

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DOB	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	AGE	MANAGER_ID	DEPARTMENT_ID
100	Steven	King	1993-06-17	515.123.4567	2003-06-17	AD_PRES	24000.00		0	90
101	Neena	Kochhar	1994-07-25	515.123.4568	2005-09-21	AD_VP	17000.00		100	90
102	Lex	De Haan	1998-06-17	515.123.4569	2001-01-13	AD_VP	17000.00		100	90
103	Alexander	Hunold	1996-08-17	590.423.4567	2006-01-03	IT_PROG	9000.00		102	60
104	Bruce	Ernst	1993-06-17	590.423.4568	2007-05-21	IT_PROG	6000.00		103	60
105	David	Austin	1995-06-17	590.423.4569	2005-06-25	IT_PROG	4800.00		103	60
106	Valli	Pataballa	1993-06-17	590.423.4560	2006-02-05	IT_PROG	4800.00		103	60
107	Diana	Lorentz	2001-06-17	590.423.5567	2007-02-07	IT_PROG	4200.00		103	60
108	Nancy	Greenberg	1993-10-19	515.124.4569	2002-08-17	FI_MGR	12008.00		101	100
109	Daniel	Faviet	1995-06-20	515.124.4169	2002-08-16	FI_ACCOUNT	9000.00		108	100
110	John	Chen	1998-06-17	515.124.4269	2005-09-28	FI_ACCOUNT	8200.00		108	100
111	Ismael	Sciarra	1993-09-19	515.124.4369	2005-09-30	FI_ACCOUNT	7700.00		108	100
112	Jose Manuel	Urman	1993-06-17	515.124.4469	2006-03-07	FI_ACCOUNT	7800.00		108	100
113	Luis	Popp	1995-05-15	515.124.4567	2007-12-07	FI_ACCOUNT	6900.00		108	100
114	Den	Raphaely	2000-06-17	515.127.4561	2002-12-07	PU_MAN	11000.00		100	30
115	Alexander	Khoo	1992-06-17	515.127.4562	2003-05-18	PU_CLERK	3100.00		114	30
116	Shelli	Baida	1993-06-17	515.127.4563	2005-12-24	PU_CLERK	2900.00		114	30
117	Sigal	Tobias	1994-06-17	515.127.4564	2005-07-24	PU_CLERK	2800.00		114	30
118	Guy	Himuro	1995-06-17	515.127.4565	2006-11-15	PU_CLERK	2600.00		114	30
119	Karen	Colmenares	1996-06-17	515.127.4566	2007-08-10	PU_CLERK	2500.00		114	30
120	Matthew	Weiss	1997-06-17	650.123.1234	2004-07-18	ST_MAN	8000.00		100	50
121	Adam	Fripp	1998-06-17	650.123.2234	2005-04-10	ST_MAN	8200.00		100	50
122	Payam	Kaufling	1999-06-17	650.123.3234	2003-05-01	ST_MAN	7900.00		100	50
123	Shanta	Vollman	2000-06-17	650.123.4234	2005-10-10	ST_MAN	6500.00		100	50
124	Kevin	Mourgos	2001-06-17	650.123.5234	2007-11-16	ST_MAN	5800.00		100	50
125	Julia	Nayer	2002-06-17	650.124.1214	2005-07-16	ST_CLERK	3200.00		120	50

Derived Attribute

Table: jobs

JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
AD_PRES	President	20080	40000
AD_VP	Administration Vice President	15000	30000
AD_ASST	Administration Assistant	3000	6000
FI_MGR	Finance Manager	8200	16000
FI_ACCOUNT	Accountant	4200	9000
AC_MGR	Accounting Manager	8200	16000
AC_ACCOUNT	Public Accountant	4200	9000
SA_MAN	Sales Manager	10000	20080
SA_REP	Sales Representative	6000	12008
PU_MAN	Purchasing Manager	8000	15000
PU_CLERK	Purchasing Clerk	2500	5500
ST_MAN	Stock Manager	5500	8500
ST_CLERK	Stock Clerk	2008	5000
SH_CLERK	Shipping Clerk	2500	5500
IT_PROG	Programmer	4000	10000
MK_MAN	Marketing Manager	9000	15000
MK_REP	Marketing Representative	4000	9000
HR_REP	Human Resources Representative	4000	9000
PR_REP	Public Relations Representative	4500	10500

Table: departments

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID
10	Administration	200
20	Marketing	201
30	Purchasing	114
40	Human Resources	203
50	Shipping	121
60	IT	103
70	Public Relations	204
80	Sales	145
90	Executive	100
100	Finance	108
110	Accounting	205
120	Treasury	0
130	Corporate Tax	0
140	Control And Credit	0
150	Shareholder Services	0
160	Benefits	0
170	Manufacturing	0
180	Construction	0
190	Contracting	0
200	Operations	0
210	IT Support	0
220	NOC	0
230	IT Helpdesk	0
240	Government Sales	0
250	Retail Sales	0
260	Recruiting	0
270	Payroll	0

Table: Project

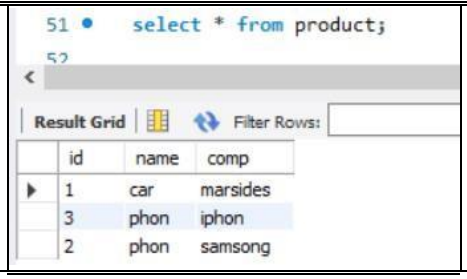
Project_ID	Project_name	START_DATE	END_DATE
1	Salem Center	2001-01-13	2001-07-24
2	Westside Market	2000-09-21	2000-10-27
3	Southside Market	2001-10-28	2002-03-15
4	Northside Market	2004-02-17	2004-12-19
5	Eastside Market	2006-03-24	2006-12-31

1. Add a new column to jobs table call "discription" with varchar(200) type.
2. Delete employee whose work in "finance" job.
3. Change of max_salary for "sales manager" job to become 20000.
4. Find employees whose salary is higher than 5500. Return full name (first and last name), and salary.
5. Find the details of 'Purchasing' department. Return all fields.
6. Find employees whose last name does not contain the letter 'K'. Sort the result-set in ascending order by department ID. Return full name (first and last name together), hire_date, salary and department_id.
7. Find employees who hired during 2002-02-04 and 2009-05-07. Return full name (first and last), job id and hire date.
8. Find employees whose managers hold the ID 120 or 103 or 145. Return first name, last name, age, salary and manager ID.
9. Find shortest project period**.** Return project id, project name and number of project days.
10. Calculate the number of employees, sum of all salary, and difference between the maximum salary and minimum salary by each job id. Return job_id, count, sum, diff_ salary.
11. Find all employees who work on "Westside Market" project**.** Return employees id, full name (first and last name together).
12. Find employees who earn less than the employee of ID 102. Return first name, last name and salary.
13. Find those employees who worked on more than two project. Return employee id and Number of projects.
14. (join) Find the first name, last name, department number, and department name for each employee.
15. Find the first name, last name, department name and job tittle for each employee.
16. Find all employees who work in department ID 90 or 30. Return first name, last name, department number and department name.
17. Find all departments including those without any employee. Return first name, last name, department ID, department name.

18. Find all employees who have or not any department. Return first name, last name, department ID, department name.
19. Find the full name, department name and project name for each employee in "Executive" department and "Salem Center" project.
20. Find the difference between maximum salary of the job and salary of all the employees who works the department of ID 90. Return job title, employee name, and salary difference.

Important Notes:

- Deadline is before 11:59 PM on 5/1/2022.
- There will be a discussion for the project.
- The total mark for this project is 20.
- The project is individual work only.
- If there is any match between the projects, both will take a zero mark in the project.
- Code file (sql file), the file name should be your id and name.
- Put the answers in one pdf file name it your Name_id.pdf.
- Submit the code and PDF file on the model.
- SQL answers should be in the following form:

Query	Result
Select * from product;	

- You can change the idea while maintaining the basic requirements such as relationships between tables (11,1-m, m-m) and using functions such as min, max, concat, sum, avg and apply order by ,group by, like, in , between, inner join ,left join, right join, nested query

Good Luck