DBMS Lab Assignment-3

Name: Vivek Ankathi
Roll.no: 20bcs016

Aim: To create a table for the given set of entities and attributes, Updating the newly formed tables by following the given problem statement

Experiment:

1. First, we create tables (Employees, Departments, Projects, Workson) create table employee(
employee_id numeric(9) not null,
first_name varchar(10),
last_name varchar(20),
deptcode char(5),
salary numeric(9,2),
Primary key (employee_id)
);
Create table departments(
deptcode char(5) not null,
deptname varchar(30),
Manager_id numeric(9),
subdeptof char(5),
Primary key (deptcode)
);
Create table projects(
project_id char(8) not null,
deptcode char(5),
description varchar(200),
startdate date,
stopdate date,
revenue numeric(12,2),
Primary key (project_id)
);
create table workson(
employee_id numeric(9) not null,
project_id char(8) not null,
assignedtime numeric(3,2)
);

2. Now, we are going to add foreign keys for the above-created tables

alter table employees add foreign key (deptcode)
references departments (`deptcode`);

alter table departments add foreign key (subdeptof)
references departments (`deptcode`);
alter table departments add foreign key (employee_id)

references employee (`employee_id`);

alter table workson add foreign key (employee_id)
references employee (`employee_id`);

alter table workson add foreign key (project_id)
references projects (`project_id`);

3. Entering 8 rows of data in these tables

insert into employee
values(190301,"Lokesh","Kasse","A",100000.00),
(190302,"Vivek","Ankathi","B",90000.00),
(190303,"Harry","Potter","C",85000.00),
(190304,"Hermione","Granger","D",86000),
(190305,"Ron","Weasley","E",80000),
(190306,"Draco","Malfoy","F",81000),
(190307,"Neville","Longbottom","G",82000),
(190308,"Luna","Lovegood","H",83000);

insert into departments
values("C01","Mathematics",1991,"03C1"),
("C02","Social Studies",1992,"03C2"),
("C03","Language",1993,"03C3"),
("C04","General Science",1994,"03C4"),
("C05","General Knowledge",1995,"03C5"),
("C06","Ethics",1996,"03C6"),
("C07","Computers",1997,"03C7"),
("C08","Sports",1998,"03C8");

insert into projects
values("20C11","03A1","Dissecting the 'anatomy' of viral web content, memes, or
social media arguments.",'20040101','20040105',34000),
("20C12","03A2"," Launching a recycling program that solves an identified problem
with existing recycling programs. This can be done at a household-level, school-level,
neighborhood-level, or city-level.",'20040201','20040202',54620),
("20C13","03A3","Analyzing the five most popular social media platforms for teens,
then predict and design a new platform based on existing trends and past trajectory of
change.",'20040315','20040320',41300),
("20C14","03A4","Creating visibility for something beautiful, useful, or otherwise deserving
of attention that currently is under-appreciated.",'20040416','20040421',31000),
("20C15","03A5","Mashing three existing video games together to create a new game.
Obviously this would not be done digitally but through annotated planning and blueprint
design.",'20040513','20040522',155000),
("20C16","03A6","Solving the problem of negative or fake
news",'20040615','20040623',22000),
("20C17","03A7"," Helping local businesses increase environmental

sustainability.",'20040701','20040713',106000),
("20C18","03A8","Creating an interactive family tree with voice-overs from living family members.",'20040827','20040912',46000);

insert into workson
values(190301,"20C11",1.23),
(190302,"20C12",2.32),
(190303,"20C13",3.34),
(190304,"20C14",6.54),
(190305,"20C15",5.23),
(190306,"20C16",7.45),
(190307,"20C17",6.28),
(190308,"20C18",8.43);

Er diagram:
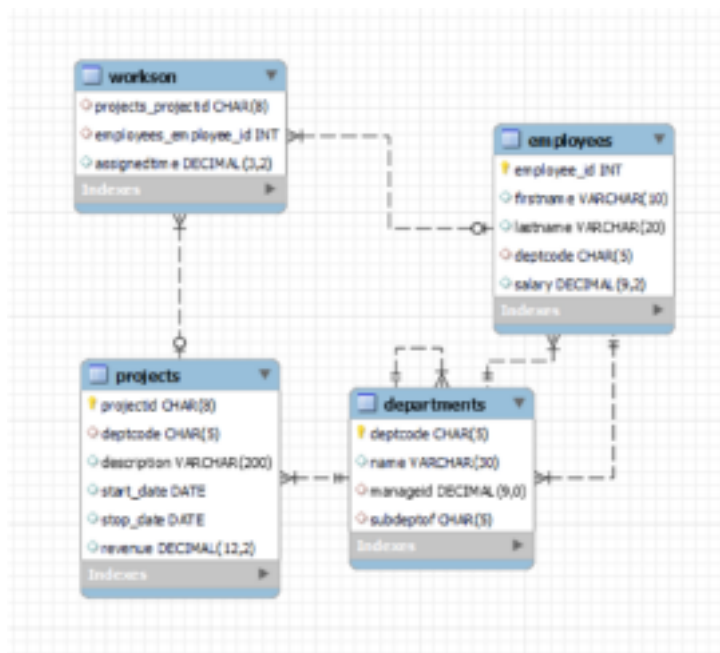
Tables:

employee_id	first_name	last_name	deptcode	salary
190301	Lokesh	Kasse	A	100000.00
190302	Vivek	Ankathi	B	90000.00
190303	Harry	Potter	C	85000.00
190304	Hermione	Granger	D	86000.00
190305	Ron	Weasley	E	80000.00
190306	Draco	Malfoy	F	81000.00
190307	Neville	Longbottom	G	82000.00
190308	Luna	Lovegood	H	83000.00
NULL	NULL	NULL	NULL	NULL

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

	deptcode	deptname	manager_id	subdeptof
▶	C01	Mathematics	1991	03C1
	C02	Social Studies	1992	03C2
	C03	Language	1993	03C3
	C04	General Science	1994	03C4
	C05	General Knowledge	1995	03C5
	C06	Ethics	1996	03C6
	C07	Computers	1997	03C7
	C08	Sports	1998	03C8
*	NULL	NULL	NULL	NULL

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

	project_id	deptcode	description_	startdate	stopdate	revenue
▶	20C11	03A1	Dissecting the 'anatomy' of viral web content, m...	2019-01-01	2019-01-05	5000.00
	20C12	03A2	Launching a recycling program that solves an id...	2019-02-01	2019-02-02	5462.00
	20C13	03A3	Analyzing the five most popular social media pla...	2019-03-15	2019-03-20	100.00
	20C14	03A4	Creating visibility for something beautiful, usefu...	2019-04-16	2019-04-21	1000.00
	20C15	03A5	Mashing three existing video games together to...	2019-05-13	2019-05-22	5500.00
	20C16	03A6	Solving the problem of negative or fake news	2019-06-15	2019-06-23	2000.00
	20C17	03A7	Helping local businesses increase environmenta...	2019-07-01	2019-07-13	10000.00
	20C18	03A8	Creating an interactive family tree with voice-o...	2019-08-27	2019-09-12	6000.00
*	NULL	NULL	NULL	NULL	NULL	NULL

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	employee_id	project_id	assignedtime
▶	190301	20C11	1.23
	190302	20C12	2.32
	190303	20C13	3.34
	190304	20C14	6.54
	190305	20C15	5.23

workson 16 ✕

Exercises:

1.select project_id from projects where date(startdate) <= 2020-02-23

2.select project_id , stopdate - startdate
from projects;

3.select year(startdate) from projects;select distinct year(startdate) from projects;

4.select employee_id from workson where assignedtime > 2.0;
   select employee_id from workson where assignedtime > 4.0;
   select employee_id from workson where assignedtime > 6.0;

5.select project_id , year(startdate) from projects
  Order by year(startdate) asc;

6.select avg(salary) from employee

7.select min(salary) from employee

8.select max(salary) from employee

9.select first_name from employee where char_length(first_name) = 6;

10.select first_name from employee where first_name regexp '^a';

11select employee_id from employee , projects where emp_deptcode = deptcode;

Result Grid | Filter

project_id
NULL

Result Grid | Filte

employee_id
190304
190305
190306
190307
190308

Result Grid | Filter Rows:

project_id	stopdate - startdate
20C11	4
20C12	1
20C13	5
20C14	5
20C15	9
20C16	8
20C17	12
20C18	85

Result 9 ×

Result Grid | Filter Rows:

project_id	year(startdate)
20C11	2004
20C12	2004
20C13	2004
20C14	2004
20C15	2004
20C16	2004
20C17	2004
20C18	2004

Result Grid | Filter R

avg(salary)
85875.000000

Result Grid | F

min(salary)
80000.00

Result Grid | Filter

year(startdate)
2004

Result Grid | Filter

employee_id
190304
190306
190307
190308

Result Grid | Filter

first_name
Lokesh

Result Grid | F

first_name

Result Grid | Filter

employee_id
190302
190303
190304
190305
190306
190307
190308

Result Grid | Fi

max(salary)
100000.00

Result Grid | Filter Ro

employee_id

Conclusion:

Thus, the tables were created. Added a primary key and a foreign key for the respective tables. Entered data for respective tables. Later on, listed the first and last names of all employees table, all attributes of the projects with revenue greater than $40,000, the department codes of the projects with revenue between $100,000 and $150,000, the project IDs for the projects that started on or before July 1, 2004.