System catalog/data dictionary

Region Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| REGION\_ID | Surrogate key  Unique index to ensure | Int |  | PK |
| REGION\_NAME |  | varchar | 15 |  |

Employee Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| EMP\_ID | Surrogate key  Unique index to ensure | Int |  | PK |
| EMP\_LNAME |  | VARCHAR | 30 |  |
| EMP\_MI |  | VARCHAR | 15 |  |
| EMP\_FNAME |  | VARCHAR | 30 |  |
| EMP\_HIREDATE |  | DATETIME |  |  |
| REGION\_ID |  | Int |  | FK |

Customer Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| CUST\_ID | Surrogate key  Unique index to ensure | Int |  | PK |
| CUST\_NAME | No duplicate customer names | varchar | 30 |  |
| CUST\_PHONE |  | varchar | 20 |  |
| REGION\_ID |  | Int |  | FK |

Skill

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| SKILL\_ID | Surrogate key  Unique index to ensure | Int |  | PK |
| SKILL\_DESCRIPTION |  | varchar | 30 |  |
| SKILL\_RATE |  | Int |  |  |

Empskill table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| emp\_id | Composite key | Int |  | PK,FK |
| skill\_id | Composite key | Int |  | PK,FK |

Project table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| project\_id | Surrogate key  Unique index to ensure | Int |  | PK |
| project\_date |  | Date |  |  |
| cust\_id |  | Int |  | FK |
| project\_description |  | Varchar | 30 |  |
| project\_esdatestart |  | Date |  |  |
| project\_esdateends |  | Date |  |  |
| project\_esbudget |  | Decimal | (10,2) |  |
| project\_acdatestart |  | Date |  |  |
| project\_acdateends |  | Date |  |  |
| project\_accost |  | Decimal | (10,2) |  |
| emp\_id |  | Int |  | FK |

Task table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| task\_id | Surrogate key  Unique index to ensure | Int |  | PK |
| project\_id |  | Int |  | FK |
| task\_description |  | Varchar | 50 |  |
| task\_begindate |  | Date |  |  |
| task\_enddate |  | Date |  |  |
| skill\_id |  | Int |  | FK |
| task\_quantity |  | Int |  |  |

Assign table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| assign\_id | Surrogate key  Unique index to ensure | Int |  | PK |
| task\_id |  | Int |  | FK |
| emp\_id |  | Int |  | FK |
| assign\_begindate |  | Date |  |  |
| assign\_enddate |  | Date |  |  |

Bill table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| bill\_id | Surrogate key  Unique index to ensure | Int |  | PK |
| bill\_date |  | Date |  |  |
| project\_id |  | Int |  | FK |

Worklog table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Description | type | length | Keys |
| wlog\_id | Surrogate key  Unique index to ensure | Int |  | PK |
| assign\_id |  | Int |  | FK |
| wlog\_date |  | Date |  |  |
| wlog\_hours |  | Int |  |  |
| bill\_id |  | Int |  | FK |

Specified MySQL program statements, and result displays

create database MIC;

use MIC;

一張含有 文字 的圖片

自動產生的描述

#1.region table

create table Region(

region\_id int primary key,

region\_name varchar(15)

);

一張含有 文字 的圖片

自動產生的描述

#2.employee table

create table Employee(

emp\_id int primary key,

emp\_lname varchar(30),

emp\_mi varchar(15),

emp\_fname varchar(30),

emp\_hiredate date,

region\_id int,

constraint foreign key (region\_id) references Region(region\_id)

);

一張含有 文字 的圖片

自動產生的描述

#3.customer table

create table Customer(

cust\_id int primary key,

cust\_name varchar(30),

cust\_phone varchar(20),

region\_id int,

constraint foreign key (region\_id) references Region(region\_id)

);

一張含有 文字 的圖片

自動產生的描述

#4.skill table

create table Skill(

skill\_id int primary key,

skill\_description varchar(30),

skill\_rate int

);

一張含有 文字 的圖片

自動產生的描述

#5.empskill table

create table Empskill(

emp\_id int,

skill\_id int,

constraint foreign key (skill\_id) references Skill(skill\_id),

constraint foreign key (emp\_id) references Employee(emp\_id)

);

一張含有 文字 的圖片

自動產生的描述

#6.project table

create table Project(

project\_id int primary key,

project\_date date,

cust\_id int,

project\_description varchar(30),

project\_esdatestart date,

project\_esdateends date,

project\_esbudget decimal(10,2),

project\_acdatestart date,

project\_acdateends date,

project\_accost decimal(10,2),

emp\_id int,

constraint foreign key (cust\_id) references Customer(cust\_id),

constraint foreign key (emp\_id) references Employee(emp\_id)

);

一張含有 文字 的圖片

自動產生的描述

#7.task table

create table Task(

task\_id int primary key,

project\_id int,

task\_description varchar(50),

task\_begindate date,

task\_enddate date,

skill\_id int,

task\_quantity int,

constraint foreign key (project\_id) references Project(project\_id),

constraint foreign key (skill\_id) references Skill(skill\_id)

);

一張含有 文字 的圖片

自動產生的描述

#8.assign table

create table Assign(

assign\_id int primary key,

task\_id int,

emp\_id int,

assign\_begindate date,

assign\_enddate date,

constraint foreign key (emp\_id) references Employee(emp\_id),

constraint foreign key (task\_id) references Task(task\_id)

);

一張含有 文字 的圖片

自動產生的描述

#9.bill table

create table Bill(

bill\_id int primary key,

bill\_date date,

project\_id int,

constraint foreign key (project\_id) references Project(project\_id)

);

一張含有 文字 的圖片

自動產生的描述

#10.worklog table

create table Worklog(

wlog\_id int primary key,

assign\_id int,

wlog\_date date,

wlog\_hours int,

bill\_id int,

constraint foreign key (assign\_id) references Assign(assign\_id),

constraint foreign key (bill\_id) references Bill(bill\_id)

);

一張含有 文字 的圖片

自動產生的描述

# Data loading #1 loading skill-table

insert into skill values( 1 ,' Data Entry' , 12 );

insert into skill values( 2 ,' Data Entry II' , 15 );

insert into skill values( 3 ,' System Analyst I' , 18 );

insert into skill values( 4 ,' System Analyst II' , 21 );

insert into skill values( 5 ,' Database Designer I' , 50 );

insert into skill values( 6 ,' Database Designer II' , 75 );

insert into skill values( 7 ,' SQL I' , 25 );

insert into skill values( 8 ,' SQL II' , 30 );

insert into skill values( 9 ,' C++ I' , 35 );

insert into skill values( 10 ,' C++ II' , 45 );

insert into skill values( 11 ,' Python I' , 25 );

insert into skill values( 12 ,' Python II' , 35 );

insert into skill values( 13 ,' Cold Fusion I' , 60 );

insert into skill values( 14 ,' Cold Fusion II' , 75 );

insert into skill values( 15 ,' ASP I' , 60 );

insert into skill values( 16 ,' ASP II' , 70 );

insert into skill values( 17 ,' Web Administrator' , 50 );

insert into skill values( 18 ,' Oracle DBA' , 100 );

insert into skill values( 19 ,' SQL Server DBA' , 100 );

insert into skill values( 20 ,' Network Eng. I' , 80 );

insert into skill values( 21 ,' Network Eng. II' , 100 );

insert into skill values( 22 ,' Technical Writer' , 100 );

insert into skill values( 23 ,' Project Manager' , 70 );

一張含有 桌 的圖片

自動產生的描述

# Data loading #2 loading region-table

insert into region values( 1 ,' NW' );

insert into region values( 2 ,' SW' );

insert into region values( 3 ,' MN' );

insert into region values( 4 ,' MS' );

insert into region values( 5 ,' NE' );

insert into region values( 6 ,' SE' );

一張含有 桌 的圖片

自動產生的描述

# Data loading #3 loading customer-table

insert into customer values( 1 ,'Xerox' ,'678-257-2857',1);

insert into customer values( 2 ,'Coca Cola' ,'931-685-1563',2);

insert into customer values( 3 ,'Verizon' ,'615-725-7896',3 );

insert into customer values( 4 ,'Dollar Store' ,'423-596-6241',4);

insert into customer values( 5 ,'Sprint' ,'901-895-5547',5);

insert into customer values( 6 ,'Exxon Mobile' ,'865-489-3699',6);

一張含有 桌 的圖片

自動產生的描述

# Data loading #4 loading employee-table

INSERT INTO EMPLOYEE VALUES( 1 ,' Sexton' ,'M' ,' Amy' ,' 2001/2/7' , 1 );

INSERT INTO EMPLOYEE VALUES( 2 ,' Craig' ,'M' ,' Brad' ,' 2000/8/16' , 3 );

INSERT INTO EMPLOYEE VALUES( 3 ,' Sewell' ,'Z' ,' Barb' ,' 2000/9/15' , 4 );

INSERT INTO EMPLOYEE VALUES( 4 ,' Williams' ,'R' ,' Jordan' ,' 2000/4/7' , 2 );

INSERT INTO EMPLOYEE VALUES( 5 ,' Chandler' ,'E' ,' Johnny' ,' 2001/6/12' , 5 );

INSERT INTO EMPLOYEE VALUES( 6 ,' Robbins' ,'E' ,' Erin' ,' 2001/8/25' , 6 );

INSERT INTO EMPLOYEE VALUES( 7 ,' Burkhart' ,'C' ,' Sam' ,' 2000/11/26' , 1 );

INSERT INTO EMPLOYEE VALUES( 8 ,' Yarbrough' ,'B' ,' Peter' ,' 2001/1/9' , 6 );

INSERT INTO EMPLOYEE VALUES( 9 ,' Kattan' ,'N' ,' Chris' ,' 2000/5/31' , 2 );

INSERT INTO EMPLOYEE VALUES( 10 ,' Pascoe' ,'L' ,' Jonathan' ,' 2001/7/14' , 3 );

INSERT INTO EMPLOYEE VALUES( 11 ,' Bales' ,'D' ,' Melissa' ,' 2001/9/16' , 4 );

INSERT INTO EMPLOYEE VALUES( 12 ,' Cope' ,'R' ,' Leslie' ,' 1999/10/31' , 5 );

INSERT INTO EMPLOYEE VALUES( 13 ,' Bible' ,'M' ,' Hanah' ,' 2000/6/8' , 2 );

INSERT INTO EMPLOYEE VALUES( 14 ,' Paine' ,'S' ,' Brad' ,' 1999/5/9' , 6 );

INSERT INTO EMPLOYEE VALUES( 15 ,' Newton' ,'S' ,' Christopher' ,' 2001/2/28' , 3 );

INSERT INTO EMPLOYEE VALUES( 16 ,' Smith' ,'A' ,' Mary' ,' 1999/3/8' , 1 );

INSERT INTO EMPLOYEE VALUES( 17 ,' Underwood' ,'L' ,' Trish' ,' 1998/10/21' , 4 );

INSERT INTO EMPLOYEE VALUES( 18 ,' Bender' ,'A' ,' Larry' ,' 2000/8/9' , 6 );

INSERT INTO EMPLOYEE VALUES( 19 ,' Mudd' ,'T' ,' Roger' ,' 1999/12/1' , 5 );

INSERT INTO EMPLOYEE VALUES( 20 ,' Kenyon' ,'D' ,' Tiffany' ,' 2001/4/28' , 2 );

INSERT INTO EMPLOYEE VALUES( 21 ,' Ephanor' , NULL ,' Victor' ,' 2000/3/2' , 1 );

INSERT INTO EMPLOYEE VALUES( 22 ,' Summers' , NULL ,' Anna' ,' 1999/1/1' , 1 );

INSERT INTO EMPLOYEE VALUES( 23 ,' Smith' ,'F' ,' Jose' ,' 1998/2/6' , 1 );

INSERT INTO EMPLOYEE VALUES( 24 ,' Rogers' ,'S' ,' Adam' ,' 2000/4/6' , 1 );

INSERT INTO EMPLOYEE VALUES( 25 ,' Zebras' , NULL ,' Steve' ,' 2000/4/5' , 1 );

INSERT INTO EMPLOYEE VALUES( 26 ,' Ellis' ,'R' ,' Maria' ,' 2000/8/7' , 1 );

INSERT INTO EMPLOYEE VALUES( 27 ,' Duarte' , NULL ,' Miriam' ,' 2000/12/3' , 1 );

INSERT INTO EMPLOYEE VALUES( 28 ,' Bush' , NULL ,' Emily' ,' 1999/6/5' , 1 );

INSERT INTO EMPLOYEE VALUES( 29 ,' Kilby' ,'T' ,' Surgena' ,' 2000/4/1' , 1 );

INSERT INTO EMPLOYEE VALUES( 30 ,' Connor' , NULL ,' Sean' ,' 1998/4/15' , 1 );

一張含有 桌 的圖片

自動產生的描述

# Data loading #5 loading empskill-table

insert into empskill values( 1 , 1 );

insert into empskill values( 1 , 2 );

insert into empskill values( 2 , 3 );

insert into empskill values( 3 , 3 );

insert into empskill values( 4 , 1 );

insert into empskill values( 4 , 2 );

insert into empskill values( 5 , 4 );

insert into empskill values( 6 , 3 );

insert into empskill values( 6 , 4 );

insert into empskill values( 7 , 4 );

insert into empskill values( 8 , 5 );

insert into empskill values( 8 , 6 );

insert into empskill values( 8 , 19 );

insert into empskill values( 9 , 7 );

insert into empskill values( 9 , 8 );

insert into empskill values( 10 , 6 );

insert into empskill values( 10 , 18 );

insert into empskill values( 11 , 8 );

insert into empskill values( 12 , 9 );

insert into empskill values( 13 , 10 );

insert into empskill values( 14 , 23 );

insert into empskill values( 15 , 12 );

insert into empskill values( 15 , 14 );

insert into empskill values( 15 , 16 );

insert into empskill values( 15 , 17 );

insert into empskill values( 16 , 5 );

insert into empskill values( 16 , 17 );

insert into empskill values( 16 , 20 );

insert into empskill values( 16 , 21 );

insert into empskill values( 17 , 1 );

insert into empskill values( 18 , 22 );

insert into empskill values( 19 , 23 );

insert into empskill values( 20 , 23 );

insert into empskill values( 21 , 7 );

insert into empskill values( 21 , 8 );

insert into empskill values( 22 , 7 );

insert into empskill values( 23 , 9 );

insert into empskill values( 23 , 18 );

insert into empskill values( 23 , 19 );

insert into empskill values( 24 , 9 );

insert into empskill values( 24 , 10 );

insert into empskill values( 25 , 3 );

insert into empskill values( 25 , 11 );

insert into empskill values( 25 , 12 );

insert into empskill values( 26 , 7 );

insert into empskill values( 26 , 11 );

insert into empskill values( 27 , 13 );

insert into empskill values( 27 , 15 );

insert into empskill values( 27 , 16 );

insert into empskill values( 28 , 3 );

insert into empskill values( 28 , 13 );

insert into empskill values( 28 , 14 );

insert into empskill values( 28 , 15 );

insert into empskill values( 28 , 17 );

insert into empskill values( 28 , 20 );

insert into empskill values( 28 , 21 );

insert into empskill values( 29 , 22 );

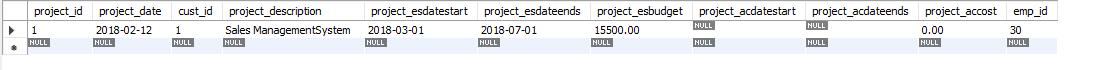
insert into empskill values( 30 , 23 );

一張含有 桌 的圖片

自動產生的描述

# Data loading #6 loading project-table

insert into project values(1, '2018/2/12', 1 ,'Sales ManagementSystem','2018/3/1','2018/7/1',15500,null,null,0,30);



# Data loading #7 loading task-table

insert into task values( 2 , 1 ,' Initial Interview' ,' 2018/3/1 ',' 2018/3/6 ', 23 , 1 );

insert into task values( 3 , 1 ,' Initial Interview' ,' 2018/3/1 ',' 2018/3/6 ', 4 , 1 );

insert into task values( 4 , 1 ,' Initial Interview' ,' 2018/3/1 ',' 2018/3/6 ', 5 , 1 );

insert into task values( 5 , 1 ,' Database Design' ,' 2018/3/11 ',' 2018/3/15 ', 5 , 1 );

insert into task values( 6 , 1 ,' System Design' ,' 2018/3/11 ',' 2018/4/12 ', 4 , 1 );

insert into task values( 7 , 1 ,' System Design' ,' 2018/3/11 ',' 2018/4/12 ', 3 , 2 );

insert into task values( 8 , 1 ,' Database Implementation' ,' 2018/3/18 ',' 2018/3/22 ', 18 , 1 );

insert into task values( 9 , 1 ,' System Coding & Testing' ,' 2018/3/25 ',' 2018/5/20 ', 7 , 2 );

insert into task values( 10 , 1 ,' System Coding & Testing' ,' 2018/3/25 ',' 2018/5/20 ', 8 , 1 );

insert into task values( 11 , 1 ,' System Coding & Testing' ,' 2018/3/25 ',' 2018/5/20 ', 18 , 1 );

insert into task values( 12 , 1 ,' System Documentation' ,' 2018/3/25 ',' 2018/6/7 ', 22 , 1 );

insert into task values( 13 , 1 ,' Final Evaluation' ,' 2018/6/10 ',' 2018/6/14 ', 23 , 1 );

insert into task values( 14 , 1 ,' Final Evaluation' ,' 2018/6/10 ',' 2018/6/14 ', 4 , 1 );

insert into task values( 15 , 1 ,' Final Evaluation' ,' 2018/6/10 ',' 2018/6/14 ', 5 , 1 );

insert into task values( 16 , 1 ,' Final Evaluation' ,' 2018/6/10 ',' 2018/6/14 ', 8 , 1 );

insert into task values( 17 , 1 ,' On-Site System On-line and Data Loading' ,' 2018/6/17 ',' 2018/6/21 ', 23 , 1 );

insert into task values( 18 , 1 ,' On-Site System On-line and Data Loading' ,' 2018/6/17 ',' 2018/6/21 ', 4 , 1 );

insert into task values( 19 , 1 ,' On-Site System On-line and Data Loading' ,' 2018/6/17 ',' 2018/6/21 ', 5 , 1 );

insert into task values( 20 , 1 ,' On-Site System On-line and Data Loading' ,' 2018/6/17 ',' 2018/6/21 ', 8 , 1 );

insert into task values( 21 , 1 ,' Sign Off' ,' 2018/7/1 ',' 2018/7/1 ', 23 , 1 );

一張含有 桌 的圖片

自動產生的描述

# Data loading #8 loading assign-table

insert into assign values( 6 , 2 , 30 ,' 2018/3/1 ',' 2018/3/6' );

insert into assign values( 7 , 3 , 7 ,' 2018/3/1 ',' 2018/3/6' );

insert into assign values( 8 , 4 , 16 ,' 2018/3/1 ',' 2018/3/6' );

insert into assign values( 9 , 5 , 16 ,' 2018/3/11 ',' 2018/3/14' );

insert into assign values( 10 , 6 , 7 ,' 2018/3/11 ', null );

insert into assign values( 11 , 7 , 28 ,' 2018/3/11 ', null );

insert into assign values( 12 , 7 , 25 ,' 2018/3/11 ', null );

insert into assign values( 13 , 8 , 23 ,' 2018/3/15 ',' 2018/3/19' );

insert into assign values( 14 , 9 , 22 ,' 2018/3/21 ', null );

insert into assign values( 15 , 9 , 26 ,' 2018/3/21 ', null );

insert into assign values( 16 , 10 , 21 ,' 2018/3/21 ', null );

insert into assign values( 17 , 11 , 23 ,' 2018/3/21 ', null );

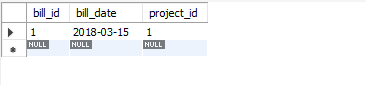
insert into assign values( 18 , 12 , 29 ,' 2018/3/25 ', null );

一張含有 桌 的圖片

自動產生的描述

# Data loading #9 loading bill-table

insert into bill values( 1 ,'2018/3/15' ,1 );



# Data loading #10 loading worklog-table

insert into worklog values( 3 , 6 ,' 2018/3/1 ', 4 , 1 );

insert into worklog values( 4 , 7 ,' 2018/3/1 ', 4 , 1 );

insert into worklog values( 5 , 8 ,' 2018/3/1 ', 4 , 1 );

insert into worklog values( 6 , 7 ,' 2018/3/8 ', 24 , 1 );

insert into worklog values( 7 , 6 ,' 2018/3/8 ', 24 , 1 );

insert into worklog values( 8 , 8 ,' 2018/3/8 ', 24 , 1 );

insert into worklog values( 9 , 10 ,' 2018/3/15 ', 40 , 1 );

insert into worklog values( 10 , 11 ,' 2018/3/15 ', 40 , 1 );

insert into worklog values( 11 , 13 ,' 2018/3/15 ', 6 , 1 );

insert into worklog values( 12 , 9 ,' 2018/3/15 ', 32 , 1 );

insert into worklog values( 13 , 12 ,' 2018/3/15 ', 35 , 1 );

insert into worklog values( 14 , 10 ,' 2018/3/22 ', 40 , null );

insert into worklog values( 15 , 11 ,' 2018/3/22 ', 40 , null );

insert into worklog values( 16 , 15 ,' 2018/3/22 ', 12 , null );

insert into worklog values( 17 , 16 ,' 2018/3/22 ', 12 , null );

insert into worklog values( 18 , 13 ,' 2018/3/22 ', 12 , null );

insert into worklog values( 19 , 17 ,' 2018/3/22 ', 12 , null );

insert into worklog values( 20 , 14 ,' 2018/3/22 ', 12 , null );

insert into worklog values( 21 , 12 ,' 2018/3/22 ', 35 , null );

insert into worklog values( 22 , 10 ,' 2018/3/29 ', 40 , null );

insert into worklog values( 23 , 11 ,' 2018/3/29 ', 40 , null );

insert into worklog values( 24 , 15 ,' 2018/3/29 ', 35 , null );

insert into worklog values( 25 , 16 ,' 2018/3/29 ', 35 , null );

insert into worklog values( 26 , 18 ,' 2018/3/29 ', 40 , null );

insert into worklog values( 27 , 17 ,' 2018/3/29 ', 35 , null );

insert into worklog values( 28 , 14 ,' 2018/3/29 ', 35 , null );

insert into worklog values( 29 , 12 ,' 2018/3/29 ', 35 , null );

一張含有 桌 的圖片

自動產生的描述

**use** mic;

#a) Write a query to display the project tasks the scheduled start and end dates and the number of employees

#required to complete each task.

**select** task\_id, task\_begindate ,task\_enddate ,task\_quantity

**from** task;

表格

描述已自动生成

#b) Write a query to display all employees (last and first name), employee hire date and skill description in

#each region. Sort by skill description within each region.

**select** emp\_lname ,emp\_fname ,emp\_hiredate ,skill\_description ,region\_name

**from** employee e **join** empskill es **on** e.emp\_id = es.emp\_id

**join** skill s **on** es.skill\_id = s.skill\_id

**join** region r **on** e.region\_id = r.region\_id

**order** **by** region\_name, skill\_description;

表格

描述已自动生成

#c) Write a query to display an inventory of the skills. Display a list of the skills and each employee (last and

#first name) having each skill. Sort by skill description.

**select** skill\_description, emp\_lname ,emp\_fname

**from** employee e **join** empskill es **on** e.emp\_id = es.emp\_id

**join** skill s **on** es.skill\_id = s.skill\_id

**order** **by** skill\_description;

表格

描述已自动生成

#d) Write a query to display total weekly hours in the work log. Display by week total number of hours

#worked by all employees.

**select** wlog\_date ,**sum**(wlog\_hours) **as** total\_weekly\_hours

**from** worklog

**group** **by** wlog\_date;

表格

描述已自动生成

#e) Write a query to display the total work log amount billed for each employee. Display the total dollar

#amount to be billed for each employee. Include employee name (last and first), total hours worked, task,

#skill description, skill rate of pay, and total amount. Group by task and display total dollar amount in

#descending order.

**select** emp\_lname ,emp\_fname , total\_hours\_worked, t.task\_id, skill\_description, skill\_rate, skill\_rate\*total\_hours\_worked **as** total\_dollar\_amount

**from** employee e **join** assign a **on** e.emp\_id = a.emp\_id

**join** empskill es **on** a.emp\_id = es.emp\_id

**join** skill s **on** es.skill\_id = s.skill\_id

**join** task t **on** a.task\_id = t.task\_id

**join** (**select** w.assign\_id ,**sum**(wlog\_hours) **as** total\_hours\_worked

**from** worklog w **join** assign a **on** w.assign\_id = a.assign\_id

**join** task t **on** a.task\_id = t.task\_id

**join** skill s **on** t.skill\_id = s.skill\_id

**group** **by** w.assign\_id

) thw **on** thw.assign\_id = a.assign\_id

**group** **by** a.assign\_id

**order** **by** t.task\_description, total\_dollar\_amount **desc**;

图形用户界面, 表格

描述已自动生成

#f) Write a query to display all the customers in each region. Sort by region then customer.

**select** cust\_name ,region\_name

**from** customer c **join** region r **on** c.region\_id = r.region\_id

**order** **by** region\_name, cust\_name;

表格

描述已自动生成

#g) Write a query to display the total number of employees by skill description in each region.

**select** region\_name, skill\_description, **count**(e.emp\_id) **as** Total\_number\_of\_emp

**from** employee e **join** region r **on** e.region\_id = r.region\_id

**join** empskill em **on** e.emp\_id = em.emp\_id

**join** skill s **on** em.skill\_id = s.skill\_id

**group** **by** s.skill\_id ,r.region\_id

**order** **by** r.region\_name;

表格

描述已自动生成

#h) Write a query to display all tasks for the project. Include the task scheduled start and end dates, required

#skills description, employee last and first names, and actual assigned start and end dates. Order by

#scheduled start dates.

**select** t.task\_id ,task\_begindate ,task\_enddate , skill\_description, emp\_lname, emp\_fname, assign\_begindate, assign\_enddate

**from** task t **join** skill s **on** t.skill\_id = s.skill\_id

**join** assign a **on** t.task\_id = a.task\_id

**join** employee e **on** e.emp\_id = a.emp\_id

**order** **by** task\_begindate;

表格

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#i) Write a query to display the employees, dates worked, hours worked, assignment, task description, and

#skill description for each bill. Sort by task description.

**select** e.emp\_id, task\_begindate ,task\_enddate, hours\_worked, a.assign\_id, task\_description, skill\_description

**from** employee e **join** assign a **on** e.emp\_id = a.emp\_id

**join** task t **on** a.task\_id = t.task\_id

**join** skill s **on** t.skill\_id = s.skill\_id

**join** (**select** assign\_id ,**sum**(wlog\_hours) **as** hours\_worked

**from** worklog

**group** **by** assign\_id

) hw **on** hw.assign\_id = a.assign\_id

**order** **by** task\_description;

表格

描述已自动生成

#j) Write a query to display the total hours worked and total amount billed for the project.

**select** **sum**(total\_hours\_worked) **as** total\_hours\_worked, **sum**(total\_hours\_worked\*skill\_rate) **as** project\_total\_amount\_billed

**from** (**select** task\_quantity, w.assign\_id ,skill\_rate ,**sum**(wlog\_hours) **as** total\_hours\_worked

**from** worklog w **join** assign a **on** w.assign\_id = a.assign\_id

**join** task t **on** a.task\_id = t.task\_id

**join** skill s **on** t.skill\_id = s.skill\_id

**group** **by** w.assign\_id

)s;

图片包含 日程表

描述已自动生成

#k) Write a query to display all employees (first and last name) on the project with more than 2 years’

#experience as of January 1, 2002.

**select** **concat**(emp\_lname, '', emp\_fname) **as** emp\_name

**from** employee

**where** **datediff**('2002-1-1',emp\_hiredate) > 730;

表格

描述已自动生成

#l) Write a query to display all employees by region. Include region description, employee name (first and

#last), and employee hire date. Group by region.

**select** region\_name , emp\_lname ,emp\_fname , emp\_hiredate

**from** employee e **join** region r **on** e.region\_id = r.region\_id

**group** **by** e.emp\_id;

表格

描述已自动生成

#m) Write a SELECT statement using a DATE/TIME function.

**select** task\_description, **date**(task\_begindate)

**from** task

**where** task\_begindate = '2018-03-11';

表格

描述已自动生成

#n) Write an INSERT statement.

**insert** **into** employee(emp\_id, emp\_lname, emp\_mi, emp\_fname, emp\_hiredate, region\_id)

**values** (31, 'Park', **null**, 'Peter', '2003-01-01', 1);

表格

描述已自动生成

#o) Write an UPDATE statement.

**update** employee

**set** emp\_mi = 'D'

**where** emp\_id = 31;

表格

描述已自动生成

#p) Write a DELETE statement.

**delete** **from** employee

**where** emp\_id = 31;

表格

描述已自动生成

#q) Write a trigger to update the work-log entries when a bill is written and sent to the customer for the total hours

#worked on the project during that period.

**delimiter $**

**create** **trigger** trg\_updateworklog

**after** **insert** **on** bill

**for** **each** **row**

**begin**

**update** worklog

**set** bill\_id = **new**.bill\_id

**where** wlog\_date = bill\_date;

**end** $

**delimiter ;**