**Links to the Answers:**

Question1:

<https://livesql.oracle.com/apex/livesql/s/lgi5trsy4c2a3mr4p29ig42tq>

Question2:

<https://livesql.oracle.com/apex/livesql/s/lgi3h3n3heqx8l8hbn4mka6oi>

Question3:

<https://livesql.oracle.com/apex/livesql/s/lgi79nyr3alro5563juymsfb5>

Question4:

<https://livesql.oracle.com/apex/livesql/s/lgiwokn63atkjmdxkmimynybi>

**SQL Queries for the Questions:**

**Question1:**

Given a time range (eg. Jan 1 to Jan 31, 2021), in that interval, what is the average amount a procedure cost, and how long did it take on the average?

**Answer :**

Assumption:

The Billing\_Record table consist of all the transaction records of the patient billing. This includes billings done on the procedures that the patients undergo. The table is related to appointment, procedure and provider tables.

***This query gives us the average billed cost per procedure in the given date.***

* First, we are joining Billing record with procedure and appointment using left join operation.
* Then we filter the result to a given time range (eg. Jan 1 to Jan 31, 2021).
* Group by procedure\_id.
* Projecting the procedure\_id and average billed amount

**select Procedure\_id** , *round*(*avg*(**Total\_Billed\_Amount**), 3) AVG\_BILLED\_AMOUNT  
 , *round*(*avg*(*to\_number*(*extract*(**HOUR from end\_time** - **start\_time**)) \* 60 +  
 *to\_number*(*extract*(**MINUTE from end\_time** - **start\_time**))), 3) AVG\_PROCEDURE\_TIME  
**from** Billing\_record B *--LEFT JOIN PROCEDURE P ON B.PROCEDURE\_ID = P.PROCEDURE\_ID* **LEFT JOIN** appointment **A ON** B.**appointment\_id** = **A**.**appointment\_id  
where Date\_billed** >= **date'2021-01-01'  
 and Date\_billed** < **date'2021-01-31'  
group by Procedure\_id**;

***scenario 2: This query gives us the average billed cost for all the procedures combined***.

**select round(avg(Total\_Billed\_Amount), 3) AVG\_BILLED\_AMOUNT  
 , round(avg(to\_number(extract(HOUR from end\_time - start\_time)) \* 60 +  
 to\_number(extract(MINUTE from end\_time - start\_time))), 3) AVG\_PROCEDURE\_TIME  
from Billing\_record B --LEFT JOIN PROCEDURE P ON B.PROCEDURE\_ID = P.PROCEDURE\_ID  
 LEFT JOIN appointment A ON B.appointment\_id = A.appointment\_id  
where Date\_billed >= date'2021-01-01'  
 and Date\_billed < date'2021-01-31';**

**Question2:**

### Given a date, what is the income for that date, from all the procedures performed that day? The owners could run this daily, to chart income, cumulative income, etc.

**Answer :**

Assumption:

The Billing\_Record table consist of all the transaction records of the patient billing. This includes billings done on the procedures that the patients undergo.

**select Date\_billed**, *sum*(*round*((**Total\_Billed\_Amount**), 3)) **as** Total\_Income  
**from** Billing\_record  
**where Date\_billed** = **date'2021-01-20'  
group by date\_billed**;

***scenario2:This query gives the results for all the dates.***

**select Date\_billed**, *sum*(*round*((**Total\_Billed\_Amount**), 3)) **as** Total\_Income  
**from** Billing\_record  
**group by date\_billed order by date\_billed**;

**Question3:**

The owners have asked you to create a new table, after you'd built the original db - this is a simple 'capabilities' table, with just two columns: EMPLOYEE ID, SKILL. With this table, they hope to have, in a single place, what each employee (staff, surgeons... everyone) can do, eg. throw a party, file taxes, administer injections, extract teeth, talk to the press... [each employee would pick from a giant list of tasks, one or more of the items - this is to prevent variations and typos].

Write a query that will pick out only the employees who can do every task in a table such as the one below:

File taxes

Meet the press

Organize spring cleaning

Do teeth cleaning

Reorder inventory

**Answer :**

Assumption:

Capabilities table will have all the skills that an employee of the dental procedure can have. Employee table will have employee details. Task sheet table will have necessary skills needed by the owners.

The query will output the employee\_id and corresponding skill\_name that they possess.

**select** abc.**employee\_id**, def.**skill\_name  
from** (  
 **select employee\_id**, *count*(ES.**skill\_id**)  
 **from** employee\_skills ES  
 **inner join** capabilities S **on** ES.**skill\_id** = S.**skill\_id  
 where** S.**skill\_name IN** (**select** *\** **from** task\_sheet)  
 **Group by employee\_id  
 having** *count*(ES.**skill\_id**) >= (**select** *count*(**skill\_name**) **from** task\_sheet)) abc  
 **cross JOIN** (**select skill\_name  
 from** capabilities  
 **where skill\_name IN** (**select** *\** **from** task\_sheet)) def  
**Order by employee\_id**;

***scenario2:The query will output emp\_id of those employees who have all the skills in the task sheet.***

**select employee\_id  
from** (  
 **select employee\_id**, *count*(ES.**skill\_id**)  
 **from** employee\_skills ES  
 **inner join** capabilities S **on** ES.**skill\_id** = S.**skill\_id  
 where** S.**skill\_name IN** (**select** *\** **from** task\_sheet)  
 **Group by employee\_id  
 having** *count*(ES.**skill\_id**) >= (**select** *count*(**skill\_name**) **from** task\_sheet)  
 );

***scenario3: The query will output employee names of those employees who have all the skills in the task sheet.***

**select employee\_name  
from** (  
 **select employee\_name**, *count*(ES.**skill\_id**)  
 **from** employee\_skills ES  
 **inner join** employee E **on** ES.**employee\_id** = E.**employee\_id  
 inner join** capabilities S **on** ES.**skill\_id** = S.**skill\_id  
 where** S.**skill\_name IN** (**select** *\** **from** task\_sheet)  
 **Group by employee\_name  
 having** *count*(ES.**skill\_id**) >= (**select** *count*(**skill\_name**) **from** task\_sheet)  
 );

**Question4:**

The administration has decided to give bonus to the top 3 employees who have worked on more appointments during this COVID time. So, Write a query to get the top 3 performers that will pick out only 3 employees in order who have taken maximum number of appointments.

**Answer :**

Assumption:

Appointment table will have all the appointment details including patient and corresponding doctor’s details who has taken the appointment. The query will output emp\_id and name of those top 3 performing employees.

**SELECT** AP.**employee\_id**, EM.**employee\_name  
FROM** ((**SELECT employee\_id**,  
 *COUNT*(**employee\_id**) **as** "top\_performer"  
 **FROM** appointment  
 **GROUP BY employee\_id  
 ORDER BY** "top\_performer" **DESC**) AP  
 **inner join** employee EM **on** AP.**employee\_id** = EM.**employee\_id**)  
**WHERE** *ROWNUM* <= 3;

**Table creation Queries:**

**CREATE TABLE Procedure**(  
 **Procedure\_Id Varchar**(20) **NOT NULL**,  
 **Procedure\_Name Varchar**(20),  
 **PRIMARY KEY** (**Procedure\_Id**)  
);

**CREATE TABLE** patient  
(  
 **patient\_Id Varchar**(20) **NOT NULL**,  
 **patient\_Name Varchar**(50),  
 **age integer**,  
 **phone\_number varchar**(20),  
 **gender varchar**(20),  
 **PRIMARY KEY** (**patient\_Id**)  
);  
  
**CREATE TABLE** employee  
(  
 **employee\_Id Varchar**(20) **NOT NULL**,  
 **skill\_id varchar**(20),  
 **employee\_Name Varchar**(50),  
 **age integer**,  
 **phone\_number varchar**(20),  
 **gender varchar**(20),  
 **address varchar**(50),  
 **salary number**(10, 2),  
 **job\_role varchar**(20),  
 **PRIMARY KEY** (**employee\_Id**)  
);

**CREATE TABLE** Appointment  
(  
 **Appointment\_Id Varchar**(20) **NOT NULL**,  
 **Start\_Time Timestamp**,  
 **End\_Time Timestamp**,  
 **patient\_id varchar**(20),  
 **employee\_id varchar**(20),  
 **PRIMARY KEY** (**Appointment\_Id**),  
 **FOREIGN KEY** (**patient\_id**) **REFERENCES** patient (**patient\_id**),  
 **FOREIGN KEY** (**employee\_id**) **REFERENCES** employee (**employee\_id**)  
);  
  
**CREATE TABLE** Provider  
(  
 **Provider\_Id Varchar**(20) **NOT NULL**,  
 **Provider\_Name Varchar**(60),  
 **PRIMARY KEY** (**Provider\_Id**)  
);  
  
**CREATE TABLE** Billing\_Record  
(  
 **Billing\_ID VARCHAR**(20),  
 **Patient\_ID VARCHAR**(20),  
 **Provider\_ID VARCHAR**(20),  
 **Appointment\_ID VARCHAR**(20),  
 **Procedure\_ID VARCHAR**(20),  
 **Total\_Billed\_Amount INTEGER**,  
 **Total\_Owed\_Amount INTEGER**,  
 **Patient\_Payment INTEGER**,  
 **Insurance\_Payment INTEGER**,  
 **Date\_Billed DATE**,  
 **PRIMARY KEY** (**Billing\_ID**),  
 **FOREIGN KEY** (**Appointment\_ID**) **REFERENCES** APPOINTMENT (**Appointment\_ID**),  
 **FOREIGN KEY** (**PROCEDURE\_ID**) **REFERENCES PROCEDURE** (**PROCEDURE\_ID**),  
 **FOREIGN KEY** (**PROvider\_ID**) **REFERENCES** PROVIDER (**PROVIDER\_ID**)  
);

**CREATE TABLE** capabilities  
(  
 **skill\_Id Varchar**(20) **NOT NULL**,  
 **skill\_Name Varchar**(60),  
 **PRIMARY KEY** (**skill\_Id**)  
);  
  
**create table** employee\_skills  
(  
 **employee\_id varchar**(20),  
 **skill\_id varchar**(20),  
 **FOREIGN KEY** (**employee\_id**) **REFERENCES** EMPLOYEE (**employee\_id**),  
 **FOREIGN KEY** (**skill\_id**) **REFERENCES** capabilities (**skill\_id**)  
);

**CREATE TABLE** TASK\_SHEET  
(  
 **SKILL\_NAME VARCHAR**(60),  
 **PRIMARY KEY** (**SKILL\_NAME**)  
);

**Insert records Queries:**

**insert into Procedure** (**Procedure\_Id**, **Procedure\_Name**)  
**select 'proc1'**, **'Braces'  
from** *dual***union all  
select 'proc2'**, **'General Consultation'  
from** *dual***union all  
select 'proc3'**, **'Root Canals'  
from** *dual***union all  
select 'proc4'**, **'Gum Surgery'  
from** *dual***union all  
select 'proc5'**, **'Teeth Whitening'  
from** *dual***union all  
select 'proc6'**, **'Fillngs and Repairs'  
from** *dual***union all  
select 'proc7'**, **'Extractions'  
from** *dual*;  
  
**insert into** patient (**patient\_Id**, **patient\_Name**, **age**, **phone\_number**, **gender**)  
**select 'PAT01'**, **'Walker Doe'**, **'32'**, **'+1(510)346-5098'**, **'Male'  
from** *dual***union all  
select 'PAT02'**, **'Marley Sebastian'**, **'30'**, **'+1(210)146-5098'**, **'Male'  
from** *dual***union all  
select 'PAT03'**, **'Sawyer Gingrich'**, **'40'**, **'+1(210)246-5198'**, **'Male'  
from** *dual***union all  
select 'PAT04'**, **'Holden Cook'**, **'35'**, **'+1(217)346-5028'**, **'Male'  
from** *dual***union all  
select 'PAT05'**, **'Nash Weasley'**, **'24'**, **'+1(210)446-5093'**, **'Male'  
from** *dual***union all  
select 'PAT06'**, **'Journey Potter'**, **'26'**, **'+1(213)546-5498'**, **'Female'  
from** *dual***union all  
select 'PAT07'**, **'Brecket Tribiani'**, **'39'**, **'+1(510)946-5058'**, **'Male'  
from** *dual***union all  
select 'PAT08'**, **'Preston Bing'**, **'41'**, **'+1(210)746-5096'**, **'Male'  
from** *dual***union all  
select 'PAT09'**, **'Blake Green'**, **'33'**, **'+1(210)846-5097'**, **'Female'  
from** *dual***union all  
select 'PAT10'**, **'Graham Buffey'**, **'36'**, **'+1(217)046-5098'**, **'Male'  
from** *dual***union all  
select 'PAT11'**, **'Andrea Geller'**, **'27'**, **'+1(510)246-5099'**, **'Female'  
from** *dual***union all  
select 'PAT12'**, **'Eloise Carpenter'**, **'22'**, **'+1(215)846-4128'**, **'Female'  
from** *dual***union all  
select 'PAT13'**, **'Venessa Granger'**, **'30'**, **'+1(210)146-5048'**, **'Male'  
from** *dual***union all  
select 'PAT14'**, **'Spenser Pater'**, **'30'**, **'+1(215)146-2048'**, **'Male'  
from** *dual***union all  
select 'PAT15'**, **'Edwin Sebastian'**, **'30'**, **'+1(210)166-5098'**, **'Male'  
from** *dual***union all  
select 'PAT16'**, **'Sam Kim'**, **'30'**, **'+1(215)106-5098'**, **'Male'  
from** *dual***union all  
select 'PAT17'**, **'Denver Trump'**, **'24'**, **'+1(216)446-5093'**, **'Male'  
from** *dual***union all  
select 'PAT18'**, **'Alden Geeter'**, **'24'**, **'+1(215)446-1223'**, **'Female'  
from** *dual***union all  
select 'PAT19'**, **'Henley Buffey'**, **'22'**, **'+1(213)806-4028'**, **'Female'  
from** *dual***union all  
select 'PAT20'**, **'Chitra Pandit'**, **'22'**, **'+1(215)850-4128'**, **'Female'  
from** *dual***union all  
select 'PAT21'**, **'Rahul Patel'**, **'22'**, **'+1(210)846-4128'**, **'Male'  
from** *dual*;  
  
**insert into** employee (**employee\_Id**, **employee\_Name**, **age**, **phone\_number**, **gender**, **address**, **salary**, **job\_role**)  
**select 'EMP01'**,  
 **'John Doe'**,  
 **'32'**,  
 **'+1(213)346-5098'**,  
 **'Male'**,  
 **'123 jade avenue'**,  
 10000,  
 **'Front\_Office Worker'  
from** *dual***union all  
select 'EMP02'**,  
 **'Micheal Sebastian'**,  
 **'30'**,  
 **'+1(213)146-5098'**,  
 **'Male'**,  
 **'123 jade avenue'**,  
 20000,  
 **'doctor'  
from** *dual***union all  
select 'EMP03'**,  
 **'Jim Gingrich'**,  
 **'40'**,  
 **'+1(212)246-5198'**,  
 **'Male'**,  
 **'234 vermont avenue'**,  
 30000,  
 **'doctor'  
from** *dual***union all  
select 'EMP04'**,  
 **'Timothy Cook'**,  
 **'35'**,  
 **'+1(213)346-5028'**,  
 **'Male'**,  
 **'345 adams avenue'**,  
 40000,  
 **'Front\_Office Worker'  
from** *dual***union all  
select 'EMP05'**,  
 **'Ron Weasley'**,  
 **'24'**,  
 **'+1(214)446-5093'**,  
 **'Male'**,  
 **'456 hollywood avenue'**,  
 60000,  
 **'Front\_Office Worker'  
from** *dual***union all  
select 'EMP06'**,  
 **'Olivia Potter'**,  
 **'26'**,  
 **'+1(215)546-5498'**,  
 **'Female'**,  
 **'567 central perk avenue'**,  
 70000,  
 **'doctor'  
from** *dual***union all  
select 'EMP07'**,  
 **'Ken Tribiani'**,  
 **'39'**,  
 **'+1(216)946-5058'**,  
 **'Male'**,  
 **'568 regal avenue'**,  
 90000,  
 **'doctor'  
from** *dual***union all  
select 'EMP08'**,  
 **'Daryl Bing'**,  
 **'41'**,  
 **'+1(217)746-5096'**,  
 **'Male'**,  
 **'321 catalina avenue'**,  
 100000,  
 **'doctor'  
from** *dual***union all  
select 'EMP09'**,  
 **'Linda Green'**,  
 **'33'**,  
 **'+1(218)846-5097'**,  
 **'Female'**,  
 **'543 hoover avenue'**,  
 35000,  
 **'doctor'  
from** *dual***union all  
select 'EMP10'**,  
 **'Greg Buffey'**,  
 **'36'**,  
 **'+1(212)046-5098'**,  
 **'Male'**,  
 **'765 figueroa avenue'**,  
 56000,  
 **'doctor'  
from** *dual***union all  
select 'EMP11'**,  
 **'Monica Geller'**,  
 **'27'**,  
 **'+1(213)246-5099'**,  
 **'Female'**,  
 **'987 27th street'**,  
 67000,  
 **'doctor'  
from** *dual***union all  
select 'EMP12'**,  
 **'Rachel Carpenter'**,  
 **'22'**,  
 **'+1(214)846-4128'**,  
 **'Female'**,  
 **'780 35th street'**,  
 78000,  
 **'Front\_Office Worker'  
from** *dual***union all  
select 'EMP13'**,  
 **'Monalisa Granger'**,  
 **'30'**,  
 **'+1(213)146-5048'**,  
 **'Male'**,  
 **'1235 jade avenue'**,  
 20000,  
 **'doctor'  
from** *dual***union all  
select 'EMP14'**,  
 **'Cleo Pater'**,  
 **'30'**,  
 **'+1(213)146-2048'**,  
 **'Male'**,  
 **'1237 jade avenue'**,  
 20000,  
 **'doctor'  
from** *dual***union all  
select 'EMP15'**,  
 **'Mason Sebastian'**,  
 **'30'**,  
 **'+1(213)166-5098'**,  
 **'Male'**,  
 **'1230 jade avenue'**,  
 20000,  
 **'Front\_Office Worker'  
from** *dual***union all  
select 'EMP16'**,  
 **'Daniel Kim'**,  
 **'30'**,  
 **'+1(213)106-5098'**,  
 **'Male'**,  
 **'150 jade avenue'**,  
 20000,  
 **'doctor'  
from** *dual***union all  
select 'EMP17'**,  
 **'Donald Trump'**,  
 **'24'**,  
 **'+1(217)446-5093'**,  
 **'Male'**,  
 **'123 Florida Avenue'**,  
 60000,  
 **'doctor'  
from** *dual***union all  
select 'EMP18'**,  
 **'Hermione Geeter'**,  
 **'24'**,  
 **'+1(210)446-1223'**,  
 **'Female'**,  
 **'456 hollywood avenue'**,  
 60000,  
 **'Front\_Office Worker'  
from** *dual***union all  
select 'EMP19'**,  
 **'Phoebe Buffey'**,  
 **'22'**,  
 **'+1(214)806-4028'**,  
 **'Female'**,  
 **'780 35th street'**,  
 78000,  
 **'doctor'  
from** *dual***union all  
select 'EMP20'**,  
 **'Saraswati Pandit'**,  
 **'22'**,  
 **'+1(210)850-4128'**,  
 **'Female'**,  
 **'780 35th street'**,  
 78000,  
 **'Front\_Office Worker'  
from** *dual***union all  
select 'EMP21'**,  
 **'Parth Patel'**,  
 **'22'**,  
 **'+1(510)846-4128'**,  
 **'Male'**,  
 **'780 35th street'**,  
 78000,  
 **'doctor'  
from** *dual*;  
  
**insert into** appointment (**appointment\_id**, **start\_time**, **end\_time**, **patient\_id**, **employee\_id**)  
**select '#id11'**, **timestamp'2021-01-11 22:50:00.0000'**, **timestamp'2021-01-11 23:22:00.0000'**, **'PAT01'**, **'EMP01'  
from** *dual***union all  
select '#id12'**, **timestamp'2021-01-12 22:49:00.0000'**, **timestamp'2021-01-12 23:23:00.0000'**, **'PAT02'**, **'EMP01'  
from** *dual***union all  
select '#id13'**, **timestamp'2021-01-13 22:48:00.0000'**, **timestamp'2021-01-13 23:24:00.0000'**, **'PAT03'**, **'EMP07'  
from** *dual***union all  
select '#id14'**, **timestamp'2021-01-14 22:47:00.0000'**, **timestamp'2021-01-14 23:25:00.0000'**, **'PAT04'**, **'EMP06'  
from** *dual***union all  
select '#id15'**, **timestamp'2021-01-15 22:46:00.0000'**, **timestamp'2021-01-15 23:26:00.0000'**, **'PAT05'**, **'EMP05'  
from** *dual***union all  
select '#id16'**, **timestamp'2021-01-16 22:45:00.0000'**, **timestamp'2021-01-16 23:27:00.0000'**, **'PAT06'**, **'EMP03'  
from** *dual***union all  
select '#id17'**, **timestamp'2021-01-17 22:44:00.0000'**, **timestamp'2021-01-17 23:28:00.0000'**, **'PAT07'**, **'EMP02'  
from** *dual***union all  
select '#id18'**, **timestamp'2021-01-18 22:43:00.0000'**, **timestamp'2021-01-18 23:29:00.0000'**, **'PAT08'**, **'EMP01'  
from** *dual***union all  
select '#id19'**, **timestamp'2021-01-19 22:42:00.0000'**, **timestamp'2021-01-19 23:30:00.0000'**, **'PAT09'**, **'EMP08'  
from** *dual***union all  
select '#id20'**, **timestamp'2021-01-20 22:41:00.0000'**, **timestamp'2021-01-20 23:31:00.0000'**, **'PAT10'**, **'EMP05'  
from** *dual***union all  
select '#id21'**, **timestamp'2021-01-21 22:40:00.0000'**, **timestamp'2021-01-21 23:32:00.0000'**, **'PAT11'**, **'EMP05'  
from** *dual***union all  
select '#id22'**, **timestamp'2021-01-22 22:39:00.0000'**, **timestamp'2021-01-22 23:33:00.0000'**, **'PAT12'**, **'EMP06'  
from** *dual***union all  
select '#id23'**, **timestamp'2021-01-23 22:38:00.0000'**, **timestamp'2021-01-23 23:34:00.0000'**, **'PAT13'**, **'EMP05'  
from** *dual***union all  
select '#id24'**, **timestamp'2021-01-24 22:37:00.0000'**, **timestamp'2021-01-24 23:35:00.0000'**, **'PAT14'**, **'EMP08'  
from** *dual***union all  
select '#id25'**, **timestamp'2021-01-25 22:36:00.0000'**, **timestamp'2021-01-25 23:36:00.0000'**, **'PAT15'**, **'EMP09'  
from** *dual***union all  
select '#id26'**, **timestamp'2021-01-26 22:35:00.0000'**, **timestamp'2021-01-26 23:37:00.0000'**, **'PAT16'**, **'EMP09'  
from** *dual***union all  
select '#id27'**, **timestamp'2021-01-27 22:34:00.0000'**, **timestamp'2021-01-27 23:38:00.0000'**, **'PAT17'**, **'EMP09'  
from** *dual***union all  
select '#id28'**, **timestamp'2021-01-28 22:33:00.0000'**, **timestamp'2021-01-28 23:39:00.0000'**, **'PAT18'**, **'EMP09'  
from** *dual***union all  
select '#id29'**, **timestamp'2021-01-29 22:32:00.0000'**, **timestamp'2021-01-29 23:40:00.0000'**, **'PAT19'**, **'EMP08'  
from** *dual*;  
  
**insert into** Provider (**Provider\_Id**, **Provider\_Name**)  
**select 'prov1'**, **'United Healthcare'  
from** *dual***union all  
select 'prov2'**, **'MetLife'  
from** *dual***union all  
select 'prov3'**, **'Guardian Life Insurance'  
from** *dual***union all  
select 'prov4'**, **'Best California'  
from** *dual***union all  
select 'prov5'**, **'Blue Cross'  
from** *dual*;  
  
**insert into** billing\_record (**Billing\_ID**, **Patient\_ID**, **Provider\_ID**, **Appointment\_ID**, **Procedure\_ID**, **Total\_Billed\_Amount**,  
 **Total\_Owed\_Amount**, **Patient\_Payment**, **Insurance\_Payment**, **Date\_Billed**)  
**select '501'**,  
 **'pat11'**,  
 **'prov3'**,  
 **'#id11'**,  
 **'proc5'**,  
 1091,  
 79,  
 271,  
 741,  
 **date'2021-01-13'  
from** *dual***union all  
select '502'**,  
 **'pat12'**,  
 **'prov3'**,  
 **'#id12'**,  
 **'proc1'**,  
 1223,  
 91,  
 298,  
 834,  
 **date'2021-01-14'  
from** *dual***union all  
select '503'**,  
 **'pat13'**,  
 **'prov4'**,  
 **'#id13'**,  
 **'proc2'**,  
 1211,  
 92,  
 397,  
 722,  
 **date'2021-01-15'  
from** *dual***union all  
select '504'**,  
 **'pat10'**,  
 **'prov4'**,  
 **'#id13'**,  
 **'proc2'**,  
 1059,  
 100,  
 359,  
 600,  
 **date'2021-01-15'  
from** *dual***union all  
select '505'**,  
 **'pat13'**,  
 **'prov4'**,  
 **'#id13'**,  
 **'proc2'**,  
 1758,  
 935,  
 323,  
 500,  
 **date'2021-01-15'  
from** *dual***union all  
select '506'**,  
 **'pat14'**,  
 **'prov2'**,  
 **'#id14'**,  
 **'proc2'**,  
 192,  
 4,  
 54,  
 134,  
 **date'2021-01-16'  
from** *dual***union all  
select '507'**,  
 **'pat15'**,  
 **'prov2'**,  
 **'#id15'**,  
 **'proc2'**,  
 959,  
 7,  
 313,  
 639,  
 **date'2021-01-17'  
from** *dual***union all  
select '508'**,  
 **'pat16'**,  
 **'prov4'**,  
 **'#id16'**,  
 **'proc4'**,  
 242,  
 64,  
 10,  
 168,  
 **date'2021-01-18'  
from** *dual***union all  
select '509'**,  
 **'pat17'**,  
 **'prov1'**,  
 **'#id17'**,  
 **'proc2'**,  
 869,  
 26,  
 104,  
 739,  
 **date'2021-01-19'  
from** *dual***union all  
select '510'**,  
 **'pat18'**,  
 **'prov5'**,  
 **'#id18'**,  
 **'proc3'**,  
 493,  
 25,  
 345,  
 123,  
 **date'2021-01-20'  
from** *dual***union all  
select '511'**,  
 **'pat10'**,  
 **'prov5'**,  
 **'#id18'**,  
 **'proc6'**,  
 900,  
 45,  
 700,  
 155,  
 **date'2021-01-20'  
from** *dual***union all  
select '512'**,  
 **'pat16'**,  
 **'prov5'**,  
 **'#id18'**,  
 **'proc6'**,  
 783,  
 33,  
 650,  
 100,  
 **date'2021-01-20'  
from** *dual***union all  
select '513'**,  
 **'pat17'**,  
 **'prov5'**,  
 **'#id18'**,  
 **'proc3'**,  
 532,  
 12,  
 497,  
 23,  
 **date'2021-01-20'  
from** *dual***union all  
select '514'**,  
 **'pat19'**,  
 **'prov5'**,  
 **'#id18'**,  
 **'proc6'**,  
 386,  
 100,  
 230,  
 56,  
 **date'2021-01-20'  
from** *dual***union all  
select '515'**,  
 **'pat18'**,  
 **'prov5'**,  
 **'#id18'**,  
 **'proc3'**,  
 584,  
 20,  
 3,  
 613,  
 **date'2021-01-21'  
from** *dual***union all  
select '516'**,  
 **'pat18'**,  
 **'prov5'**,  
 **'#id18'**,  
 **'proc2'**,  
 1211,  
 92,  
 397,  
 722,  
 **date'2021-01-11'  
from** *dual***union all  
select '517'**,  
 **'pat20'**,  
 **'prov2'**,  
 **'#id20'**,  
 **'proc4'**,  
 636,  
 69,  
 13,  
 464,  
 **date'2021-01-22'  
from** *dual***union all  
select '518'**,  
 **'pat21'**,  
 **'prov4'**,  
 **'#id21'**,  
 **'proc4'**,  
 546,  
 17,  
 68,  
 524,  
 **date'2021-01-23'  
from** *dual***union all  
select '519'**,  
 **'pat22'**,  
 **'prov5'**,  
 **'#id22'**,  
 **'proc1'**,  
 609,  
 6,  
 404,  
 393,  
 **date'2021-01-24'  
from** *dual***union all  
select '520'**,  
 **'pat20'**,  
 **'prov5'**,  
 **'#id22'**,  
 **'proc1'**,  
 803,  
 60,  
 156,  
 25,  
 **date'2021-01-24'  
from** *dual***union all  
select '521'**,  
 **'pat12'**,  
 **'prov5'**,  
 **'#id22'**,  
 **'proc1'**,  
 241,  
 25,  
 410,  
 200,  
 **date'2021-01-24'  
from** *dual***union all  
select '522'**,  
 **'pat13'**,  
 **'prov5'**,  
 **'#id22'**,  
 **'proc1'**,  
 635,  
 30,  
 300,  
 325,  
 **date'2021-01-24'  
from** *dual***union all  
select '523'**,  
 **'pat14'**,  
 **'prov3'**,  
 **'#id23'**,  
 **'proc5'**,  
 635,  
 26,  
 467,  
 618,  
 **date'2021-01-25'  
from** *dual***union all  
select '524'**,  
 **'pat23'**,  
 **'prov1'**,  
 **'#id24'**,  
 **'proc4'**,  
 1111,  
 14,  
 485,  
 810,  
 **date'2021-01-26'  
from** *dual***union all  
select '525'**,  
 **'pat24'**,  
 **'prov2'**,  
 **'#id25'**,  
 **'proc5'**,  
 1309,  
 73,  
 20,  
 397,  
 **date'2021-01-27'  
from** *dual***union all  
select '526'**,  
 **'pat26'**,  
 **'prov5'**,  
 **'#id26'**,  
 **'proc2'**,  
 490,  
 29,  
 83,  
 620,  
 **date'2021-01-28'  
from** *dual***union all  
select '527'**,  
 **'pat27'**,  
 **'prov2'**,  
 **'#id27'**,  
 **'proc6'**,  
 732,  
 76,  
 119,  
 266,  
 **date'2021-01-29'  
from** *dual***union all  
select '528'**,  
 **'pat28'**,  
 **'prov1'**,  
 **'#id28'**,  
 **'proc1'**,  
 421,  
 37,  
 362,  
 22,  
 **date'2021-01-30'  
from** *dual***union all  
select '529'**,  
 **'pat29'**,  
 **'prov1'**,  
 **'#id29'**,  
 **'proc1'**,  
 814,  
 90,  
 206,  
 518,  
 **date'2021-01-31'  
from** *dual*;

**insert into** capabilities (**skill\_id**, **skill\_name**)  
**select 'skill1'**, **'File taxes'  
from** *dual***union all  
select 'skill2'**, **'Meet the press'  
from** *dual***union all  
select 'skill3'**, **'Organize spring cleaning'  
from** *dual***union all  
select 'skill4'**, **'Do teeth cleaning'  
from** *dual***union all  
select 'skill5'**, **'Reorder inventory'  
from** *dual***union all  
select 'skill6'**, **'Administer anesthetics'  
from** *dual***union all  
select 'skill7'**, **'Prescribe antibiotics'  
from** *dual***union all  
select 'skill8'**, **'Examine x rays of gums'  
from** *dual***union all  
select 'skill9'**, **'Teach patients flossing'  
from** *dual***union all  
select 'skill10'**, **'Take care of accounts'  
from** *dual***union all  
select 'skill11'**, **'Organize and manage events'  
from** *dual***union all  
select 'skill12'**, **'Supervise doctor schedule'  
from** *dual*;  
  
**insert into** employee\_skills  
 (**employee\_id**, **skill\_id**)  
**select 'EMP01'**, **'skill1'  
from** *dual***union all  
select 'EMP01'**, **'skill3'  
from** *dual***union all  
select 'EMP02'**, **'skill2'  
from** *dual***union all  
select 'EMP02'**, **'skill3'  
from** *dual***union all  
select 'EMP03'**, **'skill2'  
from** *dual***union all  
select 'EMP03'**, **'skill3'  
from** *dual***union all  
select 'EMP04'**, **'skill1'  
from** *dual***union all  
select 'EMP04'**, **'skill2'  
from** *dual***union all  
select 'EMP04'**, **'skill3'  
from** *dual***union all  
select 'EMP04'**, **'skill4'  
from** *dual***union all  
select 'EMP04'**, **'skill5'  
from** *dual***union all  
select 'EMP05'**, **'skill4'  
from** *dual***union all  
select 'EMP05'**, **'skill5'  
from** *dual***union all  
select 'EMP06'**, **'skill4'  
from** *dual***union all  
select 'EMP06'**, **'skill6'  
from** *dual***union all  
select 'EMP07'**, **'skill4'  
from** *dual***union all  
select 'EMP07'**, **'skill7'  
from** *dual***union all  
select 'EMP08'**, **'skill4'  
from** *dual***union all  
select 'EMP08'**, **'skill8'  
from** *dual***union all  
select 'EMP09'**, **'skill4'  
from** *dual***union all  
select 'EMP09'**, **'skill9'  
from** *dual***union all  
select 'EMP10'**, **'skill1'  
from** *dual***union all  
select 'EMP10'**, **'skill10'  
from** *dual***union all  
select 'EMP10'**, **'skill2'  
from** *dual***union all  
select 'EMP10'**, **'skill3'  
from** *dual***union all  
select 'EMP10'**, **'skill4'  
from** *dual***union all  
select 'EMP10'**, **'skill5'  
from** *dual***union all  
select 'EMP11'**, **'skill11'  
from** *dual***union all  
select 'EMP11'**, **'skill5'  
from** *dual***union all  
select 'EMP12'**, **'skill12'  
from** *dual***union all  
select 'EMP12'**, **'skill6'  
from** *dual***union all  
select 'EMP13'**, **'skill1'  
from** *dual***union all  
select 'EMP13'**, **'skill7'  
from** *dual***union all  
select 'EMP14'**, **'skill1'  
from** *dual***union all  
select 'EMP14'**, **'skill8'  
from** *dual***union all  
select 'EMP15'**, **'skill1'  
from** *dual***union all  
select 'EMP15'**, **'skill9'  
from** *dual***union all  
select 'EMP16'**, **'skill1'  
from** *dual***union all  
select 'EMP16'**, **'skill10'  
from** *dual***union all  
select 'EMP17'**, **'skill11'  
from** *dual***union all  
select 'EMP17'**, **'skill2'  
from** *dual***union all  
select 'EMP18'**, **'skill12'  
from** *dual***union all  
select 'EMP18'**, **'skill2'  
from** *dual***union all  
select 'EMP19'**, **'skill2'  
from** *dual***union all  
select 'EMP19'**, **'skill6'  
from** *dual***union all  
select 'EMP20'**, **'skill1'  
from** *dual***union all  
select 'EMP20'**, **'skill2'  
from** *dual***union all  
select 'EMP20'**, **'skill3'  
from** *dual***union all  
select 'EMP20'**, **'skill4'  
from** *dual***union all  
select 'EMP20'**, **'skill5'  
from** *dual***union all  
select 'EMP20'**, **'skill6'  
from** *dual***union all  
select 'EMP21'**, **'skill3'  
from** *dual***union all  
select 'EMP21'**, **'skill6'  
from** *dual*;  
  
  
  
**insert into** TASK\_SHEET (**SKILL\_NAME**)  
**select 'File taxes'  
from** *dual***union all  
select 'Meet the press'  
from** *dual***union all  
select 'Organize spring cleaning'  
from** *dual***union all  
select 'Do teeth cleaning'  
from** *dual***union all  
select 'Reorder inventory'  
from** *dual*;