THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

सत्यं शिवं सुन्दरम्

ORACLE

SQL

A DBMS PROJECT

SPIRITUAL SPHERE

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What is Spiritual Sphere?

Temple Management System in Database Management System refers to the design and implementation of a database system to manage the various activities and operations of a temple. This project involves creating a system to store, organize and manage information related to the temple's resources, events, staff and members. This system is designed in such a way that it meets the specific needs of the temple and its community. It includes various kinds of managements like

- Employee Management: The employee management feature in a temple management system helps in maintaining a database of members, which includes their personal details and contact information.

- Event Management: Event Management is an important feature of a temple management system, which helps in managing various events and ceremonies organized by the temple.

- Donation Management: A temple management system also helps in managing donations and contributions from members and other donors.

And Many more....

So let's Explore...

Assumptions that we've made

- All booking tables are dynamic in nature.

- Combo booking is not taken into consideration. It will be only available in temple at respective timings.

- All ac and non ac rooms have same prices accordingly.

- The fests starting at respective dates, having a schedule of days, would have same starting and ending time every day.

Cardinality

1. Emp-Dept m:1
2. Donation-Dept m:1
3.Timings-Dept 1:m
4. Aarti-Aarti_Booking 1:m
5. Prasad-Prasad_Booking 1:m
6.Accomodation-Rooms_booking 1:m
7.Accomodation-Rooms_price m:1
8. Trustee-Dept m:1
9. Combo_prasad-prasad m:n
10. Dept-Is A- Aarti, Prasad, Darshan, Accommodation
11. Fest_info-Fest 1:m

• Description of Normalised Tables

1. DEPT (dept_id, dname, d_budget, start_time, end_time)
- Normalized Form: 3rd NF
- Primary key: dept_id
- Various departments are inherited from the dept entity using 'IS A' relationship.

2. EMP (emp_id, dept_id, e_name, sal, mob_no, e_mail, job, hiredate)
- Normalized Form: 3rd NF
- Primary Key: emp_id
- Foreign Key: dept_id refers to Dept table's dept_id
- Employees work in various departments.

3. DARSHAN (d_type, start_time, end_time, dept_id)
- Normalized Form: 3rd NF
- Primary Key: d_type
- Foreign Key: dept_id refers to dept table dept_id
- d_type includes various darshans like 'Sarva, VIP etc.'

4. AARTI (a_type, start_time, end_time, pid, dept_id)
- Normalized Form: 3rd NF
- Primary Key: a_type
- Foreign Keys: pid & dept_id
- Pid refers to emp table emp_id
- Dept_id refers to dept table dept_id
- A_type includes various aartis like 'Mangla, Shringar, Rajbhog etc.'

5. PRASHAD (name, price, dept_id)
- Normalized Form: 3rd NF
- Primary Key: name
- Foreign Key: dept_id which refers to the dept table dept_id
- name stores different types of prashad like 'Ladoo, Mysore Pak etc.'

6. COMBO (pr_comboid, price)
- Normalized Form: 3rd NF
- Primary Key: pr_comboid

7. FEST (f_id, f_name, dept_id, total_days)
- Normalized Form: 3rd NF
- Primary Key: f_id
- Foreign Key: dept_id which refers to the dept table dept_id

8. FEST_INFO (f_id, start_date, budget, start_time, end_time, mgr)
- Normalized Form: 3rd NF
- Primary Key: f_id & start_date
- This table is a weak entity as it depends on fest table
- Here start_date is a discriminator and with mixing of fest table primary key it becomes unique
- Foreign Key: f_id & mgr
- f_id refers to Fest table f_id
- mgr refers to Emp table emp_id
- Every year the budget of respective fest might be changed or not

9. TRUSTEE (t_id, t_name, t_mob, t_mail, dept_id)
- Normalized Form: 3rd NF
- Primary Key: t_id
- Foreign Key: dept_id
- One department is governed by many employees

10. ACCOMODATION (r_id, r_type, capacity, dept_id)
- Normalized Form: 3rd NF
- Primary Key: r_id
- Foreign Key: r_type & dept_id
- r_type refers to room_price table r_type
- dept_id refers to the dept table dept_id

11. DESCRIBE_COMBO (pr_comboid, name, quantity)
- Normalized Form: 3rd NF
- Primary Key: pr_comboid & name
- This is a many to many relationships' entity
- Foreign Key: pr_comboid & name
- Pr_comboid refers to combo table pr_comboid
- name refers to prashad table name

12. ROOM_PRICE (r_type, price)
- Normalized Form: 3rd NF
- Primary Key: r_type

13. AARTI_BOOKING (ab_id, a_type, booked_by, amt, date)
- Normalized Form: 3rd NF
- Primary Key: ab_id
- Foreign Key: a_type
- a_type refers to aarti table a_type

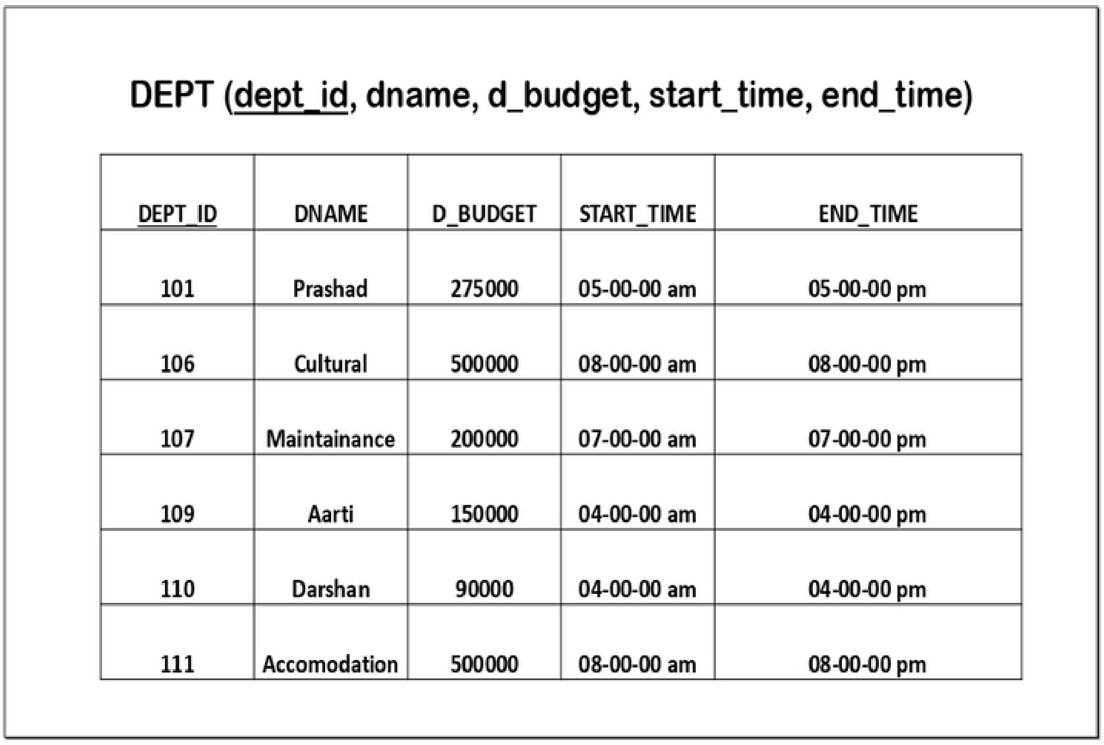
14. PRASAD_BOOKING (pb_id, name, booked_by, quantity, amt, date)
- Normalized Form: 3rd NF
- Primary Key: pb_id
- Foreign Key: name refers to table prashad name

15. ROOM_BOOKING (rb_id, booked_by, date, amt, room_type)
- Normalized Form: 3rd NF
- Primary Key: rb_id
- Foreign Key: room_type which refers to the table accommodation room_type

16. DETAILS (ab_id, member_names)
- Normalized Form: 3rd NF
- Primary Key: ab_id & member_names
- It is a weak entity
- Member_names is a discriminator therefore and with the mixing of
aarti_booking primary key it becomes unique

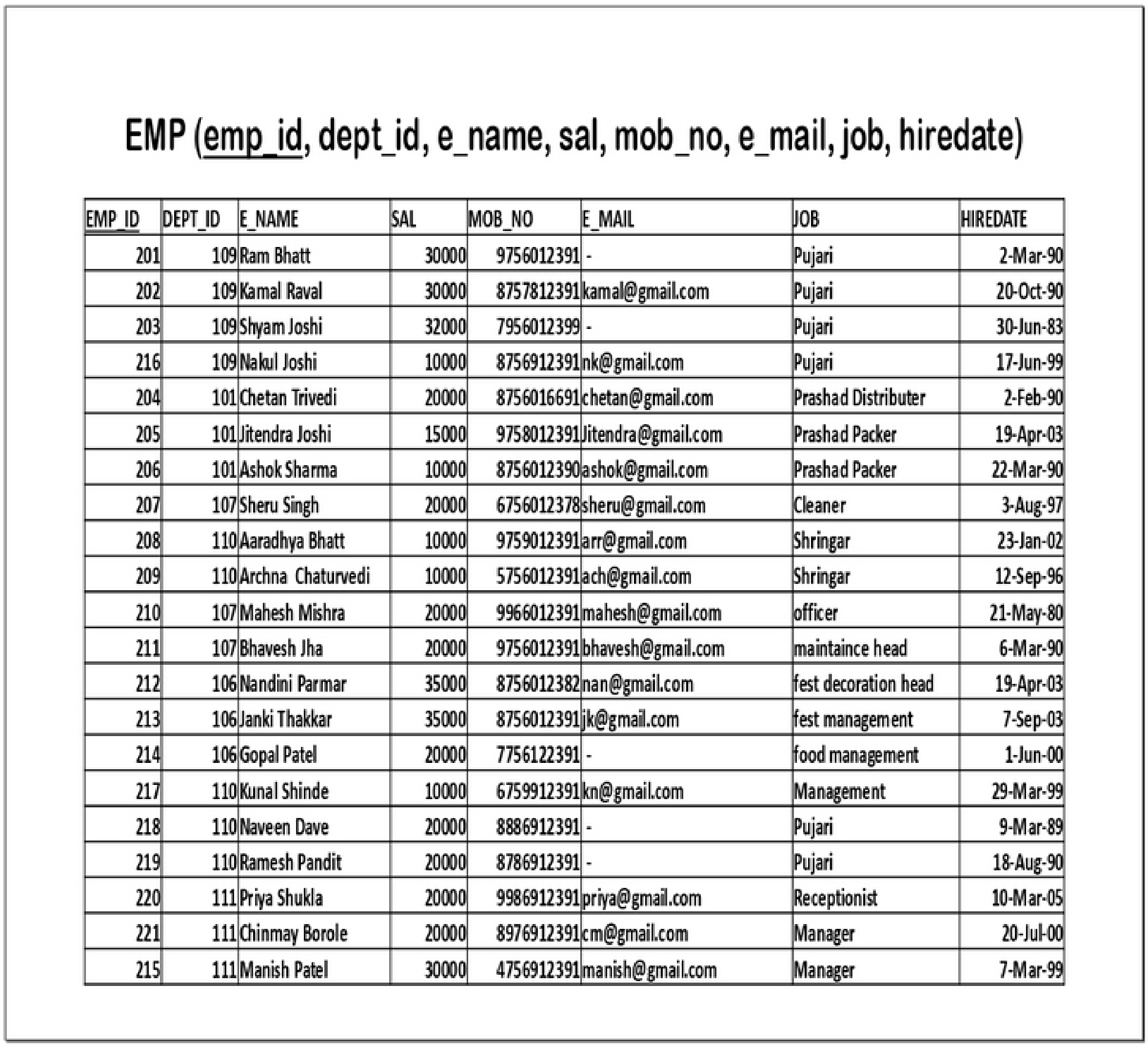
17. DONATION (d_id, donor_name, amt, dept_id, d_date)
- Normalized Form: 3rd NF
- Primary Key: d_id
- Foreign Key: dept_id which refers to the dept table dept_id

TABLES



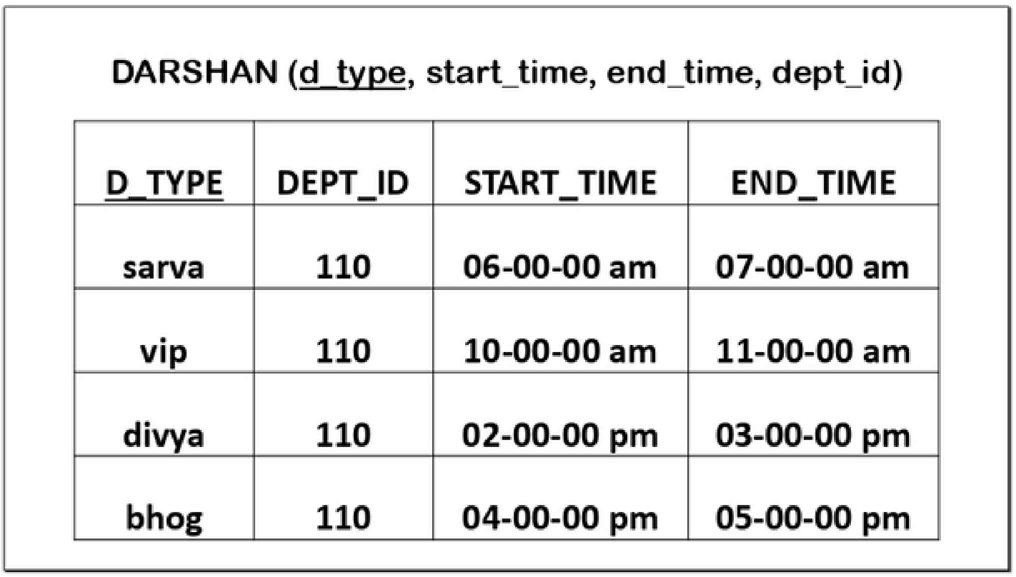
DEPT (dept_id, dname, d_budget, start_time, end_time)

DEPT_ID	DNAME	D_BUDGET	START_TIME	END_TIME
101	Prashad	275000	05-00-00 am	05-00-00 pm
106	Cultural	500000	08-00-00 am	08-00-00 pm
107	Maintainance	200000	07-00-00 am	07-00-00 pm
109	Aarti	150000	04-00-00 am	04-00-00 pm
110	Darshan	90000	04-00-00 am	04-00-00 pm
111	Accomodation	500000	08-00-00 am	08-00-00 pm



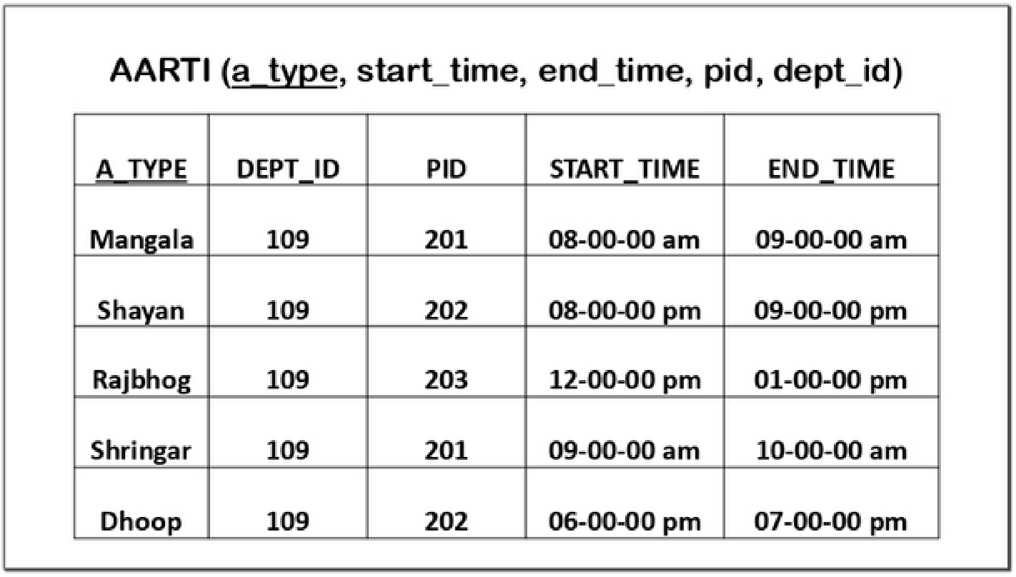
EMP (emp_id, dept_id, e_name, sal, mob_no, e_mail, job, hiredate)

EMP_ID	DEPT_ID	E_NAME	SAL	MOB_NO	E_MAIL	JOB	HIREDATE
201	109	Ram Bhatt	30000	9756012391	-	Pujari	2-Mar-90
202	109	Kamal Raval	30000	8757812391	kamal@gmail.com	Pujari	20-Oct-90
203	109	Shyam Joshi	32000	7956012399	-	Pujari	30-Jun-83
216	109	Nakul Joshi	10000	8756912391	nk@gmail.com	Pujari	17-Jun-99
204	101	Chetan Trivedi	20000	8756016691	chetan@gmail.com	Prashad Distributer	2-Feb-90
205	101	Jitendra Joshi	15000	9758012391	Jitendra@gmail.com	Prashad Packer	19-Apr-03
206	101	Ashok Sharma	10000	8756012390	ashok@gmail.com	Prashad Packer	22-Mar-90
207	107	Sheru Singh	20000	6756012378	sheru@gmail.com	Cleaner	3-Aug-97
208	110	Aaradhya Bhatt	10000	9759012391	arr@gmail.com	Shringar	23-Jan-02
209	110	Archna Chaturvedi	10000	5756012391	ach@gmail.com	Shringar	12-Sep-96
210	107	Mahesh Mishra	20000	9966012391	mahesh@gmail.com	officer	21-May-80
211	107	Bhavesh Jha	20000	9756012391	bhavesh@gmail.com	maintaince head	6-Mar-90
212	106	Nandini Parmar	35000	8756012382	nan@gmail.com	fest decoration head	19-Apr-03
213	106	Janki Thakkar	35000	8756012391	jk@gmail.com	fest management	7-Sep-03
214	106	Gopal Patel	20000	7756122391	-	food management	1-Jun-00
217	110	Kunal Shinde	10000	6759912391	kn@gmail.com	Management	29-Mar-99
218	110	Naveen Dave	20000	8886912391	-	Pujari	9-Mar-89
219	110	Ramesh Pandit	20000	8786912391	-	Pujari	18-Aug-90
220	111	Priya Shukla	20000	9986912391	priya@gmail.com	Receptionist	10-Mar-05
221	111	Chinmay Borole	20000	8976912391	cm@gmail.com	Manager	20-Jul-00
215	111	Manish Patel	30000	4756912391	manish@gmail.com	Manager	7-Mar-99



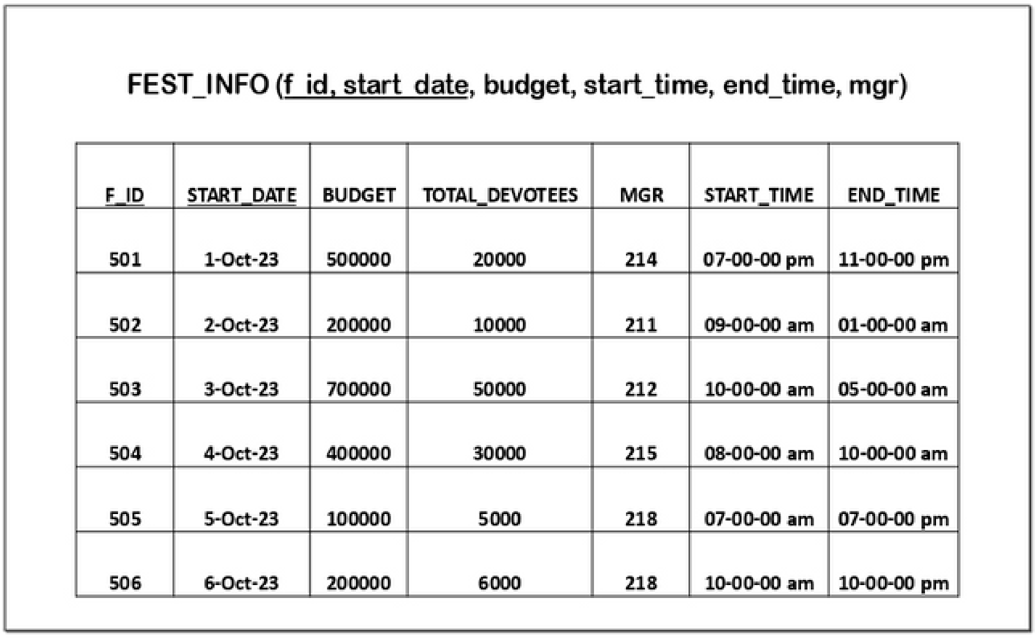
DARSHAN (d_type, start_time, end_time, dept_id)

D_TYPE	DEPT_ID	START_TIME	END_TIME
sarva	110	06-00-00 am	07-00-00 am
vip	110	10-00-00 am	11-00-00 am
divya	110	02-00-00 pm	03-00-00 pm
bhog	110	04-00-00 pm	05-00-00 pm



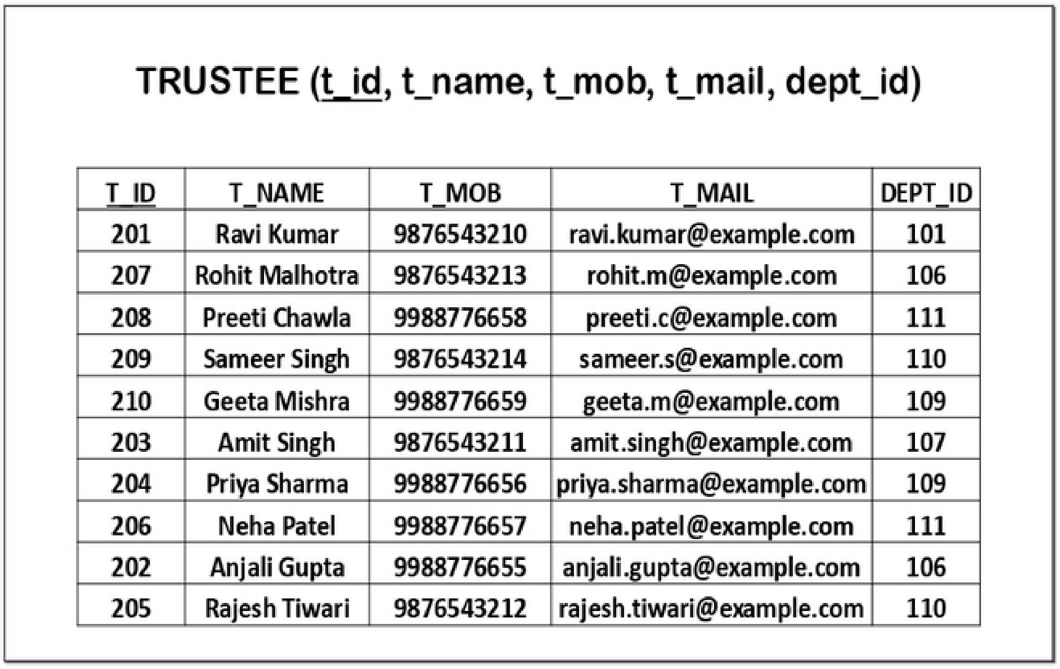
AARTI (a_type, start_time, end_time, pid, dept_id)

A_TYPE	DEPT_ID	PID	START_TIME	END_TIME
Mangala	109	201	08-00-00 am	09-00-00 am
Shayan	109	202	08-00-00 pm	09-00-00 pm
Rajbhog	109	203	12-00-00 pm	01-00-00 pm
Shringar	109	201	09-00-00 am	10-00-00 am
Dhoop	109	202	06-00-00 pm	07-00-00 pm



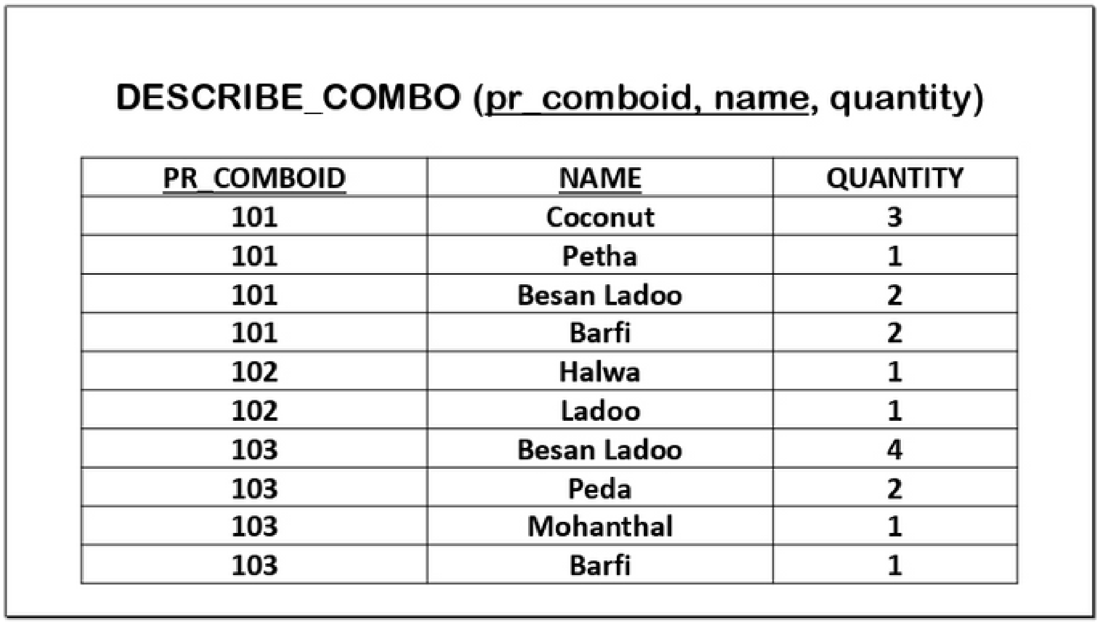
FEST_INFO (f_id, start_date, budget, start_time, end_time, mgr)

F_ID	START_DATE	BUDGET	TOTAL_DEVOTEES	MGR	START_TIME	END_TIME
501	1-Oct-23	500000	20000	214	07-00-00 pm	11-00-00 pm
502	2-Oct-23	200000	10000	211	09-00-00 am	01-00-00 am
503	3-Oct-23	700000	50000	212	10-00-00 am	05-00-00 am
504	4-Oct-23	400000	30000	215	08-00-00 am	10-00-00 am
505	5-Oct-23	100000	5000	218	07-00-00 am	07-00-00 pm
506	6-Oct-23	200000	6000	218	10-00-00 am	10-00-00 pm



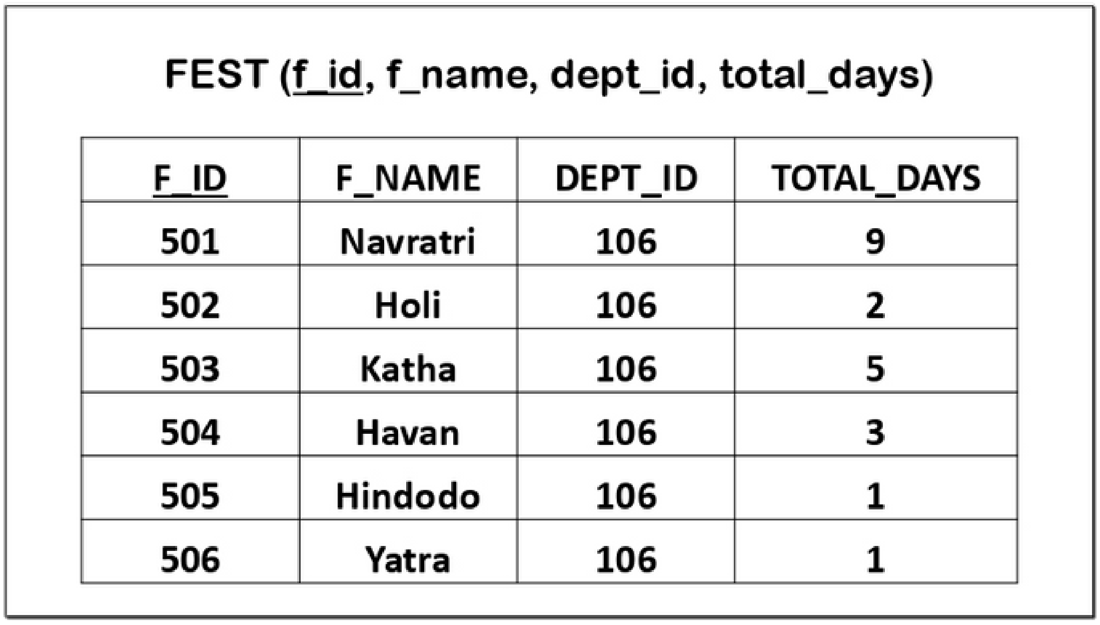
TRUSTEE (t_id, t_name, t_mob, t_mail, dept_id)

T_ID	T_NAME	T_MOB	T_MAIL	DEPT_ID
201	Ravi Kumar	9876543210	ravi.kumar@example.com	101
207	Rohit Malhotra	9876543213	rohit.m@example.com	106
208	Preeti Chawla	9988776658	preeti.c@example.com	111
209	Sameer Singh	9876543214	sameer.s@example.com	110
210	Geeta Mishra	9988776659	geeta.m@example.com	109
203	Amit Singh	9876543211	amit.singh@example.com	107
204	Priya Sharma	9988776656	priya.sharma@example.com	109
206	Neha Patel	9988776657	neha.patel@example.com	111
202	Anjali Gupta	9988776655	anjali.gupta@example.com	106
205	Rajesh Tiwari	9876543212	rajesh.tiwari@example.com	110



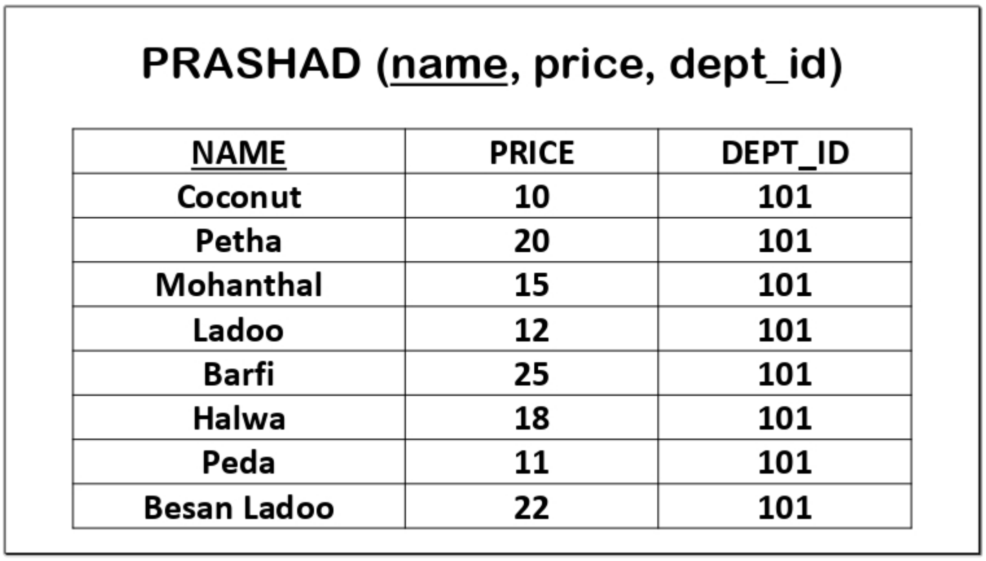
DESCRIBE_COMBO (pr_comboid, name, quantity)

PR_COMBOID	NAME	QUANTITY
101	Coconut	3
101	Petha	1
101	Besan Ladoo	2
101	Barfi	2
102	Halwa	1
102	Ladoo	1
103	Besan Ladoo	4
103	Peda	2
103	Mohanthal	1
103	Barfi	1



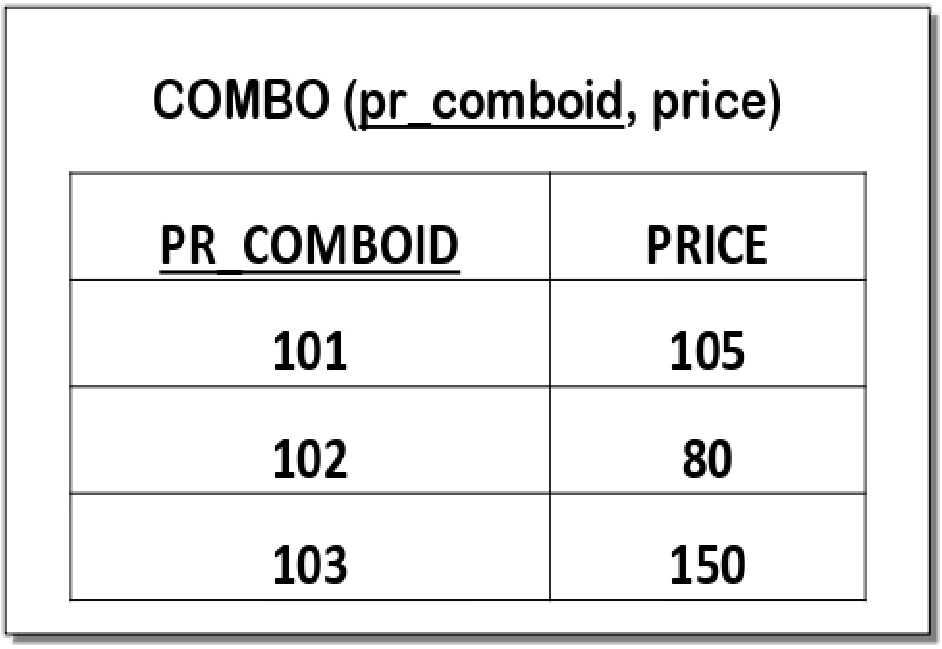
FEST (f_id, f_name, dept_id, total_days)

F_ID	F_NAME	DEPT_ID	TOTAL_DAYS
501	Navratri	106	9
502	Holi	106	2
503	Katha	106	5
504	Havan	106	3
505	Hindodo	106	1
506	Yatra	106	1



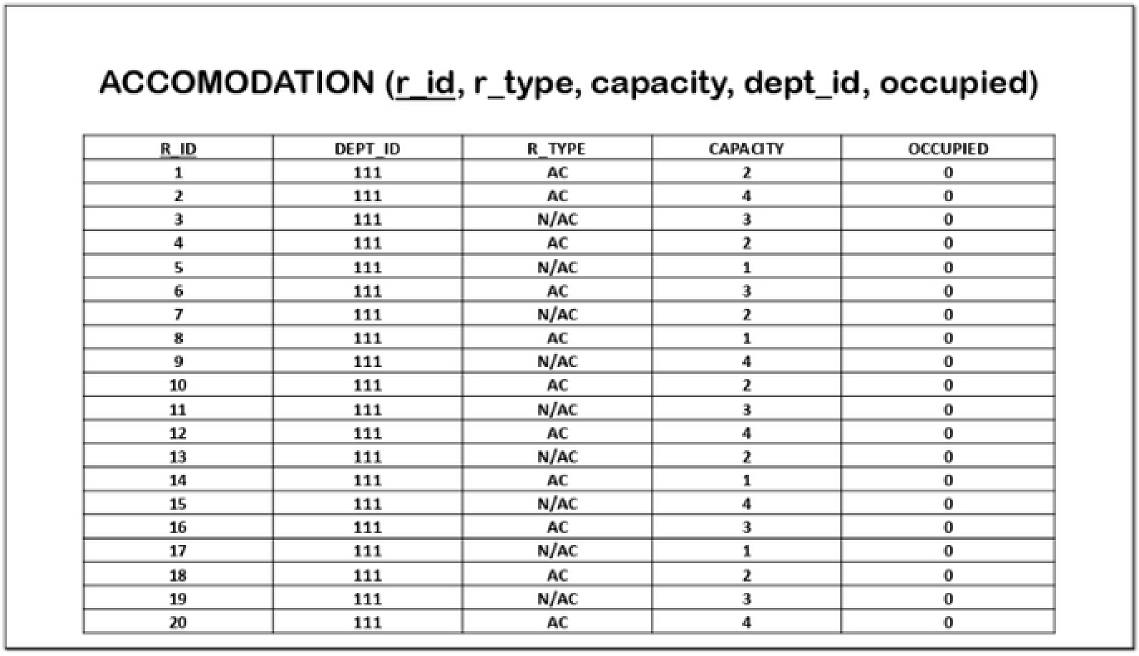
PRASHAD (name, price, dept_id)

NAME	PRICE	DEPT_ID
Coconut	10	101
Petha	20	101
Mohanthal	15	101
Ladoo	12	101
Barfi	25	101
Halwa	18	101
Peda	11	101
Besan Ladoo	22	101



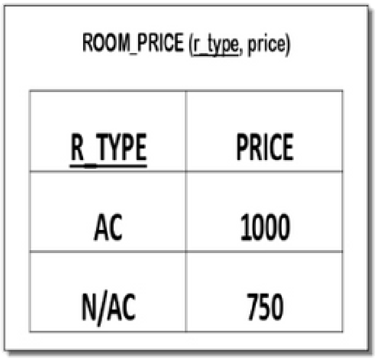
COMBO (pr_comboid, price)

PR_COMBOID	PRICE
101	105
102	80
103	150



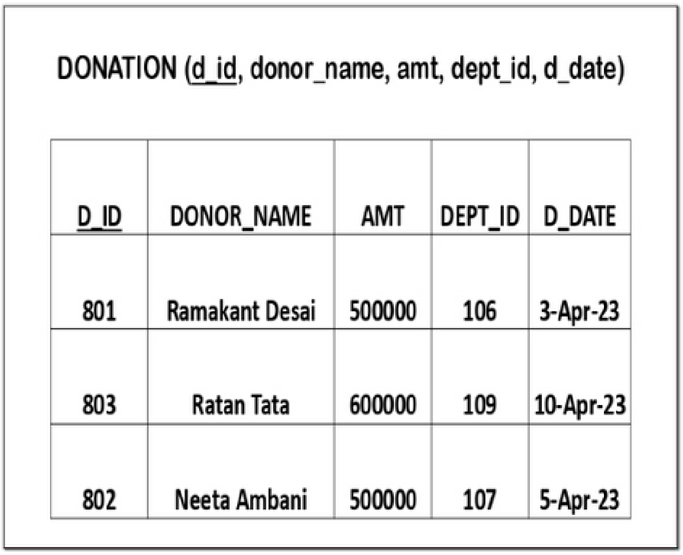
ACCOMODATION (r_id, r_type, capacity, dept_id, occupied)

R_ID	DEPT_ID	R_TYPE	CAPACITY	OCCUPIED
1	111	AC	2	0
2	111	AC	4	0
3	111	N/AC	3	0
4	111	AC	2	0
5	111	N/AC	1	0
6	111	AC	3	0
7	111	N/AC	2	0
8	111	AC	1	0
9	111	N/AC	4	0
10	111	AC	2	0
11	111	N/AC	3	0
12	111	AC	4	0
13	111	N/AC	2	0
14	111	AC	1	0
15	111	N/AC	4	0
16	111	AC	3	0
17	111	N/AC	1	0
18	111	AC	2	0
19	111	N/AC	3	0
20	111	AC	4	0



ROOM_PRICE (r_type, price)

R_TYPE	PRICE
AC	1000
N/AC	750



DONATION (d_id, donor_name, amt, dept_id, d_date)

D_ID	DONOR_NAME	AMT	DEPT_ID	D_DATE
801	Ramakant Desai	500000	106	3-Apr-23
803	Ratan Tata	600000	109	10-Apr-23
802	Neeta Ambani	500000	107	5-Apr-23

FUNCTION, PROCEDURE AND TRIGGER

◈ A package which contains functions to calculate room amount and prasad price:

```
create or replace package calculate_amt as
  function room_amt (r ACCOMODATION.r_id%type,d
ROOM_BOOKING.no_of_days%type) return room_booking.amount%type;
  function get_price (n PRASHAD.name%type,quantity
prashad_booking.quantity%type)  return number;
end calculate_amt;

create or replace package body calculate_amt as
function room_amt (r ACCOMODATION.r_id%type,d
ROOM_BOOKING.no_of_days%type) return room_booking.amount%type
is
p number(4);
begin
select price into p from ROOM_PRICE where r_type=(select r_type from
ACCOMODATION where r_id=r);
return p*d;
end room_amt;

function get_price (n PRASHAD.name%type,quantity
prashad_booking.quantity%type)  return number
   is
a prashad.price%type;
begin
select price into a from prashad where name = n;
return a*quantity;
end get_price;

end calculate_amt;
```

◈ A package which contain procedure to display Aarti, prasad and room details:

```
create or replace package detail
as
 procedure get_details (a in number,b in number);
end  detail;
/

create or replace package body detail
    as
 procedure p_aarti_details(a in out details.ab_id%type)
is
    cursor c1 is select * from details order by ab_id;
begin
    dbms_output.put_line('Name of family members');
    for r1 in c1
    loop
     if(r1.ab_id = a)
     then
      dbms_output.put_line(r1.member_names);
  end if;
 end loop;
end p_aarti_details;

 procedure get_details
(a in number,b in number)
as
    rb ROOM_BOOKING%rowtype;
 ab AARTI_BOOKING%rowtype;
 pb PRASHAD_BOOKING%rowtype;
begin
if(a=1) then
    select * into rb from ROOM_BOOKING where rb_id=b;
dbms_output.put_line('Booking id '||rb.rb_id);
dbms_output.put_line('booked by '||rb.booked_by);
dbms_output.put_line('amt :'||rb.amount);
dbms_output.put_line('on date :'||rb.rb_date);

elsif(a=2) then
select * into ab from AARTI_BOOKING where ab_id=b;
dbms_output.put_line('Booking id '||ab.ab_id);
dbms_output.put_line('Type of aarti '||ab.a_type);
dbms_output.put_line('booked by '||ab.booked_by);
dbms_output.put_line('amt :'||ab.amt);
dbms_output.put_line('on date :'||ab.b_date);
 p_aarti_details(ab.ab_id);

elsif(a=3) then
select * into pb from PRASHAD_BOOKING where pb_id=b;
dbms_output.put_line('Token No: '||pb.pb_id);
dbms_output.put_line('booked_by '||pb.booked_by);
dbms_output.put_line('name,quantity : '||pb.name||'
'||pb.quantity);
dbms_output.put_line('amt : '||pb.amount);
end if;
end get_details;

end detail;
/
```

◈A function to calculate the total donation amount received by a particular department:

```
create or replace function get_donation_amount
(d DEPT.dept_id%type)
return number
is
cursor c1 is select * from DONATION where dept_id=d;
amt number(10,2);
begin
 amt:=0;
for r1 in c1
loop
amt:=amt+r1.amt;
end loop;
return amt;
end get_donation_amount;
```

◈Triggers to show the details of Aarti and Prasad Booking details as the booking is done:

```
create or replace trigger t_aarti
after insert on aarti_booking
for each row
begin
 dbms_output.put_line('Booking id '||:new.ab_id);
   dbms_output.put_line('Type of aarti '||:new.a_type);
      dbms_output.put_line('booked by '||:new.booked_by);
      dbms_output.put_line('amt :'||:new.amt);
      dbms_output.put_line('on date :'||:new.b_date);
end t_aarti;
/

create or replace trigger t_prashad
after insert on prashad_booking
for each row
begin
dbms_output.put_line('Token No: '||:new.pb_id);
dbms_output.put_line('booked_by '||:new.booked_by);
   dbms_output.put_line('name,quantity : '||:new.name||'
'||:new.quantity);
   dbms_output.put_line('amt : '||:new.amount);
end t_prashad;
/
```

◈Package for getting Aarti and Darshan timings using views:

```
create or replace view v_aarti (type,start_time,end_time) as select
a_type,to_char(start_time,'hh-mi-ss am'),to_char(end_time,'hh-mi-ss am')
from AARTI with read only;
create or replace view v_darshan (type,start_time,end_time) as select d_type
,to_char(start_time,'hh-mi-ss am'),to_char(end_time,'hh-mi-ss am')  from
DARSHAN with read only;


create or replace package view_timings
as
procedure aarti_timings(c1 in out sys_refcursor);
procedure darshan_timings(c1 in out sys_refcursor);
end view_timings;

create or replace  package body view_timings
as
procedure aarti_timings(c1 in out sys_refcursor)
as
begin
open c1 for
select * from v_aarti;
end aarti_timings;
procedure darshan_timings(c1 in out sys_refcursor)
as
begin
open c1 for
select * from v_darshan;
end darshan_timings;
end view_timings;
/
```

◈A Procedure to display details about a fest in next 5 days:

```
create or replace procedure view_festdetails
is
r1 FEST_INFO%rowtype;
name FEST.f_name%type;
day1 FEST.total_days%type;
temp number(3);
cursor c1 is select * from FEST_INFO;
begin
for r1 in c1
loop
   select total_days into day1 from FEST where f_id=r1.f_id;
   temp:=round(r1.start_date-sysdate+day1);
   if temp<=5 and temp>0 then
   select f_name into name from FEST where f_id=r1.f_id;

   dbms_output.put_line('NAME : '||name||' START DATE :
'||r1.start_date||' NUMBER OF DAYS : '||day1||' START TIME :
'||to_char(r1.start_time,'hh-mi-ss am')||' END TIME :
'||to_char(r1.end_time,'hh-mi-ss am'));
end if;
end loop;
end view_festdetails;
```

◈A Trigger for Room booking using a function to check room vacancy:

```
create or replace trigger t_room
   before insert on room_booking
   for each row
   begin
   if(check1(:new.room_id)) then
 dbms_output.put_line('Booking id '||:new.rb_id);
   dbms_output.put_line('Room no '||:new.room_id);
   dbms_output.put_line('booked by '||:new.booked_by);
   dbms_output.put_line('amt
:'||calculate_amt.room_amt(:new.room_id,:new.no_of_days));
   dbms_output.put_line('on date :'||:new.rb_date);
else
   dbms_output.put_line('booked');
   raise_application_error(-20000,'booked already');
end if;
end t_room;
/
create or replace function check1
 (r ACCOMODATION.r_id%type)
return boolean
as
cursor c1 is select * from ROOM_BOOKING where room_id=r order by rb_date desc;
r1 ROOM_BOOKING%rowtype;
begin
open c1;
   fetch c1 into r1;
   loop
exit when c1%rowcount=2 or c1%notfound;
if(round(sysdate-r1.rb_date-r1.no_of_days)>0) then
return true;
else return false;
end if;
end loop;
close c1;
return true;
exception
   when no_data_found then return true;
when others then return true;
end check1;
/
```

◈A view to display details of vacant rooms:

```
create or replace view room_vacancy as select
a.r_id,a.r_type,a.capacity,rp.price from
ACCOMODATION a,ROOM_PRICE rp where r_id not in
(select distinct(room_id) from room_booking where
round(sysdate-rb_date-no_of_days)<0) and
a.r_type=rp.r_type order by r_id
```