

# Umrah and Prayer Management System

## Phase 4

Coding phase:

Pilgrims Table

```
create table Pilgrims (  
    Pilgrims_NO number(2) primary key,  
    First_Name varchar2(10) not null,  
    Last_Name varchar2(10) not null,  
    Age number(2) not null,  
    Gender varchar2(6) not null,  
    Nationality varchar2(20) not null,  
    People_with_special_need varchar2(3) not null  
);
```

```
insert into Pilgrims values(1,'rania','alghamdi',20,'female','saudi','no');  
insert into Pilgrims values(2,'mohammed','almemoni',24,'male','saudi','no');  
insert into Pilgrims values(3,'muna','dhemesh',50,'female','Syrian','yes');  
insert into Pilgrims values(4,'rayan','alzahrani',30,'male','saudi','no');  
insert into Pilgrims values(5,'omar','ali',55,'male','saudi','yes');  
insert into Pilgrims values(6,'lama','ahmed',33,'female','egyptian','no');  
insert into Pilgrims values(7,'leena','jahdali',13,'female','saudi','no');  
insert into Pilgrims values(8,'saif','khan',29,'male','indian','no');  
insert into Pilgrims values(9,'rawan','saleh',40,'female','iraqi','no');  
insert into Pilgrims values(10,'khalid','amen',39,'male','egyptian','yes');  
select* from Pilgrims;
```

PILGRIMS_NO	FIRST_NAME	LAST_NAME	AGE	GENDER	NATIONALITY	PEOPLE_WITH_SPECIAL_NEED
1	rania	alghamdi	20	female	saudi	no
2	mohammed	almemoni	24	male	saudi	no
3	muna	dhemesh	50	female	Syrian	yes
4	rayan	alzahrani	30	male	saudi	no
5	omar	ali	55	male	saudi	yes
6	lama	ahmed	33	female	egyptian	no
7	leena	jahdali	13	female	saudi	no
8	saif	khan	29	male	indian	no
9	rawan	saleh	40	female	iraqi	no
10	khalid	amen	39	male	egyptian	yes

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10 rows selected.

## Resident Table

```
create table Resident (  
  Pilgrims_NO number(2),  
  Res_ID number(10),  
  Constraint Resident_pk primary key (Pilgrims_NO,Res_ID),  
  Constraint Resident_fk foreign key (Pilgrims_NO) references Pilgrims(Pilgrims_NO)  
);
```

```
insert into Resident values(3,2013754891);  
insert into Resident values(6,2891263012);  
insert into Resident values(8,2005812374);  
insert into Resident values(9,2240957183);  
insert into Resident values(10,2589210067);  
select* from Resident;
```

PILGRIMS_NO	RES_ID
3	2013754891
6	2891263012
8	2005812374
9	2240957183
10	2589210067

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5 rows selected.

## Citizens Table

```
create table Citizens (  
  Pilgrims_NO number(2) ,  
  Cit_ID number(10),  
  Constraint Citizens_pk primary key (Pilgrims_NO,Cit_ID),  
  Constraint Citizens_fk foreign key (Pilgrims_NO) references Pilgrims(Pilgrims_NO)  
);
```

```
insert into Citizens values(1,1116480200);  
insert into Citizens values(2,1103582749);  
insert into Citizens values(4,1013859462);  
insert into Citizens values(5,1002623948);  
insert into Citizens values(7,1118910203);  
select* from Citizens;
```

PILGRIMS_NO	CIT_ID
1	1116480200
2	1103582749
4	1013859462
5	1002623948
7	1118910203

[Download CSV](#)

5 rows selected.

## Immunization Table

```
create table Immunization (  
  ImmID varchar(6) primary key,  
  Imm_status varchar2(20) not null,  
  Pilgrims_NO number(2),  
  Constraint Immunization_fk foreign key (Pilgrims_NO) references Pilgrims(Pilgrims_NO)  
);
```

```
insert into Immunization values('FK8832','vaccinated',1);  
insert into Immunization values('FE8830','vaccinated',2);  
insert into Immunization values('FG8838','vaccinated',3);  
insert into Immunization values('FR8831','vaccinated',4);  
insert into Immunization values('FS8833','vaccinated',5);  
insert into Immunization values('FD8834','vaccinated',6);  
insert into Immunization values('FH8835','vaccinated',7);  
insert into Immunization values('FU8836','vaccinated',8);  
insert into Immunization values('FX8837','vaccinated',9);  
insert into Immunization values('FP8839','vaccinated',10);  
select* from Immunization;
```

IMMID	IMM_STATUS	PILGRIMS_NO
FK8832	vaccinated	1
FE8830	vaccinated	2
FG8838	vaccinated	3
FR8831	vaccinated	4
FS8833	vaccinated	5
FD8834	vaccinated	6
FH8835	vaccinated	7
FU8836	vaccinated	8
FX8837	vaccinated	9
FP8839	vaccinated	10

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10 rows selected.

## Event Table

```
create table Event (  
    Event_Type varchar2(3) primary key,  
    Event_Name varchar2(6) not null,  
    ImmID varchar(6),  
    Constraint Event_fk foreign key (ImmID) references Immunization(ImmID)  
);
```

```
insert into Event values('Um1', 'Umrah', 'FK8832');  
insert into Event values('Um2', 'Umrah', 'FE8830');  
insert into Event values('Um3', 'Umrah', 'FG8838');  
insert into Event values('Pr1', 'Prayer', 'FR8831');  
insert into Event values('Um4', 'Umrah', 'FS8833');  
insert into Event values('Um5', 'Umrah', 'FD8834');  
insert into Event values('Pr2', 'Prayer', 'FH8835');  
insert into Event values('Pr3', 'Prayer', 'FU8836');  
insert into Event values('Um6', 'Umrah', 'FX8837');  
insert into Event values('Pr4', 'Prayer', 'FP8839');  
insert into Event values('Um7', 'Umrah', 'FU8836');  
insert into Event values('Um8', 'Umrah', 'FR8831');  
insert into Event values('Pr5', 'Prayer', 'FR8831');  
select* from Event;
```

EVENT_TYPE	EVENT_NAME	IMMID
Um1	Umrah	FK8832
Um2	Umrah	FE8830
Um3	Umrah	FG8838
Pr1	Prayer	FR8831
Um4	Umrah	FS8833
Um5	Umrah	FD8834
Pr2	Prayer	FH8835
Pr3	Prayer	FU8836
Um6	Umrah	FX8837
Pr4	Prayer	FP8839
Um7	Umrah	FU8836
Um8	Umrah	FR8831
Pr5	Prayer	FR8831

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13 rows selected.

## Appointment\_DateTable

```
create table Appointment_Date (  
    Date_ date primary key,  
    Day_ varchar2(12) not null  
);
```

```
insert into Appointment_Date values('1-May-22', 'Sunday');  
insert into Appointment_Date values('2-May-22', 'Monday');  
insert into Appointment_Date values('3-May-22', 'Tuesday');  
insert into Appointment_Date values('4-May-22', 'Wednesday');  
insert into Appointment_Date values('5-May-22', 'Thursday');  
insert into Appointment_Date values('6-May-22', 'Friday');  
insert into Appointment_Date values('7-May-22', 'Saturday');  
select* from Appointment_Date;
```

DATE_	DAY_
01-MAY-22	Sunday
02-MAY-22	Monday
03-MAY-22	Tuesday
04-MAY-22	Wednesday
05-MAY-22	Thursday
06-MAY-22	Friday
07-MAY-22	Saturday

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7 rows selected.

## Appointment Table

```
create table Appointment (  
    Date_ date ,  
    Event_type varchar2(3),  
    Time_ varchar2(20) not null,  
    Constraint Appointment_pk primary key (Date_,Event_type),  
    Constraint Appointment_fk foreign key (Date_) references Appointment_Date(Date_),  
    Constraint EventType_fk foreign key (Event_type) references Event(Event_type)  
);
```

```
insert into Appointment values('7-May-22','Um1','2pm - 4pm');  
insert into Appointment values('7-May-22','Um2','10am - 12pm');  
insert into Appointment values('7-May-22','Um3','1am - 2pm');  
insert into Appointment values('5-May-22','Um4','4am - 6am');  
insert into Appointment values('5-May-22','Um5','6pm - 8pm');  
insert into Appointment values('3-May-22','Um6','12pm -2pm');  
insert into Appointment values('1-May-22','Pr1','8pm - 10pm');  
insert into Appointment values('1-May-22','Pr2','12pm - 2pm');  
insert into Appointment values('2-May-22','Um7','2pm - 4pm');  
insert into Appointment values('6-May-22','Pr3','12pm - 2pm');  
insert into Appointment values('2-May-22','Pr4','4am - 6am');  
insert into Appointment values('6-May-22','Pr5','12pm - 2pm');  
insert into Appointment values('4-May-22','Um8','8pm - 10pm');  
select* from Appointment;
```

DATE_	EVENT_TYPE	TIME_
07-MAY-22	Um1	2pm - 4pm
07-MAY-22	Um2	10am - 12pm
07-MAY-22	Um3	1am - 2pm
05-MAY-22	Um4	4am - 6am
05-MAY-22	Um5	6pm - 8pm
03-MAY-22	Um6	12pm -2pm
01-MAY-22	Pr1	8pm - 10pm
01-MAY-22	Pr2	12pm - 2pm
02-MAY-22	Um7	2pm - 4pm
06-MAY-22	Pr3	12pm - 2pm
02-MAY-22	Pr4	4am - 6am
06-MAY-22	Pr5	12pm - 2pm
04-MAY-22	Um8	8pm - 10pm

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13 rows selected.



## Transport Table

```
create table Transport (  
    BusID number(3) primary key,  
    Driver_name varchar2(20) not null,  
    Event_type varchar2(3),  
    Date_ date,  
    Num_of_pilgrims number(2) not null,  
    Constraint Transport_fk foreign key (Date_,Event_type) references Appointment(Date_,Event_type)  
);
```

```
insert into Transport values('120','ali khan','Um1','7-May-22',25);  
insert into Transport values('121','mohammed ahmed','Um2','7-May-22',29);  
insert into Transport values('122','abdullah omar','Um3','7-May-22',30);  
insert into Transport values('125','abdullah omar','Um4','5-May-22',30);  
insert into Transport values('123','ali khan','Um5','5-May-22',23);  
insert into Transport values('124','mohammed ahmed','Um6','3-May-22',22);  
insert into Transport values('130','saad saleh','Um7','2-May-22',20);  
insert into Transport values('133','ibrahim anas','Um8','4-May-22',21);  
insert into Transport values('135','ali khan','Pr1','1-May-22',28);  
insert into Transport values('137','saad saleh','Pr2','1-May-22',26);  
insert into Transport values('134','ibrahim anas','Pr3','6-May-22',27);  
insert into Transport values('139','amen alghamdi','Pr4','2-May-22',24);  
insert into Transport values('138','amen alghamdi','Pr5','6-May-22',30);  
select* from Transport;
```

BUSID	DRIVER_NAME	EVENT_TYPE	DATE_	NUM_OF_PILGRIMS
120	ali khan	Um1	07-MAY-22	25
121	mohammed ahmed	Um2	07-MAY-22	29
122	abdullah omar	Um3	07-MAY-22	30
125	abdullah omar	Um4	05-MAY-22	30
123	ali khan	Um5	05-MAY-22	23
124	mohammed ahmed	Um6	03-MAY-22	22
130	saad saleh	Um7	02-MAY-22	20
133	ibrahim anas	Um8	04-MAY-22	21
135	ali khan	Pr1	01-MAY-22	28
137	saad saleh	Pr2	01-MAY-22	26
134	ibrahim anas	Pr3	06-MAY-22	27
139	amen alghamdi	Pr4	02-MAY-22	24
138	amen alghamdi	Pr5	06-MAY-22	30

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13 rows selected.



## Permit Table

```
create table Permit (  
  PermitID varchar(3) primary key,  
  Pilgrims_NO number(2),  
  Constraint Permit_Pil_fk foreign key (Pilgrims_NO) references Pilgrims(Pilgrims_NO)  
);
```

```
insert into Permit values('11K',1);  
insert into Permit values('12E',2);  
insert into Permit values('13G',3);  
insert into Permit values('14R',4);  
insert into Permit values('15S',5);  
insert into Permit values('16D',6);  
insert into Permit values('17H',7);  
insert into Permit values('18U',8);  
insert into Permit values('19X',9);  
insert into Permit values('10P',10);  
select* from Permit;
```

PERMITID	PILGRIMS_NO
11K	1
12E	2
13G	3
14R	4
15S	5
16D	6
17H	7
18U	8
19X	9
10P	10

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10 rows selected.

## Queries

```
-- using group by list number of pilgrims of each country--  
select count(Pilgrims_NO ) as Num_of_Pilgrims, Nationality  
from Pilgrims  
group by Nationality;
```

NUM_OF_PILGRIMS	NATIONALITY
2	egyptian
1	iraqi
5	saudi
1	indian
1	Syrian

```
-- list the pilgrims that they are female and greater than 30 --  
SELECT Age, Gender  
FROM Pilgrims  
WHERE (Age > 30)  
and Gender ='female';
```

AGE	GENDER
50	female
33	female
40	female

```
-- using aggregate function find the minmum , maximum and average
SELECT Max (Age),MIN ( Age) ,AVG (Age)
FROM Pilgrims;
```

MAX(AGE)	MIN(AGE)	AVG(AGE)
55	13	33.3

```
-- list the pilgrims WITH SPECIAL NEED names --
select FIRST_NAME,People_with_special_need
FROM Pilgrims
where People_with_special_need='yes'
order by FIRST_NAME;
```

FIRST_NAME	PEOPLE_WITH_SPECIAL_NEED
khalid	yes
muna	yes
omar	yes

```
-- using subquery list the pilgrim first name,age and nationality in which PermitID = '14R'--
select distinct Pilgrims_NO ,First_Name ,Age ,Nationality
from Pilgrims
where Pilgrims_NO in (select Pilgrims_NO from Permit where PermitID = '14R');
```

PILGRIMS_NO	FIRST_NAME	AGE	NATIONALITY
4	rayan	30	saudi

```
--using join list all pilgrims reservations with date , time and event name--
select distinct Event.ImmID, Appointment.Date_ , Appointment.Time_ , Event.Event_Name
from Appointment
left join Event
on Appointment.Event_type = Event.Event_type
order by Event.ImmID;
```

IMMID	DATE_	TIME_	EVENT_NAME
FD8834	05-MAY-22	6pm - 8pm	Umrah
FE8830	07-MAY-22	10am - 12pm	Umrah
FG8838	07-MAY-22	1am - 2pm	Umrah
FH8835	01-MAY-22	12pm - 2pm	Prayer
FK8832	07-MAY-22	2pm - 4pm	Umrah
FP8839	02-MAY-22	4am - 6am	Prayer
FR8831	01-MAY-22	8pm - 10pm	Prayer
FR8831	04-MAY-22	8pm - 10pm	Umrah
FR8831	06-MAY-22	12pm - 2pm	Prayer
FS8833	05-MAY-22	4am - 6am	Umrah
FU8836	02-MAY-22	2pm - 4pm	Umrah
FU8836	06-MAY-22	12pm - 2pm	Prayer
FX8837	03-MAY-22	12pm -2pm	Umrah

```
--using join list all Res_ID for Residents with their nationality and Pilgrims_NO--
select Pilgrims.Pilgrims_NO, Pilgrims.Nationality, Resident.Res_ID
from Pilgrims
left join Resident
on Pilgrims.Pilgrims_NO = Resident.Pilgrims_NO
order by Pilgrims.Pilgrims_NO;
```

PILGRIMS_NO	NATIONALITY	RES_ID
1	saudi	—
2	saudi	—
3	Syrian	2013754891
4	saudi	—
5	saudi	—
6	egyptian	2891263012
7	saudi	—
8	indian	2005812374
9	iraqi	2240957183

```
--using join list all Cit_ID for Citizens with their nationality and Pilgrims_NO--
select Pilgrims.Pilgrims_NO, Pilgrims.Nationality, Citizens.Cit_ID
from Pilgrims
left join Citizens
on Pilgrims.Pilgrims_NO = Citizens.Pilgrims_NO
order by Pilgrims.Pilgrims_NO;
```

PILGRIMS_NO	NATIONALITY	CIT_ID
1	saudi	1116480200
2	saudi	1103582749
3	Syrian	—
4	saudi	1013859462
5	saudi	1002623948
6	egyptian	—
7	saudi	1118910203
8	indian	—
9	iraqi	—
10	egyptian	—

```
--using subquery list all reservations for pilgrim that have immid = FR8831--
select ImmID, Event_Type, Event_Name
from Event
where Event_Type = any (select Event_Type from Event where ImmID ='FR8831');
```

IMMID	EVENT_TYPE	EVENT_NAME
FR8831	Pr1	Prayer
FR8831	Um8	Umrah
FR8831	Pr5	Prayer

```
--using subquery list the reservations date and time for pilgrim that have immid = FR8831--
select Event_Type, Date_ ,Time_
from Appointment
where Event_Type = any (select Event_Type from Event where ImmID ='FR8831');
```

EVENT_TYPE	DATE_	TIME_
Pr1	01-MAY-22	8pm - 10pm
Pr5	06-MAY-22	12pm - 2pm
Um8	04-MAY-22	8pm - 10pm

```
--using subquery list the reservations BusID and DriverName with booked date for pilgrim that have immid = FR8831--
select BusID , Driver_name ,Event_Type, Date_
from Transport
where Event_Type = any (select Event_Type from Event where ImmID ='FR8831');
```

BUSID	DRIVER_NAME	EVENT_TYPE	DATE_
133	ibrahim anas	Um8	04-MAY-22
135	ali khan	Pr1	01-MAY-22
138	amen alghamdi	Pr5	06-MAY-22

# Procedures

Create stored procedure which return records based on parameters:

```
1 CREATE OR REPLACE PROCEDURE PilgrimsInfo(PilgrimsNO IN Pilgrims.Pilgrims_NO%TYPE)
2 AS
3     FirstName Pilgrims.First_Name%TYPE;
4     LastName Pilgrims.Last_Name%TYPE;
5     PilgAge Pilgrims.Age%TYPE;
6     PilgGender Pilgrims.Gender%TYPE;
7     PilgNationality Pilgrims.Nationality%TYPE;
8     Peoplewithspecialneed Pilgrims.People_with_special_need%TYPE;
9 BEGIN
10    SELECT First_Name, Last_Name, Age, Gender, Nationality, People_with_special_need
11    INTO FirstName, LastName, PilgAge, PilgGender, PilgNationality, Peoplewithspecialneed
12    FROM Pilgrims WHERE Pilgrims_NO = PilgrimsNO;
13
14    DBMS_OUTPUT.PUT_LINE('Pilgrims number: ' || PilgrimsNO);
15    DBMS_OUTPUT.PUT_LINE('First name: ' || FirstName);
16    DBMS_OUTPUT.PUT_LINE('Last name: ' || LastName);
17    DBMS_OUTPUT.PUT_LINE('Pilgrim age: ' || PilgAge);
18    DBMS_OUTPUT.PUT_LINE('Pilgrim Gender: ' || PilgGender);
19    DBMS_OUTPUT.PUT_LINE('Pilgrim Nationality: ' || PilgNationality);
20    DBMS_OUTPUT.PUT_LINE('People with special need: ' || Peoplewithspecialneed);
21 END;
```

Procedure created.

```
1 EXEC PilgrimsInfo(1);
```

```
Statement processed.
Pilgrims number: 1
First name: rania
Last name: alghamdi
Pilgrim age: 20
Pilgrim Gender: female
Pilgrim Nationality: saudi
People with special need: no
```



Create an UPDATE query based stored procedure:

```
1 create or replace procedure update_time(  
2     date1 Appointment.Date_%type,  
3     Event_type1 Event.Event_type%type,  
4     new_time1 Appointment.Time_%type )as  
5  
6     old_time1 Appointment.Time_%type;  
7 begin  
8  
9     select Time_ into old_time1  
10    from Appointment  
11   where  
12     date1 = Date_ and Event_type1 = Event_type;  
13  
14     update Appointment set Time_ = new_time1  
15    where date1 = Date_ and Event_type1 =Event_type;  
16  
17     dbms_output.put_line('old Time: '|| old_time1|| '');  
18     dbms_output.put_line('new Time: '|| new_time1|| '');  
19     dbms_output.put_line('The time has been changed successfully ');  
20 end update_time;
```

Procedure created.

```
22 EXECUTE update_time('7-MAY-22','Um1','4pm - 6pm');
```

Statement processed.

old Time: 2pm - 4pm

new Time: 4pm - 6pm

The time has been changed successfully