A Report

On the work done during 3rd semester subject

Database Management Systems

of

B.Tech. Computer Engineering

School Management System

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Brief Information about the system

Introduction

Our system provides database solution for a School Management System. The solution consists of different levels of details. First of all, it is able to represent teachers, students, and various other employees of a school in the database. It is also capable of storing the data related to classrooms, standards, and subjects. After that, notion of lectures is also represented. Finally, attendance can also be stored into the system.

Objective

The objective is to create a system capable of storing various data related to a school organization. Now, even in various school organizations, there is vast difference in their workings. Hence, it is necessary to choose some requirements of our school, and then build a database based on those requirements.

Requirements of our school

Requirements related to students and employees

We wish to represent a student as well as following different employees of a school: Teacher, Watchman, Cleanliness Worker, Peon.

Requirements related to standard and subject

- In our organization, a subject is taught in exactly one standard. This means that Mathematics of Std. 1st and Std. 2nd are different.
- Within a standard, subject names are unique.
- We need to store in which standard a student is studying in, and which past standards the student has studied in.
- Within a standard, all students have unique roll numbers.
- Each standard has a class teacher, and a teacher can be class teacher of at most one standard.

➤ Each standard has a classroom allocated to it. A classroom is characterized by room number, building number.

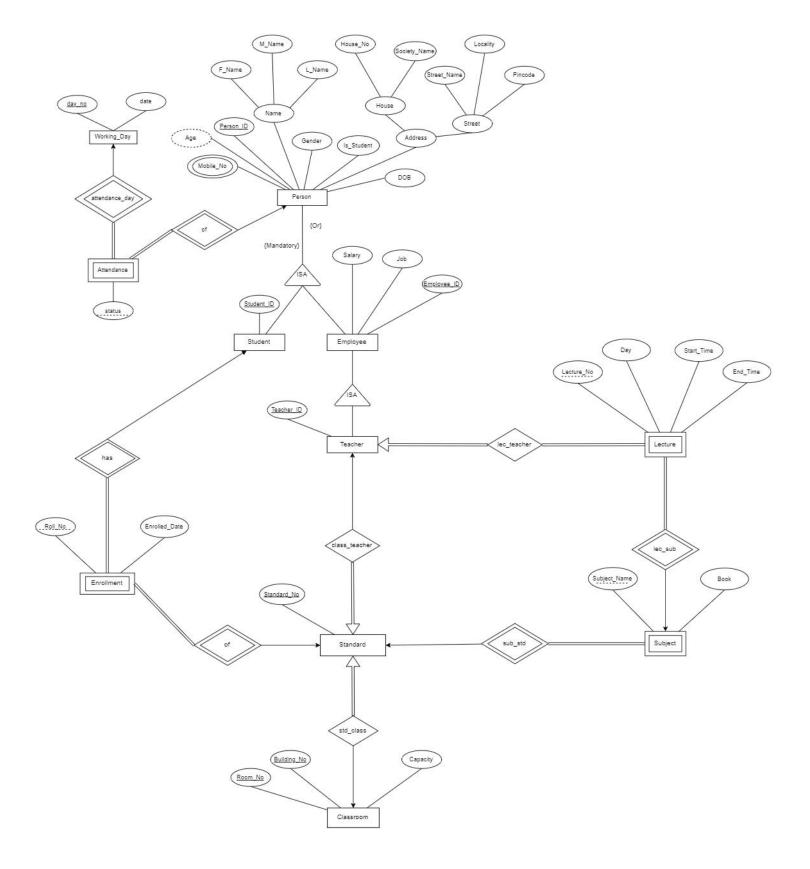
Requirements related to lectures

- Organization needs to store data related to weekly lectures.
- A lecture is characterized by a particular subject (which is of a particular standard), and its lecture number.
- > We also need to store the day, start time, end time related to a lecture.
- A lecture is conducted by exactly one teacher and one teacher has to conduct at least one lecture in a week.

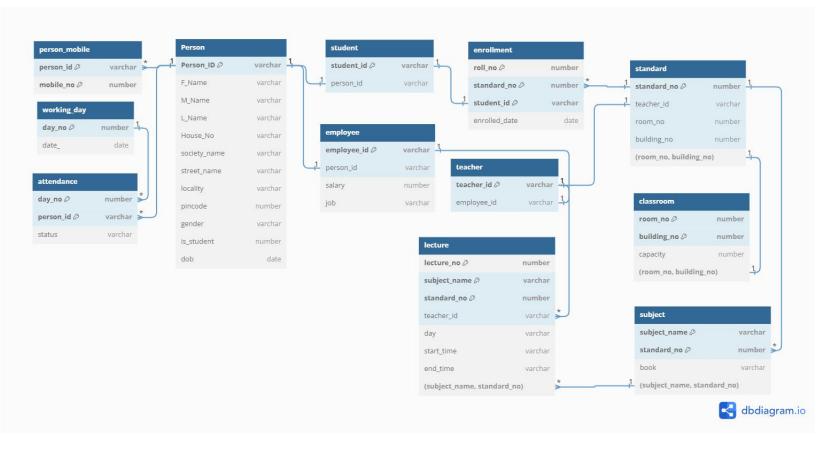
Requirements related to attendance

Organization needs to store whether a person was present on a specific working day or not.

ER Diagram



Schema



Person(<u>Person_ID</u>, F_Name, M_Name, L_Name, House_No, Society_Name, Street_Name, Locality, Pincode, Gender, Is Student, DOB);

Person_Mobile(<u>Person_ID, Mobile_No</u>, Person_ID references Person);

Student(Student ID, Person_ID,
Person_ID references Person,
Person_ID Unique);

Employee(<u>Employee ID</u>, Person_ID, Salary, Job, Person_ID references Person, Person ID Unique);

Teacher(<u>Teacher ID</u>, Employee_ID, Employee_ID references Employee, Employee ID Unique);

Classroom(Room No, Building No, Capacity);

Enrollment(Roll No, Standard No, Student ID, Standard_No references Standard, Student ID references Student);

Lecture(<u>Lecture No, Subject Name, Standard No</u>, Teacher_ID, Day, Start_Time, End_Time, (Subject_Name, Standard_No) references Subject, Teacher_ID references Teacher);

Working_Day(Day_No, Date_);

Attendance(<u>Day No, Person ID</u>, Status, Day_No references Working_Day, Person_ID references Person);

Normalization Comments

Normalization is the process of decomposing our relational schema into smaller relations, so as to remove insertion, deletion, updation, and redundancy anomalies.

One way to check if our database needs normalization is to check whether any of the anomalies are present or not. The way is to write down the Functional Dependencies, and follow the normalization procedure. If our system is already normalized, it will not change, otherwise it will be normalized.

1NF

The condition of the first normal form is that every attribute in our relations be atomic and there should be no multi-valued attribute. Clearly, all relations have atomic attributes (Name has been decomposed into F_Name, M_Name, L_Name. Address has also been decomposed into atomic attributes). Also, no relation has any multi-valued attribute (Mobile number has a separate relation for it).

Hence, the schema is already in 1NF.

2NF

For a relation to be in 2NF, there should be no partial dependencies in the relation, that is, there should be no attribute that depends on part of the candidate key. In our case, there are no such attributes in any relation. Hence, all relations are already in 2NF.

Hence, the schema is already in 2NF.

3NF

3NF requires that no relation should have any transitive dependency, meaning that there should be no attribute that depends on a non-prime attribute. Again, no such attributes in any relation.

Hence, the schema is already in 3NF.

CRUD (DDL and DML)

Person

```
Create
CREATE TABLE Person
  Person ID varchar(10) PRIMARY KEY,
  F_Name varchar(50) not null,
  M_Name varchar(50) not null,
  L_Name varchar(50) not null,
  House No varchar(10) not null,
  society_name varchar(50) not null,
  street_name varchar(50) not null,
  locality varchar(30) not null,
  pincode number(6,0) not null,
  gender varchar(10) CHECK (gender IN('Male', 'Female', 'Other')),
  is_student number(1, 0) check (is_student in(0, 1)),
  dob date not null
);
Insert
insert into person values('P0001', 'Meet', 'Ramesh', 'Patel', '101', 'Krishna Crown', 'College Road',
'Nadiad', 387001, 'Male', 1, '11-MAY-2008');
insert into person values('P0002', 'Maharshi', 'Dipak', 'Jani', '303', 'Aarav Society', 'Canal Road',
'Ghodasar', 380050, 'Male', 1, '25-SEP-2007');
insert into person values('P0003', 'Amatulla', 'Akbari', 'Gajipurwala', '205', 'Prime Society', 'Punit Road',
'Nadiad', 387002, 'Female', 1, '18-JAN-2006');
```

insert into person values('P0004', 'Nihar', 'Vipul', 'Rakholiya', '306', 'Aarav Society', 'Canal Road',

'Ghodasar', 380050, 'Male', 1, '10-SEP-2007');

insert into person values('P0005', 'Dev', 'Dipesh', 'Patel', '202', 'Royal Heights', 'College Road', 'Nadidad', 387001, 'Male', 1, '10-JAN-2007');

insert into person values ('P0006', 'Het', 'Brijesh', 'Parikh', '54', 'Gokul Society', 'Punit Road', 'Ghodasar', 380050, 'Male', 1, '14-FEB-2009');

insert into person values ('P0007', 'Nensee', 'Kishor', 'Zankat', '48', 'Baleshwar City', 'Lalgebi Road', 'Hathijan', 382445, 'Female', 1, '26-MAR-2010');

insert into person values ('P0008', 'Harshpalsinh', 'Champaksinh', 'Zala', '14', 'Viratnagar Society', 'Lalbhai Road', 'Dhrangadhra', 364554, 'Male', 1, '05-NOV-2009');

insert into person values ('P0009', 'Darshit', 'Dharmesh', 'Vyas', '504', 'Aarav Society', 'Canal Road', 'Ghodasar', 380050, 'Male', 1, '06-JUN-2011');

insert into person values ('P0010', 'Sahil', 'Irfan', 'Vora', '202', 'Royal Heights', 'College Road', 'Nadiad', 387001, 'Male', 1, '10-OCT-2011');

insert into person values('P0011', 'Yug', 'Nipul', 'Vithani', '45', 'Baleshwar City', 'Lalgebi Road', 'Hathijan', 382445, 'Male', 1, '17-AUG-2012');

insert into person values('P0012', 'Vasu', 'Piyush', 'Vekariya', '16', 'Viratnagar Society', 'Lalbhai Road', 'Dhrangadhra', 364554, 'Male', 1, '29-NOV-2012');

insert into person values ('P0013', 'Parth', 'Sandeep', 'Vasava', '26', 'Gokul Society', 'Punit Road', 'Ghodasar', 380050, 'Male', 1, '01-AUG-2016');

insert into person values('P0014', 'Jinesh', 'Vijay', 'Vamja', '17', 'Aarav Society', 'Canal Road', 'Ghodasar', 380050, 'Male', 1, '14-MAR-2016');

insert into person values ('P0015', 'Manish', 'Danabhai', 'Vala', '304', 'Royal Heights', 'College Road', 'Nadiad', 387001, 'Male', 1, '19-SEP-2017');

insert into person values ('P0016', 'Sohel', 'Danishbhai', 'Vahora', '47', 'Baleshwar City', 'Lalgebi Road', 'Hathijan', 382445, 'Male', 1, '04-JUL-2017');

insert into person values('P0017', 'Prince', 'Sailesh', 'Vaghasiya', '11', 'Gokul Society', 'Punit Road', 'Ghodasar', 380050, 'Male', 1, '06-APR-2016');

insert into person values('P0018', 'Shrushti', 'Rajesh', 'Vaghasiya', '204', 'Prime Society', 'Punit Road', 'Nadiad', 387002, 'Female', 1, '18-MAR-2016');

insert into person values('P0019', 'Jimesh', 'Manoj', 'Vadodariya', '404', 'Aarav Society', 'Canal Road', 'Ghodasar', 380050, 'Male', 1, '07-JAN-2017');

insert into person values ('P0020', 'Akshar', 'Anand', 'Vadher', '202', 'Nexus Heights', 'College Road', 'Nadiad', 387001, 'Male', 1, '13-DEC-2016');

insert into person values('P0021', 'Milan', 'Naresh', 'Vadhel', '303', 'Krishna Crown', 'College Road', 'Nadiad', 387001, 'Male', 1, '11-JAN-2017');

insert into person values('P0022', 'Shyam', 'Dinesh', 'Vachhani', '401', 'Royal Heights', 'College Road', 'Nadiad', 387001, 'Male', 1, '16-AUG-2016');

insert into person values('P0023', 'Urvi', 'Rajesh', 'Vasava', '206', 'Prime Society', 'Punit Road', 'Nadiad', 387001, 'Female', 1, '19-JUL-2016');

insert into person values('P0024', 'Sahil', 'Sanjay', 'Undhad', '103', 'Krishna Crown', 'College Road', 'Nadiad', 387001, 'Male', 1, '30-JAN-2017');

insert into person values('P0025', 'Khushi', 'Ishwar', 'Umarvanshi', '504', 'Prime Society', 'Punit Road', 'Nadiad', 387001, 'Female', 1, '23-FEB-2017');

insert into person

values('P0026','Dhamsania','Dhruvil','Arvindbhai','A1','Sahajanand','A12','Nadiad',387001,'Male',0,'29-DEC-2005');

insert into person

values('P0027','Dhanani','Vaibhav','Vijaybhai','A2','Sahajanad','A123','Nadiad',387001,'Male',0,'25-jan-2005');

insert into person

values('P0028','Dobariya','Meet','Manojbhai','A3','Sahajanand','A12','Nadiad',387001,'Male',0,'28-feb-2000');

insert into person

values('P0029','Dobariya','Vrund','Ghanshayambhai','A4','Vidhyut','B12','Baroda',388812,'Male',0,'12-jan-1998');

insert into person

values('P0030','Fadadu','Khanjan','Arvinbhai','B12','Jambuvan','A123','Baroda',388812,'Male',0,'21-dec-2003');

insert into person

values('P0031','Faldu','Arpit','Kiritbhai','C12','Vidhya','C2','Nadiad',387001,'Male',0,'22-jan-2000');

insert into person

values('P0032','Gabani','Kuldeep','Nareshbhai','Z12','yamuna','J12','Nadiad',387001,'Male',0,'11-nov-1999');

insert into person

values('P0033','Gabani','Yash','Niteshbhai','B123','Yamata','X12','Baroda',383880,'Male',0,'01-jan-2001');

insert into person

values('P0034','Gajera','Jaimin','Nileshbhai','R12','Vidhyut','C45','Surat',123456,'Male',0,'17-jan-2002');

insert into person

values('P0035','Gajera','Kavan','Sanjeevbhai','Y12','Samantha','J12','Nadiad',378001,'Male',0,'12-may-2008');

insert into person

values('P0036','Gajera','Rushang','Manojbhai','A2','Samantha','H12','Kheda',345678,'Male',0,'12-jan-2000');

insert into person

values('P0037','Gandhi','Nitya','Vijaybhai','C123','Yamuna','H14','Vadodara',345672,'Male',0,'8-feb-2004');

insert into person

values('P0038','Ganjawala','Samarth','Sanjaybhai','B12','Vishwa','M12','Nadiad',361312,'Male',0,'12-may-2005');

insert into person

values('P0039','Ganvit','Nikunjkumar','Pravinbhai','C65','IPCO','V12','Anand',129023,'Male',0,'17-jan-1999');

insert into person

values('P0040','Garala','Mahek','Rameshbhai','V123','Karma','B123','Nadaiad',387001,'Female',0,'1-jan-1992');

insert into person

values('P0041','Garasia','Nrushans','Amrutbhai','B122','Vidhya','C90','Annad',370022,'Male',0,'22-may-1998');

insert into person

values('P0042','Gohel','Akshay','Rajendrakumar','V15','Amrut','B12','Nadiad',229012,'Male',0,'24-june-1998');

insert into person

values('P0043','Gohil','Nana','Gambhirbhai','C45','Krishna','J12','Neshda',387001,'Male',0,'4-jan-2005');

insert into person

values('P0044','Gohil','Sumit','Jitendrakumar','Ce044','Krishan','N12','Nadiad',387001,'Male',0,'05-may-1998');

insert into person

values('P0045','Gupta','Sanket','Kalpeshbhai','C12','Krishna','H45','Nadiad',387001,'Male',0,'22-feb-2000');

insert into person values

('P0046','Gurjar','Karan','Vijaybhai','V67','Ambika','L12','Kheda',389011,'Male',0,'18-feb-1999');

insert into person values

('P0047','Hadiyal','Mehul','Mohanbhai','C12','Dwarkesh','Mj12','Dwarka',361315,'Male',0,'29-jan-2005');

insert into person values

('P0048', 'Haraniya', 'Smith', 'Niteshkumar', 'G12', 'Kanera', 'K12', 'Kheda', 453617, 'Male', 0, '22-feb-1998');

insert into person values

('P0049','Husain','Saif','Sahilbhai','H45','Saraswati','L12','Anand',370011,'Male',0,'15-may-1999');

insert into person values ('P0050','Jambudiya','Heet','Ketanbhai','V33','Krishna','C22','Nadiad',370001,'Male',0,'14-may-1997');

₱ PERSON_ID	∯ F_NAME	∯ M_NAME	L_NAME	♦ HOUSE_NO	SOCIETY_NAME	STREET_NAME		PINCODE	GENDER		∯ DOB
1 P0001	Meet	Ramesh	Patel	101	Krishna Crown	College Road	Nadiad	387001	Male	1	11-05-08
2 P0002	Maharshi	Dipak	Jani	303	Aarav Society	Canal Road	Ghodasar	380050	Male	1	25-09-07
3 P0003	Amatulla	Akbari	Gajipurwala	205	Prime Society	Punit Road	Nadiad	387002	Female	1	18-01-06
4 P0004	Nihar	Vipul	Rakholiya	306	Aarav Society	Canal Road	Ghodasar	380050	Male	1	10-09-07
5 P0005	Dev	Dipesh	Patel	202	Royal Heights	College Road	Nadidad	387001	Male	1	10-01-07
6 P0006	Het	Brijesh	Parikh	54	Gokul Society	Punit Road	Ghodasar	380050	Male	1	14-02-09
7 P0007	Nensee	Kishor	Zankat	48	Baleshwar City	Lalgebi Road	Hathijan	382445	Female		26-03-10
8 P0008	Harshpalsinh	Champaksinh		14	Viratnagar Society			364554	Male		05-11-09
9 P0009	Darshit	Dharmesh		504	Aarav Society		Ghodasar	380050			06-06-11
10 P0010	Sahil		-	202	Royal Heights	College Road		387001			10-10-11
11 P0011	Yug			45	Baleshwar City	Lalgebi Road		382445			17-08-12
12 P0012	Vasu			16	Viratnagar Society		The state of the s	364554			29-11-12
13 P0013	Parth	Sandeep	Land Control of Control	26	Gokul Society	Punit Road	Ghodasar	3800501			01-08-16
14 P0014		and the second second		17			Ghodasar	380050			
		Vijay			Aarav Society						14-03-16
15 P0015	Manish	Danabhai		304	Royal Heights	College Road		387001			19-09-17
16 P0016	Sohel	Danishbhai		47	Baleshwar City	Lalgebi Road	Contract Contract	3824451			04-07-17
17 P0017	Prince	Sailesh	STATE OF THE STATE	11	Gokul Society		Ghodasar	3800501			06-04-16
18 P0018		Carlotte Carlotte		204	Prime Society		Nadiad	387002			18-03-16
19 P0019	Jimesh	Daniel Toler	-	404	Aarav Society		Ghodasar	3800501			07-01-17
20 P0020		Anand		202	Nexus Heights	College Road		387001		1	13-12-16
21 P0021	Milan	Naresh	Vadhel	303	Krishna Crown	College Road	Nadiad	387001	Male	1	11-01-17
22 P0022	Shyam	Dinesh	Vachhani	401	Royal Heights	College Road	Nadiad	387001	Male	1	16-08-16
23 P0023	Urvi	Rajesh	Vasava	206	Prime Society	Punit Road	Nadiad	387001	Female	1	19-07-16
24 P0024	Sahil	Sanjay	Undhad	103	Krishna Crown	College Road	Nadiad	387001	Male	1	30-01-17
25 P0025	Khushi	Ishwar	Umarvanshi	504	Prime Society	Punit Road	Nadiad	387001	Female	1	23-02-17
26 P0026	Dhamsania	Dhruvil	Arvindbhai	A1	Sahajanand	A12	Nadiad	387001	Male	0	29-12-05
27 2000				2.0	INVITATION OF			228221			
27 P0027	Dhanani	Vaibhav	Vijaybhai	A2	Sahajanad	A123	Nadiad	387001			25-01-05
28 P0028	Dobariya		Manojbhai	A3	Sahajanand	A12	Nadiad	387001			8-02-00
29 P0029	Dobariya		Ghanshayambh		Vidhyut	B12	Baroda	388812			12-01-98
30 P0030	Fadadu	Khanjan	Arvinbhai	B12	Jambuvan	A123	Baroda	388812			21-12-03
31 P0031	Faldu	Arpit	Kiritbhai	C12	Vidhya yamuna	C2 J12	Nadiad Nadiad	387001	Male	0 2	22-01-00
32 P0032	Gabani	Kuldeep	Nareshbhai	212			Nadlad		Mala	0.1	1 11 66
33 P0033		Vach							Male		1-11-99
24 00024	Gabani	Yash	Niteshbhai	B123	Yamata	X12	Baroda	383880	Male	0 0	01-01-01
34 P0034	Gajera	Jaimin	Niteshbhai Nileshbhai	B123 R12	Yamata Vidhyut	X12 C45	Baroda Surat	383880 123456	Male Male	0 0 0 1	01-01-01 17-01-02
35 P0035	Gajera Gajera	Jaimin Kavan	Niteshbhai Nileshbhai Sanjeevbhai	B123 R12 Y12	Yamata Vidhyut Samantha	X12 C45 J12	Baroda Surat Nadiad	383880 123456 378001	Male Male Male	0 0 0 1 0 1	01-01-01 17-01-02 12-05-08
35 P0035 36 P0036	Gajera Gajera Gajera	Jaimin Kavan Rushang	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai	B123 R12 Y12 A2	Yamata Vidhyut Samantha Samantha	X12 C45 J12 H12	Baroda Surat Nadiad Kheda	383880 123456 378001 345678	Male Male Male Male	0 0 0 1 0 1 0 1	01-01-01 17-01-02 12-05-08 12-01-00
35 P0035 36 P0036 37 P0037	Gajera Gajera Gajera Gandhi	Jaimin Kavan Rushang Nitya	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai	B123 R12 Y12 A2 C123	Yamata Vidhyut Samantha Samantha Yamuna	X12 C45 J12 H12 H14	Baroda Surat Nadiad Kheda Vadodara	383880 123456 378001 345678 345672	Male Male Male Male Male	0 0 0 1 0 1 0 1	01-01-01 17-01-02 12-05-08 12-01-00 08-02-04
35 P0035 36 P0036 37 P0037 38 P0038	Gajera Gajera Gajera Gandhi Ganjawal	Jaimin Kavan Rushang Nitya a Samarth	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai	B123 R12 Y12 A2 C123 B12	Yamata Vidhyut Samantha Samantha Yamuna Vishwa	X12 C45 J12 H12 H14 M12	Baroda Surat Nadiad Kheda Vadodara Nadiad	383880 123456 378001 345678 345672 361312	Male Male Male Male Male Male	0 0 0 1 0 1 0 1 0 0	01-01-01 17-01-02 12-05-08 12-01-00 18-02-04 12-05-05
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039	Gajera Gajera Gajera Gandhi Ganjawal	Jaimin Kavan Rushang Nitya a Samarth Nikunjku	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai	B123 R12 Y12 A2 C123 B12 C65	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO	X12 C45 J12 H12 H14 M12 V12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand	383880 123456 378001 345678 345672 361312 129023	Male Male Male Male Male Male Male Male	0 0 0 1 0 1 0 1 0 0 0 1	01-01-01 17-01-02 12-05-08 12-01-00 08-02-04 12-05-05 17-01-99
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai	B123 R12 Y12 A2 C123 B12 C65 V123	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma	X12 C45 J12 H12 H14 M12 V12 B123	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand	383880 123456 378001 345678 345672 361312 129023 387001	Male Male Male Male Male Male Male Male	0 0 0 1 0 1 0 0 0 0 0 1 0 0	01-01-01 17-01-02 12-05-08 12-01-00 08-02-04 12-05-05 17-01-99 01-01-92
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai	B123 R12 Y12 A2 C123 B12 C65 V123 B122	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya	X12 C45 J12 H12 H14 M12 V12 B123 C90	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad	383880 123456 378001 345678 345672 361312 129023 387001 370022	Male Male Male Male Male Male Male Male	0 0 0 1 0 1 0 0 0 0 0 1 0 0 0 0 0 0	01-01-01 17-01-02 12-05-08 12-01-00 08-02-04 12-05-05 17-01-99 01-01-92 22-05-98
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041 42 P0042	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia Gohel	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai Ramethbai Rajendrakuma	B123 R12 Y12 A2 C123 B12 C65 V123 B122 ar V15	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya Amrut	X12 C45 J12 H12 H14 M12 V12 B123 C90 B12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad Nadiad	383880 123456 378001 345678 345672 361312 129023 387001 370022 229012	Male Male Male Male Male Male Male Female Male	0 0 0 1 0 1 0 0 1 0 0 1 0 0 0 0 1 0 0 0 0 0 2 0 2	01-01-01 17-01-02 12-05-08 12-01-00 08-02-04 12-05-05 17-01-99 01-01-92 22-05-98 24-06-98
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041 42 P0042 43 P0043	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia Gohel Gohil	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans Akshay	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai Ramethhai Rajendrakume Gambhirbhai	B123 R12 Y12 A2 C123 B12 C65 V123 B122 ar V15 C45	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya Amrut Krishna	X12 C45 J12 H12 H14 M12 V12 B123 C90 B12 J12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad Nadiad Nadiad Neshda	383880 123456 378001 345678 345672 361312 129023 387001 370022 229012 387001	Male Male Male Male Male Male Male Male	0 0 0 1 0 1 0 0 1 0 0 0 1 0 0 0 0 0 0 0	01-01-01 17-01-02 12-05-08 12-01-00 18-02-04 12-05-05 17-01-99 11-01-92 12-05-98 14-06-98 14-01-05
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041 42 P0042 43 P0043 44 P0044	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia Gohel Gohil	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans Akshay Nana Sumit	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai Imar Pravinbhai Rameshbhai R Amrutbhai Rajendrakume Gambhirbhai Jitendrakume	B123 R12 Y12 A2 C123 B12 C65 V123 B122 ar V15 C45 ar Ce044	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya Amrut Krishna Krishan	X12 C45 J12 H12 H14 M12 V12 B123 C90 B12 J12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad Nadiad Nadiad Nadiad Nadiad Nadiad	383880 123456 378001 345678 345672 361312 129023 387001 370022 229012 387001 387001	Male Male Male Male Male Male Male Male	0 0 0 0 1 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0	01-01-01 17-01-02 12-05-08 12-01-00 18-02-04 12-05-05 17-01-99 11-01-92 12-05-98 14-06-98 14-01-05 15-05-98
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041 42 P0042 43 P0043 44 P0044 45 P0045	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia Gohel Gohil Gohil Gupta	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans Akshay Nana Sumit Sanket	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai Rameshbhai Rajendrakuma Gambhirbhai Jitendrakuma	B123 R12 Y12 A2 C123 B12 C65 V123 B122 ar V15 C45 C45 C2	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya Amrut Krishna Krishan	X12 C45 J12 H12 H14 M12 V12 B123 C90 B12 J12 N12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad Nadiad Nadiad Nadiad Nadiad Nadiad	383880 123456 378001 345678 345672 361312 129023 387001 370022 229012 387001 387001	Male Male Male Male Male Male Male Male	0 0 0 0 1 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0	01-01-01 17-01-02 12-05-08 12-01-00 18-02-04 12-05-05 17-01-99 11-01-92 12-05-98 14-06-98 14-01-05 15-05-98 12-02-00
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041 42 P0042 43 P0043 44 P0044 45 P0045	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia Gohel Gohil Gohil Gupta Gurjar	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans Akshay Nana Sumit Sanket Karan	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai Rameshbhai Rajendrakuma Gambhirbhai Jitendrakuma Kalpeshbhai	B123 R12 Y12 A2 C123 B12 C65 V123 B122 AF V15 C45 C45 C45 C45 V120 V67	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya Amrut Krishna Krishan Krishna Ambika	X12 C45 J12 H12 H14 M12 V12 B123 C90 B12 J12 N12 H45 L12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad Nadiad Neshda Nadiad Nadiad Kheda	383880 123456 378001 345678 345672 361312 129023 387001 370022 229012 387001 387001 387001 387001 389011	Male Male Male Male Male Male Male Male	0 0 0 1 0 1 0 0 1 0 0 1 0 0 0 0 1 0	01-01-01 17-01-02 12-05-08 12-01-00 18-02-04 12-05-05 17-01-99 11-01-92 12-05-98 14-06-98 14-01-05 15-05-98 12-02-00 18-02-99
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041 42 P0042 43 P0043 44 P0044 45 P0045 46 P0046 47 P0047	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia Gohel Gohil Gupta Gurjar Hadiyal	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans Akshay Nana Sumit Sanket Karan Mehul	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai Rajendrakuma Gambhirbhai Jitendrakuma Kalpeshbhai Vijaybhai Mohanbhai	B123 R12 Y12 A2 C123 B12 C65 V123 B122 ar V15 C45 C45 Ar Ce044 C12 V67 C12	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya Amrut Krishna Krishan Krishna Ambika Dwarkesh	X12 C45 J12 H12 H14 M12 V12 B123 C90 B12 J12 N12 H45 L12 MJ12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad Nadiad Nadiad Neshda Nadiad Nadiad Nadiad Nadiad Nadiad Nadiad Nadiad Nadiad	383880 123456 378001 345678 345672 361312 129023 387001 370022 229012 387001 387001 387001 389011 361315	Male Male Male Male Male Male Male Male	0 0 0 1 0 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0	01-01-01 1.7-01-02 1.2-05-08 1.2-01-00 18-02-04 1.2-05-05 1.7-01-99 101-01-92 12-05-98 14-06-98 14-01-05 15-05-98 12-02-00 18-02-99 19-01-05
35 P0035 36 P0036 37 P0037 38 P0038 39 P0039 40 P0040 41 P0041 42 P0042 43 P0043 44 P0044 45 P0045	Gajera Gajera Gajera Gandhi Ganjawal Ganvit Garala Garasia Gohel Gohil Gohil Gupta Gurjar Hadiyal Haraniya	Jaimin Kavan Rushang Nitya a Samarth Nikunjku Mahek Nrushans Akshay Nana Sumit Sanket Karan Mehul	Niteshbhai Nileshbhai Sanjeevbhai Manojbhai Vijaybhai Sanjaybhai mar Pravinbhai Rameshbhai Rameshbhai Rajendrakuma Gambhirbhai Jitendrakuma Kalpeshbhai	B123 R12 Y12 A2 C123 B12 C65 V123 B122 AF V15 C45 C45 C45 C45 V120 V67	Yamata Vidhyut Samantha Samantha Yamuna Vishwa IPCO Karma Vidhya Amrut Krishna Krishan Krishna Ambika	X12 C45 J12 H12 H14 M12 V12 B123 C90 B12 J12 N12 H45 L12	Baroda Surat Nadiad Kheda Vadodara Nadiad Anand Nadaiad Annad Nadiad Neshda Nadiad Nadiad Kheda	383880 123456 378001 345678 345672 361312 129023 387001 370022 229012 387001 387001 387001 389011	Male Male Male Male Male Male Male Male	0 0 0 1 0 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0	01-01-01 1.7-01-02 1.2-05-08 1.2-01-00 18-02-04 1.2-05-05 1.7-01-99 11-01-92 12-05-98 14-06-98 14-01-05 15-05-98 12-02-00 18-02-99

Student

Create

```
CREATE TABLE Student
(
  student_id varchar(10) PRIMARY KEY,
  person_id varchar(10),
  foreign key(person_id) REFERENCES person(person_id)
);
Insert
insert into student values ('S1', 'P0001');
insert into student values ('S2', 'P0002');
insert into student values ('S3', 'P0003');
insert into student values ('S4', 'P0004');
insert into student values ('S5', 'P0005');
insert into student values ('S6', 'P0006');
insert into student values ('S7', 'P0007');
insert into student values ('S8', 'P0008');
insert into student values ('S9', 'P0009');
insert into student values ('S10', 'P0010');
insert into student values ('S11', 'P0011');
insert into student values ('S12', 'P0012');
insert into student values ('S13', 'P0013');
insert into student values ('S14', 'P0014');
insert into student values ('S15', 'P0015');
insert into student values ('S16', 'P0016');
insert into student values ('S17', 'P0017');
```

insert into student values ('S18', 'P0018');

```
insert into student values ('S19', 'P0019'); insert into student values ('S20', 'P0020'); insert into student values ('S21', 'P0021'); insert into student values ('S22', 'P0022'); insert into student values ('S23', 'P0023'); insert into student values ('S24', 'P0024'); insert into student values ('S25', 'P0025');
```

	STUDENT_ID	PERSON_ID				
1	S1	P0001				
2	52	P0002				
3	S3	P0003				
4	S4	P0004				
5	S5	P0005				
6	S6	P0006				
7	S7	P0007				
8	S8	P0008				
9	59	P0009				
10	S10	P0010				
11	S11	P0011				
12	S12	P0012				
13	S13	P0013				
14	S14	P0014				
15	S15	P0015				
16	S16	P0016				
17	S17	P0017				
18	S18	P0018				
19	S19	P0019				
20	S20	P0020				
21	S21	P0021				
22	S22	P0022				
23	S23	P0023				
24	S24	P0024				
25	S25	P0025				

Employee

Create

```
CREATE TABLE Employee
(
  employee id varchar(10) PRIMARY KEY,
  person_id varchar(10),
  salary number(6, 0) not null,
  job varchar(30) check (job in('Teacher', 'Watchman', 'Cleanliness Worker', 'Peon')),
  foreign key (person id) REFERENCES person(person id)
);
Insert
insert into employee values ('E1', 'P0026', '10000', 'Peon');
insert into employee values ('E2', 'P0027', '10000', 'Peon');
insert into employee values ('E3', 'P0028', '10000', 'Cleanliness Worker');
insert into employee values ('E4', 'P0029', '10000', 'Peon');
insert into employee values ('E5', 'P0030', '10000', 'Watchman');
insert into employee values ('E6', 'P0031', '10000', 'Peon');
insert into employee values ('E7', 'P0032', '10000', 'Peon');
insert into employee values ('E8', 'P0033', '10000', 'Cleanliness Worker');
insert into employee values ('E9', 'P0034', '10000', 'Peon');
insert into employee values ('E10', 'P0035', '10000', 'Watchman');
insert into employee values ('E11', 'P0036', '10000', 'Peon');
insert into employee values ('E12', 'P0037', '10000', 'Cleanliness Worker');
insert into employee values ('E13', 'P0038', '40000', 'Teacher');
insert into employee values ('E14', 'P0039', '10000', 'Peon');
insert into employee values ('E15', 'P0040', '10000', 'Peon');
```

insert into employee values ('E16', 'P0041', '40000', 'Teacher');

insert into employee values ('E17', 'P0042', '40000', 'Teacher');
insert into employee values ('E18', 'P0043', '40000', 'Teacher');
insert into employee values ('E19', 'P0044', '40000', 'Teacher');
insert into employee values ('E20', 'P0045', '10000', 'Watchman');
insert into employee values ('E21', 'P0046', '10000', 'Watchman');
insert into employee values ('E22', 'P0047', '10000', 'Cleanliness Worker');
insert into employee values ('E23', 'P0048', '10000', 'Peon');
insert into employee values ('E24', 'P0049', '10000', 'Watchman');
insert into employee values ('E25', 'P0050', '40000', 'Teacher');

	♦ EMPLOYEE_ID	♦ PERSON_ID	SALARY	
1	E1	P0026	10000	Peon
2	E2	P0027	10000	Peon
3	E3	P0028	10000	Cleanliness Worker
4	E4	P0029	10000	Peon
5	E5	P0030	10000	Watchman
6	E6	P0031	10000	Peon
7	E7	P0032	10000	Peon
8	E8	P0033	10000	Cleanliness Worker
9	E9	P0034	10000	Peon
10	E10	P0035	10000	Watchman
11	E11	P0036	10000	Peon
12	E12	P0037	10000	Cleanliness Worker
13	E13	P0038	40000	Teacher
14	E14	P0039	10000	Peon
15	E15	P0040	10000	Peon
16	E16	P0041	40000	Teacher
17	E17	P0042	40000	Teacher
18	E18	P0043	40000	Teacher
19	E19	P0044	40000	Teacher
20	E20	P0045	10000	Watchman
21	E21	P0046	10000	Watchman
22	E22	P0047	10000	Cleanliness Worker
23	E23	P0048	10000	Peon
24	E24	P0049	10000	Watchman
25	E25	P0050	40000	Teacher

Teacher

Create

```
CREATE TABLE Teacher
(
    teacher_id varchar(10) PRIMARY KEY,
    employee_id varchar(10),
    foreign key (employee_id) REFERENCES employee(employee_id)
);
```

Insert

```
insert into teacher values ('T1', 'E13');
insert into teacher values ('T2', 'E16');
insert into teacher values ('T3', 'E17');
insert into teacher values ('T4', 'E18');
insert into teacher values ('T5', 'E19');
insert into teacher values ('T6', 'E25');
```

	↑ TEACHER_ID	
1	T1	E13
2	T2	E16
3	T3	E17
4	T4	E18
5	T5	E19
6	T6	E25

Classroom

Create

```
create table classroom(
room_no number(3, 0),
building_no number(3, 0),
capacity number(3, 0),
primary key(room_no, building_no)
);

Insert
insert into classroom values (1, 1, 50);
insert into classroom values (2, 1, 40);
insert into classroom values (1, 2, 40);
insert into classroom values (2, 2, 50);
insert into classroom values (2, 2, 50);
```

	∯ ROOM_NO	⊕ BUILDING_NO	♦ CAPACITY
1	1	1	50
2	2	1	40
3	3	1	30
4	1	2	40
5	2	2	50

Standard

Create

```
CREATE TABLE standard
(
    standard_no number(2, 0) PRIMARY KEY,
    teacher_id varchar(10),
```

```
room_no number(3, 0),

building_no number(3, 0),

foreign key(teacher_id) REFERENCES teacher(teacher_id),

foreign key(room_no, building_no) references classroom
);

Insert

insert into standard values (1, 'T1', 1, 1);

insert into standard values (2, 'T2', 2, 1);

insert into standard values (3, 'T3', 3, 1);
```

insert into standard values (4, 'T6', 1, 2);

	\$ STANDARD_NO	♦ TEACHER_ID	ROOM_NO	BUILDING_NO
1	1	T1	1	1
2	2	T2	2	1
3	3	T3	3	1
4	4	T6	1	2

Subject

Create

```
create table subject
(
   subject_name varchar(30) not null,
   standard_no number(3),
   book varchar(40) not null,
   foreign key(standard_no) references standard(standard_no),
    primary key(subject_name, standard_no)
);
```

Insert

```
insert into subject values ('Mathematics', 1, 'Mathematics, Std. 1, GCERT');
insert into subject values ('Hindi', 1, 'Hindi language, Std. 1, GCERT');
insert into subject values ('Gujarati', 1, 'Gujarati, Std. 1, GCERT');
insert into subject values ('English', 1, 'English, Std. 1, GCERT');
insert into subject values ('Science', 1, 'Science for beginners, GCERT');
insert into subject values ('Mathematics', 2, 'Mathematics, Std. 2, GCERT');
insert into subject values ('Hindi', 2, 'Hindi language, Std. 2, GCERT');
insert into subject values ('Gujarati', 2, 'Gujarati, Std. 2, GCERT');
insert into subject values ('English', 2, 'English, Std. 2, GCERT');
insert into subject values ('Science', 2, 'Science for beginners, GCERT');
insert into subject values ('Mathematics', 3, 'Mathematics, Std. 3, GCERT');
insert into subject values ('Hindi', 3, 'Hindi language, Std. 3, GCERT');
insert into subject values ('Gujarati', 3, 'Gujarati, Std. 3, GCERT');
insert into subject values ('English', 3, 'English, Std. 3, GCERT');
insert into subject values ('Science', 3, 'Science for beginners, GCERT');
insert into subject values ('Social Science', 3, 'Social Science, Std. 3, GCERT');
insert into subject values ('Mathematics', 4, 'Mathematics, Std. 4, GCERT');
insert into subject values ('Hindi', 4, 'Hindi language, Std. 4, GCERT');
insert into subject values ('Gujarati', 4, 'Gujarati, Std. 4, GCERT');
insert into subject values ('English', 4, 'English, Std. 4, GCERT');
insert into subject values ('Science and Technology', 4, 'Science for intermediates, GCERT');
insert into subject values ('Social Science', 4, 'Social Science, Std. 4, GCERT');
```

SUBJECT_NAME	\$ STANDARD_NO
1 Mathematics	1 Mathematics, Std. 1, GCERT
2 Hindi	1 Hindi language, Std. 1, GCERT
3 Gujarati	1 Gujarati, Std. 1, GCERT
4 English	1 English, Std. 1, GCERT
5 Science	1 Science for beginners, GCERT
6 Mathematics	2 Mathematics, Std. 2, GCERT
7 Hindi	2 Hindi language, Std. 2, GCERT
8 Gujarati	2 Gujarati, Std. 2, GCERT
9 English	2 English, Std. 2, GCERT
10 Science	2 Science for beginners, GCERT
11 Mathematics	3 Mathematics, Std. 3, GCERT
12 Hindi	3 Hindi language, Std. 3, GCERT
13 Gujarati	3 Gujarati, Std. 3, GCERT
14 English	3 English, Std. 3, GCERT
15 Science	3 Science for beginners, GCERT
16 Social Science	3 Social Science, Std. 3, GCERT
17 Mathematics	4 Mathematics, Std. 4, GCERT
18 Hindi	4 Hindi language, Std. 4, GCERT
19 Gujarati	4 Gujarati, Std. 4, GCERT
20 English	4 English, Std. 4, GCERT
21 Science and Technolog	y 4 Science for intermediates, GCERI
22 Social Science	4 Social Science, Std. 4, GCERT

Enrollment

Create

```
create table enrollment
(
   roll_no number(3),
   standard_no number(3),
   student_id varchar(10) not null,
   enrolled_date date not null,
   foreign key(standard_no) references standard,
```

```
foreign key(student_id) references student,
primary key(roll_no, standard_no)
);

Insert
insert into enrollment values (1, 1, 'S1', '6-MA'
```

```
insert into enrollment values (1, 1, 'S1', '6-MAY-2023'); insert into enrollment values (2, 1, 'S2', '6-MAY-2023'); insert into enrollment values (3, 1, 'S3', '6-MAY-2023'); insert into enrollment values (4, 1, 'S4', '6-MAY-2023'); insert into enrollment values (5, 1, 'S5', '6-MAY-2023'); insert into enrollment values (6, 1, 'S6', '6-MAY-2023'); insert into enrollment values (1, 2, 'S7', '8-MAY-2023'); insert into enrollment values (2, 2, 'S8', '8, MAY-2023');
```

```
insert into enrollment values (2, 2, 'S8', '8-MAY-2023'); insert into enrollment values (3, 2, 'S9', '8-MAY-2023'); insert into enrollment values (4, 2, 'S10', '8-MAY-2023'); insert into enrollment values (5, 2, 'S11', '8-MAY-2023'); insert into enrollment values (6, 2, 'S12', '8-MAY-2023');
```

insert into enrollment values (1, 3, 'S13', '9-MAY-2023'); insert into enrollment values (2, 3, 'S14', '9-MAY-2023'); insert into enrollment values (3, 3, 'S15', '9-MAY-2023'); insert into enrollment values (4, 3, 'S16', '9-MAY-2023'); insert into enrollment values (5, 3, 'S17', '9-MAY-2023');

insert into enrollment values (1, 4, 'S18', '11-MAY-2023'); insert into enrollment values (2, 4, 'S19', '11-MAY-2023'); insert into enrollment values (3, 4, 'S20', '11-MAY-2023'); insert into enrollment values (4, 4, 'S21', '11-MAY-2023');

insert into enrollment values (5, 4, 'S22', '11-MAY-2023'); insert into enrollment values (6, 4, 'S23', '11-MAY-2023'); insert into enrollment values (7, 4, 'S24', '11-MAY-2023'); insert into enrollment values (8, 4, 'S25', '11-MAY-2023');

	ROLL_NO	\$ STANDARD_NO	∯ STUDENT_ID	€ ENROLLED_DATE
1	1	1	S1	06-05-23
2	2	1	S2	06-05-23
3	3	1	53	06-05-23
4	4	1	S4	06-05-23
5	5	1	S5	06-05-23
6	6	1	S6	06-05-23
7	1	2	S7	08-05-23
8	2	2	S8	08-05-23
9	3	2	59	08-05-23
10	4	2	S10	08-05-23
11	5	2	S11	08-05-23
12	6	2	S12	08-05-23
13	1	3	S13	09-05-23
14	2	3	S14	09-05-23
15	3	3	S15	09-05-23
16	4	3	S16	09-05-23
17	5	3	S17	09-05-23
18	1	4	S18	11-05-23
19	2	4	S19	11-05-23
20	3	4	S20	11-05-23
21	4	4	S21	11-05-23
22	5	4	S22	11-05-23
23	6	4	S23	11-05-23
24	7	4	524	11-05-23
25	8	4	S25	11-05-23

Lecture

Create

```
create table lecture
(
  lecture no number(2),
  subject_name varchar(30),
  standard_no number(3),
  teacher id varchar(10),
  day varchar(14) check (day in('Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday')),
  start_time varchar(10) not null,
  end_time varchar(10) not null,
  primary key(standard no, subject name, lecture no),
  foreign key(subject name, standard no) references subject,
  foreign key(teacher_id) references teacher
);
Insert
insert into lecture values(1, 'Mathematics', 1, 'T1', 'Monday', '07:30', '08:00');
insert into lecture values(2, 'Mathematics', 1, 'T1', 'Monday', '08:00', '08:30');
insert into lecture values(1, 'Hindi', 1, 'T3', 'Monday', '08:30', '09:00');
insert into lecture values(1, 'Gujarati', 1, 'T2', 'Monday', '09:00', '09:30');
insert into lecture values(1, 'English', 1, 'T4', 'Monday', '10:00', '10:30');
insert into lecture values(1, 'Science', 1, 'T1', 'Monday', '10:30', '11:00');
insert into lecture values(2, 'Science', 1, 'T1', 'Monday', '11:00', '11:30');
insert into lecture values(2, 'English', 1, 'T4', 'Monday', '11:30', '12:00');
```

insert into lecture values(3, 'Mathematics', 1, 'T1', 'Tuesday', '07:30', '08:00');

```
insert into lecture values(4, 'Mathematics', 1, 'T1', 'Tuesday', '08:00', '08:30');
insert into lecture values(2, 'Hindi', 1, 'T3', 'Tuesday', '08:30', '09:00');
insert into lecture values(2, 'Gujarati', 1, 'T2', 'Tuesday', '09:00', '09:30');
insert into lecture values(3, 'English', 1, 'T4', 'Tuesday', '10:00', '10:30');
insert into lecture values(3, 'Science', 1, 'T1', 'Tuesday', '10:30', '11:00');
insert into lecture values(4, 'Science', 1, 'T1', 'Tuesday', '11:00', '11:30');
insert into lecture values(4, 'English', 1, 'T4', 'Tuesday', '11:30', '12:00');
insert into lecture values(5, 'Mathematics', 1, 'T1', 'Wednesday', '07:30', '08:00');
insert into lecture values(6, 'Mathematics', 1, 'T1', 'Wednesday', '08:00', '08:30');
insert into lecture values(3, 'Hindi', 1, 'T3', 'Wednesday', '08:30', '09:00');
insert into lecture values(3, 'Gujarati', 1, 'T2', 'Wednesday', '09:00', '09:30');
insert into lecture values(5, 'English', 1, 'T4', 'Wednesday', '10:00', '10:30');
insert into lecture values(5, 'Science', 1, 'T1', 'Wednesday', '10:30', '11:00');
insert into lecture values(6, 'Science', 1, 'T1', 'Wednesday', '11:00', '11:30');
insert into lecture values(6, 'English', 1, 'T4', 'Wednesday', '11:30', '12:00');
insert into lecture values(7, 'Mathematics', 1, 'T1', 'Thursday', '07:30', '08:00');
insert into lecture values(8, 'Mathematics', 1, 'T1', 'Thursday', '08:00', '08:30');
insert into lecture values(4, 'Hindi', 1, 'T3', 'Thursday', '08:30', '09:00');
insert into lecture values(4, 'Gujarati', 1, 'T2', 'Thursday', '09:00', '09:30');
insert into lecture values(7, 'English', 1, 'T4', 'Thursday', '10:00', '10:30');
insert into lecture values(7, 'Science', 1, 'T1', 'Thursday', '10:30', '11:00');
insert into lecture values(8, 'Science', 1, 'T1', 'Thursday', '11:00', '11:30');
insert into lecture values(8, 'English', 1, 'T4', 'Thursday', '11:30', '12:00');
insert into lecture values(9, 'Mathematics', 1, 'T1', 'Friday', '07:30', '08:00');
insert into lecture values(10, 'Mathematics', 1, 'T1', 'Friday', '08:00', '08:30');
```

```
insert into lecture values(5, 'Hindi', 1, 'T3', 'Friday', '08:30', '09:00');
insert into lecture values(5, 'Gujarati', 1, 'T2', 'Friday', '09:00', '09:30');
insert into lecture values(9, 'English', 1, 'T4', 'Friday', '10:00', '10:30');
insert into lecture values(9, 'Science', 1, 'T1', 'Friday', '10:30', '11:00');
insert into lecture values(10, 'Science', 1, 'T1', 'Friday', '11:00', '11:30');
insert into lecture values(10, 'English', 1, 'T4', 'Friday', '11:30', '12:00');
insert into lecture values(1, 'Mathematics', 2, 'T6', 'Monday', '07:30', '08:00');
insert into lecture values(2, 'Mathematics', 2, 'T6', 'Monday', '08:00', '08:30');
insert into lecture values(1, 'Gujarati', 2, 'T2', 'Monday', '08:30', '09:00');
insert into lecture values(1, 'Hindi', 2, 'T3', 'Monday', '09:00', '09:30');
insert into lecture values(1, 'Science', 2, 'T6', 'Monday', '10:00', '10:30');
insert into lecture values(1, 'English', 2, 'T4', 'Monday', '10:30', '11:00');
insert into lecture values(2, 'English', 2, 'T4', 'Monday', '11:00', '11:30');
insert into lecture values(2, 'Science', 2, 'T6', 'Monday', '11:30', '12:00');
insert into lecture values(3, 'Mathematics', 2, 'T6', 'Tuesday', '07:30', '08:00');
insert into lecture values(4, 'Mathematics', 2, 'T6', 'Tuesday', '08:00', '08:30');
insert into lecture values(2, 'Gujarati', 2, 'T2', 'Tuesday', '08:30', '09:00');
insert into lecture values(2, 'Hindi', 2, 'T3', 'Tuesday', '09:00', '09:30');
insert into lecture values(3, 'Science', 2, 'T6', 'Tuesday', '10:00', '10:30');
insert into lecture values(3, 'English', 2, 'T4', 'Tuesday', '10:30', '11:00');
insert into lecture values(4, 'English', 2, 'T4', 'Tuesday', '11:00', '11:30');
insert into lecture values(4, 'Science', 2, 'T6', 'Tuesday', '11:30', '12:00');
insert into lecture values(5, 'Mathematics', 2, 'T6', 'Wednesday', '07:30', '08:00');
insert into lecture values(6, 'Mathematics', 2, 'T6', 'Wednesday', '08:00', '08:30');
insert into lecture values(3, 'Gujarati', 2, 'T2', 'Wednesday', '08:30', '09:00');
```

```
insert into lecture values(3, 'Hindi', 2, 'T3', 'Wednesday', '09:00', '09:30');
insert into lecture values(5, 'Science', 2, 'T6', 'Wednesday', '10:00', '10:30');
insert into lecture values(5, 'English', 2, 'T4', 'Wednesday', '10:30', '11:00');
insert into lecture values(6, 'English', 2, 'T4', 'Wednesday', '11:00', '11:30');
insert into lecture values(6, 'Science', 2, 'T6', 'Wednesday', '11:30', '12:00');
insert into lecture values(7, 'Mathematics', 2, 'T6', 'Thursday', '07:30', '08:00');
insert into lecture values(8, 'Mathematics', 2, 'T6', 'Thursday', '08:00', '08:30');
insert into lecture values(4, 'Gujarati', 2, 'T2', 'Thursday', '08:30', '09:00');
insert into lecture values(4, 'Hindi', 2, 'T3', 'Thursday', '09:00', '09:30');
insert into lecture values(7, 'Science', 2, 'T6', 'Thursday', '10:00', '10:30');
insert into lecture values(7, 'English', 2, 'T4', 'Thursday', '10:30', '11:00');
insert into lecture values(8, 'English', 2, 'T4', 'Thursday', '11:00', '11:30');
insert into lecture values(8, 'Science', 2, 'T6', 'Thursday', '11:30', '12:00');
insert into lecture values(9, 'Mathematics', 2, 'T6', 'Friday', '07:30', '08:00');
insert into lecture values(10, 'Mathematics', 2, 'T6', 'Friday', '08:00', '08:30');
insert into lecture values(5, 'Gujarati', 2, 'T2', 'Friday', '08:30', '09:00');
insert into lecture values(5, 'Hindi', 2, 'T3', 'Friday', '09:00', '09:30');
insert into lecture values(9, 'Science', 2, 'T6', 'Friday', '10:00', '10:30');
insert into lecture values(9, 'English', 2, 'T4', 'Friday', '10:30', '11:00');
insert into lecture values(10, 'English', 2, 'T4', 'Friday', '11:00', '11:30');
insert into lecture values(10, 'Science', 2, 'T6', 'Friday', '11:30', '12:00');
```

insert into lecture values(1, 'Hindi', 3, 'T3', 'Monday', '07:30', '08:00'); insert into lecture values(1, 'Gujarati', 3, 'T2', 'Monday', '08:00', '08:30'); insert into lecture values(1, 'Social Science', 3, 'T4', 'Monday', '08:30', '09:00');

```
insert into lecture values(1, 'English', 3, 'T4', 'Monday', '09:00', '09:30');
insert into lecture values(1, 'Mathematics', 3, 'T1', 'Monday', '10:00', '10:30');
insert into lecture values(2, 'Mathematics', 3, 'T6', 'Monday', '10:30', '11:00');
insert into lecture values(1, 'Science', 3, 'T5', 'Monday', '11:00', '11:30');
insert into lecture values(2, 'Science', 3, 'T5', 'Monday', '11:30', '12:00');
insert into lecture values(2, 'Hindi', 3, 'T3', 'Tuesday', '07:30', '08:00');
insert into lecture values(2, 'Gujarati', 3, 'T2', 'Tuesday', '08:00', '08:30');
insert into lecture values(2, 'Social Science', 3, 'T4', 'Tuesday', '08:30', '09:00');
insert into lecture values(2, 'English', 3, 'T4', 'Tuesday', '09:00', '09:30');
insert into lecture values(3, 'Mathematics', 3, 'T1', 'Tuesday', '10:00', '10:30');
insert into lecture values(4, 'Mathematics', 3, 'T6', 'Tuesday', '10:30', '11:00');
insert into lecture values(3, 'Science', 3, 'T5', 'Tuesday', '11:00', '11:30');
insert into lecture values(4, 'Science', 3, 'T5', 'Tuesday', '11:30', '12:00');
insert into lecture values(3, 'Hindi', 3, 'T3', 'Wednesday', '07:30', '08:00');
insert into lecture values(3, 'Gujarati', 3, 'T2', 'Wednesday', '08:00', '08:30');
insert into lecture values(3, 'Social Science', 3, 'T4', 'Wednesday', '08:30', '09:00');
insert into lecture values(3, 'English', 3, 'T4', 'Wednesday', '09:00', '09:30');
insert into lecture values(5, 'Mathematics', 3, 'T1', 'Wednesday', '10:00', '10:30');
insert into lecture values(6, 'Mathematics', 3, 'T6', 'Wednesday', '10:30', '11:00');
insert into lecture values(5, 'Science', 3, 'T5', 'Wednesday', '11:00', '11:30');
insert into lecture values(6, 'Science', 3, 'T5', 'Wednesday', '11:30', '12:00');
insert into lecture values(4, 'Hindi', 3, 'T3', 'Thursday', '07:30', '08:00');
insert into lecture values(4, 'Gujarati', 3, 'T2', 'Thursday', '08:00', '08:30');
insert into lecture values(4, 'Social Science', 3, 'T4', 'Thursday', '08:30', '09:00');
insert into lecture values(4, 'English', 3, 'T4', 'Thursday', '09:00', '09:30');
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insert into lecture values(7, 'Mathematics', 3, 'T1', 'Thursday', '10:00', '10:30');
insert into lecture values(8, 'Mathematics', 3, 'T6', 'Thursday', '10:30', '11:00');
insert into lecture values(7, 'Science', 3, 'T5', 'Thursday', '11:00', '11:30');
insert into lecture values(8, 'Science', 3, 'T5', 'Thursday', '11:30', '12:00');
insert into lecture values(5, 'Hindi', 3, 'T3', 'Friday', '07:30', '08:00');
insert into lecture values(5, 'Gujarati', 3, 'T2', 'Friday', '08:00', '08:30');
insert into lecture values(5, 'Social Science', 3, 'T4', 'Friday', '08:30', '09:00');
insert into lecture values(5, 'English', 3, 'T4', 'Friday', '09:00', '09:30');
insert into lecture values(9, 'Mathematics', 3, 'T1', 'Friday', '10:00', '10:30');
insert into lecture values(10, 'Mathematics', 3, 'T6', 'Friday', '10:30', '11:00');
insert into lecture values(9, 'Science', 3, 'T5', 'Friday', '11:00', '11:30');
insert into lecture values(10, 'Science', 3, 'T5', 'Friday', '11:30', '12:00');
insert into lecture values(1, 'Hindi', 4, 'T2', 'Monday', '07:30', '08:00');
insert into lecture values(1, 'Gujarati', 4, 'T3', 'Monday', '08:00', '08:30');
insert into lecture values(1, 'Social Science', 4, 'T5', 'Monday', '08:30', '09:00');
insert into lecture values(1, 'English', 4, 'T5', 'Monday', '09:00', '09:30');
insert into lecture values(1, 'Mathematics', 4, 'T2', 'Monday', '10:00', '10:30');
insert into lecture values(2, 'Mathematics', 4, 'T2', 'Monday', '10:30', '11:00');
insert into lecture values(1, 'Science and Technology', 4, 'T4', 'Monday', '11:00', '11:30');
insert into lecture values(2, 'Science and Technology', 4, 'T6', 'Monday', '11:30', '12:00');
insert into lecture values(2, 'Hindi', 4, 'T2', 'Tuesday', '07:30', '08:00');
insert into lecture values(2, 'Gujarati', 4, 'T3', 'Tuesday', '08:00', '08:30');
insert into lecture values(2, 'Social Science', 4, 'T5', 'Tuesday', '08:30', '09:00');
insert into lecture values(2, 'English', 4, 'T5', 'Tuesday', '09:00', '09:30');
insert into lecture values(3, 'Mathematics', 4, 'T2', 'Tuesday', '10:00', '10:30');
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insert into lecture values(4, 'Mathematics', 4, 'T2', 'Tuesday', '10:30', '11:00');
insert into lecture values(3, 'Science and Technology', 4, 'T4', 'Tuesday', '11:00', '11:30');
insert into lecture values(4, 'Science and Technology', 4, 'T6', 'Tuesday', '11:30', '12:00');
insert into lecture values(3, 'Hindi', 4, 'T2', 'Wednesday', '07:30', '08:00');
insert into lecture values(3, 'Gujarati', 4, 'T3', 'Wednesday', '08:00', '08:30');
insert into lecture values(3, 'Social Science', 4, 'T5', 'Wednesday', '08:30', '09:00');
insert into lecture values(3, 'English', 4, 'T5', 'Wednesday', '09:00', '09:30');
insert into lecture values(5, 'Mathematics', 4, 'T2', 'Wednesday', '10:00', '10:30');
insert into lecture values(6, 'Mathematics', 4, 'T2', 'Wednesday', '10:30', '11:00');
insert into lecture values(5, 'Science and Technology', 4, 'T4', 'Wednesday', '11:00', '11:30');
insert into lecture values(6, 'Science and Technology', 4, 'T6', 'Wednesday', '11:30', '12:00');
insert into lecture values(4, 'Hindi', 4, 'T2', 'Thursday', '07:30', '08:00');
insert into lecture values(4, 'Gujarati', 4, 'T3', 'Thursday', '08:00', '08:30');
insert into lecture values(4, 'Social Science', 4, 'T5', 'Thursday', '08:30', '09:00');
insert into lecture values(4, 'English', 4, 'T5', 'Thursday', '09:00', '09:30');
insert into lecture values(7, 'Mathematics', 4, 'T2', 'Thursday', '10:00', '10:30');
insert into lecture values(8, 'Mathematics', 4, 'T2', 'Thursday', '10:30', '11:00');
insert into lecture values(7, 'Science and Technology', 4, 'T4', 'Thursday', '11:00', '11:30');
insert into lecture values(8, 'Science and Technology', 4, 'T6', 'Thursday', '11:30', '12:00');
insert into lecture values(5, 'Hindi', 4, 'T2', 'Friday', '07:30', '08:00');
insert into lecture values(5, 'Gujarati', 4, 'T3', 'Friday', '08:00', '08:30');
insert into lecture values(5, 'Social Science', 4, 'T5', 'Friday', '08:30', '09:00');
insert into lecture values(5, 'English', 4, 'T5', 'Friday', '09:00', '09:30');
insert into lecture values(9, 'Mathematics', 4, 'T2', 'Friday', '10:00', '10:30');
insert into lecture values(10, 'Mathematics', 4, 'T3', 'Friday', '10:30', '11:00');
```

insert into lecture values(9, 'Science and Technology', 4, 'T4', 'Friday', '11:00', '11:30'); insert into lecture values(10, 'Science and Technology', 4, 'T6', 'Friday', '11:30', '12:00');

1	LECTURE_NO				⊕ DAY	START_TIME	€ END_TIME
1	1	Mathematics	1	Tl	Monday	07:30	08:00
2	2	Mathematics	1	T1	Monday	08:00	08:30
3	1	Hindi	1	T3	Monday	08:30	09:00
4	1	Gujarati	1	T2	Monday	09:00	09:30
5	1	English	1	T4	Monday	10:00	10:30
6	1	Science	1	T1	Monday	10:30	11:00
7	2	Science	1	T1	Monday	11:00	11:30
8	2	English	1	T4	Monday	11:30	12:00
9	3	Mathematics	1	Tl	Tuesday	07:30	08:00
10	4	Mathematics	1	Tl	Tuesday	08:00	08:30
11	2	Hindi	1	T3	Tuesday	08:30	09:00
12	2	Gujarati	1	T2	Tuesday	09:00	09:30
13	3	English	1	T4	Tuesday	10:00	10:30
14	3	Science	1	Tl	Tuesday	10:30	11:00
15	4	Science	1	T1	Tuesday	11:00	11:30
16	4	English	1	T4	Tuesday	11:30	12:00
17	5	Mathematics	1	Tl	Wednesday	07:30	08:00
18	6	Mathematics	1	Tl	Wednesday	08:00	08:30
19	3	Hindi	1	T3	Wednesday	08:30	09:00
20	3	Gujarati	1	T2	Wednesday	09:00	09:30
21	5	English	1	T4	Wednesday	10:00	10:30
22	5	Science	1	T1	Wednesday	10:30	11:00
23	6	Science	1	Tl	Wednesday	11:00	11:30
24	6	English	1	T4	Wednesday	11:30	12:00
25	7	Mathematics	1	T1	Thursday	07:30	08:00
26	8	Mathematics	1	Tl	Thursday	08:00	08:30

	LECTURE_NO	SUBJECT_NAME	\$ STANDARD_NO	TEACHER_ID	⊕ DAY	START_TIME	\$ END_TIME
27	4	Hindi	1	T3	Thursday	08:30	09:00
28	4	Gujarati	1	T2	Thursday	09:00	09:30
29	7	English	1	T4	Thursday	10:00	10:30
30	7	Science	1	Tl	Thursday	10:30	11:00
31	8	Science	1	T1	Thursday	11:00	11:30
32	8	English	1	T4	Thursday	11:30	12:00
33	9	Mathematics	1	T1	Friday	07:30	08:00
34	10	Mathematics	1	T1	Friday	08:00	08:30
35	5	Hindi	1	T3	Friday	08:30	09:00
36	5	Gujarati	1	T2	Friday	09:00	09:30
37	9	English	1	T4	Friday	10:00	10:30
38	9	Science	1	T1	Friday	10:30	11:00
39	10	Science	1	T1	Friday	11:00	11:30
40	10	English	1	T4	Friday	11:30	12:00
41	1	Mathematics	2	T6	Monday	07:30	08:00
42	2	Mathematics	2	T6	Monday	08:00	08:30
43	1	Gujarati	2	T2	Monday	08:30	09:00
44	1	Hindi	2	T3	Monday	09:00	09:30
45	1	Science	2	T6	Monday	10:00	10:30
46	1	English	2	T4	Monday	10:30	11:00
47	2	English	2	T4	Monday	11:00	11:30
48	2	Science	2	T6	Monday	11:30	12:00
49	3	Mathematics	2	T6	Tuesday	07:30	08:00
50	4	Mathematics	2	T6	Tuesday	08:00	08:30
51	2	Gujarati	2	T2	Tuesday	08:30	09:00
52	2	Hindi	2	T3	Tuesday	09:00	09:30

1	LECTURE_NO		\$ STANDARD_NO		⊕ DAY	START_TIME	€ END_TIME
53	3	Science	2	T6	Tuesday	10:00	10:30
54	3	English	2	T4	Tuesday	10:30	11:00
55	4	English	2	T4	Tuesday	11:00	11:30
56	4	Science	2	T6	Tuesday	11:30	12:00
57	5	Mathematics	2	T6	Wednesday	07:30	08:00
58	6	Mathematics	2	T6	Wednesday	08:00	08:30
59	3	Gujarati	2	T2	Wednesday	08:30	09:00
60	3	Hindi	2	T3	Wednesday	09:00	09:30
61	5	Science	2	T6	Wednesday	10:00	10:30
62	5	English	2	T4	Wednesday	10:30	11:00
63	6	English	2	T4	Wednesday	11:00	11:30
64	6	Science	2	T6	Wednesday	11:30	12:00
65	7	Mathematics	2	T6	Thursday	07:30	08:00
66	8	Mathematics	2	T6	Thursday	08:00	08:30
67	4	Gujarati	2	T2	Thursday	08:30	09:00
68	4	Hindi	2	T3	Thursday	09:00	09:30
69	7	Science	. 2	T6	Thursday	10:00	10:30
70	7	English	2	T4	Thursday	10:30	11:00
71	8	English	2	T4	Thursday	11:00	11:30
72	8	Science	2	T6	Thursday	11:30	12:00
73	9	Mathematics	2	T6	Friday	07:30	08:00
74	10	Mathematics	2	T6	Friday	08:00	08:30
75	5	Gujarati	2	T2	Friday	08:30	09:00
76	5	Hindi	2	T3	Friday	09:00	09:30
77	9	Science	2	T6	Friday	10:00	10:30
78	9	English	2	T4	Friday	10:30	11:00

	LECTURE_NO	\$ SUBJECT_NAME	♦ STANDARD_NO		♦ DAY		€ END_TIME
79	10	English	2	T4	Friday	11:00	11:30
80	10	Science	2	T6	Friday	11:30	12:00
81	1	Hindi	3	T3	Monday	07:30	08:00
82	1	Gujarati	3	T2	Monday	08:00	08:30
83	1	Social Sci	3	T4	Monday	08:30	09:00
84	1	English	3	T4	Monday	09:00	09:30
85	1	Mathematics	3	T1	Monday	10:00	10:30
86	2	Mathematics	3	T6	Monday	10:30	11:00
87	1	Science	3	T5	Monday	11:00	11:30
88	2	Science	3	T5	Monday	11:30	12:00
89	2	Hindi	3	T3	Tuesday	07:30	08:00
90	2	Gujarati	3	T2	Tuesday	08:00	08:30
91	2	Social Sci	3	T4	Tuesday	08:30	09:00
92	2	English	3	T4	Tuesday	09:00	09:30
93	3	Mathematics	3	T1	Tuesday	10:00	10:30
94	4	Mathematics	3	T6	Tuesday	10:30	11:00
95	3	Science	3	T5	Tuesday	11:00	11:30
96	4	Science	3	T5	Tuesday	11:30	12:00
97	3	Hindi	3	T3	Wednesday	07:30	08:00
98	3	Gujarati	3	T2	Wednesday	08:00	08:30
99	3	Social Sci	3	T4	Wednesday	08:30	09:00
100	3	English	3	T4	Wednesday	09:00	09:30
101	5	Mathematics	3	T1	Wednesday	10:00	10:30
102	6	Mathematics	3	T6	Wednesday	10:30	11:00
103	5	Science	3	T5	Wednesday	11:00	11:30
104	6	Science	3	T5	Wednesday	11:30	12:00

4	LECTURE_NO		\$ STANDARD_NO	↑ TEACHER_ID	∯ DAY		
105	4	Hindi	3	T3	Thursday	07:30	08:00
106	4	Gujarati	3	T2	Thursday	08:00	08:30
107	4	Social Sci	3	T4	Thursday	08:30	09:00
108	4	English	3	T4	Thursday	09:00	09:30
109	7	Mathematics	3	T1	Thursday	10:00	10:30
110	8	Mathematics	3	T6	Thursday	10:30	11:00
111	7	Science	3	T5	Thursday	11:00	11:30
112	8	Science	3	T5	Thursday	11:30	12:00
113	5	Hindi	3	T3	Friday	07:30	08:00
114	5	Gujarati	3	T2	Friday	08:00	08:30
115	5	Social Sci	3	T4	Friday	08:30	09:00
116	5	English	3	T4	Friday	09:00	09:30
117	9	Mathematics	3	Tl	Friday	10:00	10:30
118	10	Mathematics	3	T6	Friday	10:30	11:00
119	9	Science	3	T5	Friday	11:00	11:30
120	10	Science	3	T5	Friday	11:30	12:00
121	1	Hindi	4	T2	Monday	07:30	08:00
122	1	Gujarati	4	T3	Monday	08:00	08:30
123	1	Social Sci	4	T5	Monday	08:30	09:00
124	1	English	4	T5	Monday	09:00	09:30
125	1	Mathematics	4	T2	Monday	10:00	10:30
126	2	Mathematics	4	T2	Monday	10:30	11:00
127	1	Science an	4	T4	Monday	11:00	11:30
128	2	Science an	4	T6	Monday	11:30	12:00
129	2	Hindi	4	T2	Tuesday	07:30	08:00
130	2	Gujarati	4	T3	Tuesday	08:00	08:30

	LECTURE_NO	SUBJECT_NAME	STANDARD_NO		⊕ DAY	♦ START_TIME	♦ END_TIME
131	2	Social Sci	4	T5	Tuesday	08:30	09:00
132	2	English	4	T5	Tuesday	09:00	09:30
133	3	Mathematics	4	T2	Tuesday	10:00	10:30
134	4	Mathematics	4	T2	Tuesday	10:30	11:00
135	3	Science an	4	T4	Tuesday	11:00	11:30
136	4	Science an	4	T6	Tuesday	11:30	12:00
137	3	Hindi	4	T2	Wednesday	07:30	08:00
138	3	Gujarati	4	Т3	Wednesday	08:00	08:30
139	3	Social Sci	4	T5	Wednesday	08:30	09:00
140	3	English	4	T5	Wednesday	09:00	09:30
141	5	Mathematics	4	T2	Wednesday	10:00	10:30
142	6	Mathematics	4	T2	Wednesday	10:30	11:00
143	5	Science an	4	T4	Wednesday	11:00	11:30
144	6	Science an	4	T6	Wednesday	11:30	12:00
145	4	Hindi	4	T2	Thursday	07:30	08:00
146	4	Gujarati	4	T3	Thursday	08:00	08:30
147	4	Social Sci	4	T5	Thursday	08:30	09:00
148	4	English	4	T5	Thursday	09:00	09:30
149	7	Mathematics	4	T2	Thursday	10:00	10:30
150	8	Mathematics	4	T2	Thursday	10:30	11:00
151	7	Science an	4	T4	Thursday	11:00	11:30
152	8	Science an	4	T6	Thursday	11:30	12:00
153	5	Hindi	4	T2	Friday	07:30	08:00
154	5	Gujarati	4	T3	Friday	08:00	08:30
155	5	Social Sci	4	T5	Friday	08:30	09:00
156	5	English	4	T5	Friday	09:00	09:30
157	9	Mathematics	4	T2	Friday	10:00	10:30
158	10	Mathematics	4	T3	Friday	10:30	11:00
159	9	Science an	4	T4	Friday	11:00	11:30
160	10	Science an	4	T6	Friday	11:30	12:00

Working Day

Create

```
create table working_day
(
   day_no number(3),
   date_ date not null unique,
   primary key(day_no)
);
```

Insert

```
insert into working_day values(1,'01-jun-2019'); insert into working_day values(2,'02-jun-2019'); insert into working_day values(3,'03-jun-2019'); insert into working_day values(4,'04-jun-2019'); insert into working_day values(5,'05-jun-2019');
```

	DAY_NO	DATE_
1	1	01-06-19
2	2	02-06-19
3	3	03-06-19
4	4	04-06-19
5	5	05-06-19

Attendance

Create

```
create table attendance
(
   day_no number(3),
```

```
person_id varchar(10),
status varchar(15) check (status in('Present', 'Absent')),
primary key(day_no, person_id),
foreign key(day_no) references working_day,
foreign key(person_id) references person
);
```

Insert

```
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0001', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0002','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0003','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0004', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0005','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0006','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0007', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0008', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0009','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0010','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0011', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0012', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0013','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0014','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0015','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0016', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0017', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0018','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0019','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0020', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0021','Present');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0022','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0023','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0024', 'Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0025', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0026','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0027','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0028','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0029','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0030','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0031','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0032', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0033', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0034','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0035','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0036','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0037', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0038','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0039','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0040','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0041', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0042','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0043','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0044','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0045', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0046', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0047','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0048','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (1, 'P0049', 'Present');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (1,'P0050','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0001','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0002', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0003', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0004','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0005','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0006','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0007','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0008','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0009','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0010', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0011', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0012','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0013','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0014', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0015','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0016','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0017','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0018','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0019', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0020','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0021','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0022','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0023', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0024','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0025','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0026','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0027', 'Absent');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0028','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0029','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0030', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0031', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0032','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0033','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0034','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0035','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0036','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0037','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0038', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0039', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0040','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0041','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0042','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0043','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0044','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0045','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0046','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (2, 'P0047', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0048','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0049','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (2,'P0050','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0001', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0002','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0003','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0004','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0005', 'Present');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0006','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0007','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0008', 'Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0009', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0010','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0011','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0012','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0013','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0014','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0015','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0016', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0017', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0018','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0019','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0020', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0021','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0022','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0023','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0024','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0025', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0026','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0027','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0028','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0029', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0030','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0031','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0032','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0033', 'Present');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0034','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0035','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0036', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0037', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0038','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0039','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0040','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0041','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0042','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0043','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0044', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (3, 'P0045', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0046','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0047','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0048','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0049','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (3,'P0050','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0001','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0002','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0003', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0004','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0005','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0006','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0007', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0008','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0009','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0010', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0011', 'Present');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0012','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0013', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0014', 'Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0015', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0016','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0017','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0018','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0019','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0020','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0021', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0022', 'Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0023', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0024','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0025','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0026','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0027', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0028','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0029','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0030','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0031', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0032','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0033','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0034','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0035', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0036', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0037','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0038','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0039', 'Present');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0040','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0041','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0042', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0043', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0044','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0045','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0046','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0047','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0048','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (4,'P0049','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (4, 'P0050', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0001', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0002','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0003','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0004','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0005', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0006','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0007','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0008','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0009', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0010','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0011','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0012','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0013', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0014','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0015','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0016','Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0017', 'Present');
```

```
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0018','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0019','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0020', 'Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0021', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0022','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0023','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0024','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0025','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0026','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0027','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0028', 'Absent');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0029', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0030','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0031','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0032', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0033','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0034','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0035','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0036','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0037', 'Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0038','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0039','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0040','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0041', 'Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0042','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0043','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0044','Present');
Insert into ATTENDANCE (DAY NO, PERSON ID, STATUS) values (5, 'P0045', 'Present');
```

Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0046','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0047','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0048','Present');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0049','Absent');
Insert into ATTENDANCE (DAY_NO,PERSON_ID,STATUS) values (5,'P0050','Absent');

	DAY_NO	♦ PERSON_ID	♦ STATUS
1	1	P0001	Present
2	1	P0002	Absent
3	1	P0003	Present
4	1	P0004	Absent
5	1	P0005	Present
6	1	P0006	Present
7	1	P0007	Present
8	1	P0008	Absent
9	1	P0009	Present
10	1	P0010	Present
11	1	P0011	Present
12	1	P0012	Absent
13	1	P0013	Aheent

Person Mobile

Create

```
CREATE TABLE person_mobile(

person_id varchar(10),

mobile_no number(10, 0) not null,

foreign key(person_id) REFERENCES person(person_id),

primary key(person_id, mobile_no)

);
```

Insert

Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0001', 9553074646); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0002', 9638057031); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0003', 8138736952); Insert into PERSON_MOBILE (PERSON_ID,MOBILE_NO) values ('P0004',8531197969); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0005', 9583812584); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0006', 9011249400); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0007', 6710889329); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0008', 9680047496); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0009', 8962702365); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0010', 9106369704); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0011', 7762432744); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0012',7123005087); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0013', 7849154999); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0014',9458602193); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0015', 7207543413); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0016', 8816679981); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0017', 8371513326); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0018', 9099882181); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0019', 7519945390); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0020', 9878700428); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0021', 6916927805); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0022',7709588290); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0023', 8640412081); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0024', 8761085515); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0025', 7650690731); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0026', 8273103938); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0027', 8792601171);

Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0028', 9451081179); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0029', 7477337500); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0030',7127920824); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0031',9519015364); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0032',7260811259); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0033', 9846259640); Insert into PERSON_MOBILE (PERSON_ID,MOBILE_NO) values ('P0034',7435568897); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0035', 7016575585); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0036', 8566385570); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0037', 9170270463); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0038', 9944874306); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0039', 7368225643); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0040', 7833172416); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0041', 9785101199); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0042', 7646152078); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0043', 6880614712); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0044',9748023586); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0045',8267619643); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0046', 7065129100); Insert into PERSON MOBILE (PERSON ID, MOBILE NO) values ('P0047', 8978934949); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0048', 8469578542); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0049',7209797377); Insert into PERSON_MOBILE (PERSON_ID, MOBILE_NO) values ('P0050', 7933879323);

	₱ PERSON_ID	MOBILE_NO
1	P0001	9553074646
2	P0002	9638057031
3	P0003	8138736952
4	P0004	8531197969
5	P0005	9583812584
6	P0006	9011249400
7	P0007	6710889329
8	P0008	9680047496
9	P0009	8962702365
10	P0010	9106369704
11	P0011	7762432744
12	P0012	7123005087
13	P0013	7849154999
14	P0014	9458602193
15	P0015	7207543413
16	P0016	8816679981
17	P0017	8371513326
18	P0018	9099882181
19	P0019	7519945390
20	P0020	9878700428
21	P0021	6916927805
22	P0022	7709588290
23	P0023	8640412081
24	P0024	8761085515
25	P0025	7650690731
26	P0026	8273103938

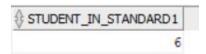
27	P0027	8792601171
28	P0028	9451081179
29	P0029	7477337500
30	P0030	7127920824
31	P0031	9519015364
32	P0032	7260811259
33	P0033	9846259640
34	P0034	7435568897
35	P0035	7016575585
36	P0036	8566385570
37	P0037	9170270463
38	P0038	9944874306
39	P0039	7368225643
40	P0040	7833172416
41	P0041	9785101199
42	P0042	7646152078
43	P0043	6880614712
44	P0044	9748023586
45	P0045	8267619643
46	P0046	7065129100
47	P0047	8978934949
48	P0048	8469578542
49	P0049	7209797377
50	P0050	7933879323

Queries (DQL)

Find number of Students

Eg: Find number of students of standard 3rd.

select count(*) as student_in_standard1 from (student natural join enrollment) where standard_no=1;



Find lecture timings

Eg. 1: Find when is the second mathematics lecture of the week in standard 2nd.

select day, start_time, end_time from lecture where lecture_no =2 and subject_name='Mathematics' and standard_no=2;

Eg. 2: Find start time and end time of Hindi lecture in standard 2nd on Tuesday.

select start_time,end_time from lecture where subject_name='Hindi' and standard_no=2 and day='Tuesday';



Find classroom

Eg: Find the classroom allocated to standard 3rd.

select room_no,building_no from standard where standard_no=3;



Find classroom capacity

Eg: Find the capacity of classroom in which standard 3rd studies.

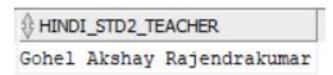
select capacity from (standard natural join classroom) where standard no =3;



Find teacher

Eg: Find the name of teachers who teach Hindi in standard 2nd.

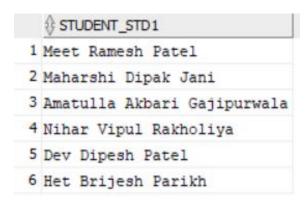
select distinct F_name||''||M_name||''||L_name as Hindi_Std2_Teacher from (lecture natural join teacher natural join employee natural join person) where subject_name='Hindi' and standard_no=2;



Find students

Eg: Find names of students who study in standard 1st.

select F_name||''||M_name||''||L_name as Student_Std1 from (person natural join student natural join enrollment) where standard_no=1;



Find salary of employees

Eg: Find salary of all teachers with their names.

select F_name||''||M_name||''||L_name as Teacher_Name, Salary from (person natural join employee natural join teacher);

	↑ TEACHER_NAME	SALARY	
	Ganjawala Samarth Sanjaybhai	40000	
	Garasia Nrushans Amrutbhai	40000	
	Gohel Akshay Rajendrakumar	40000	
	Gohil Nana Gambhirbhai	40000	
i	Gohil Sumit Jitendrakumar	40000	
į	Jambudiya Heet Ketanbhai	40000	

Find student's enrollent

Eg: Find the enrollment of student with student ID: S12.

select enrolled_date, standard_no, roll_no from (enrollment) where student_id='S12';



Find time table

Eg: Find time table of standard 1st on Monday.

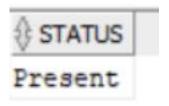
select lecture_no,subject_name,standard_no,start_time,end_time from lecture where standard_no = 1 and day='Monday';

LECTURE_NO	\$ SUBJECT_NAME	\$ STANDARD_NO	♦ START_TIME	♦ END_TIME
1	Mathematics	1	07:30	08:00
2	Mathematics	1	08:00	08:30
1	Hindi	1	08:30	09:00
1	Gujarati	1	09:00	09:30
1	English	1	10:00	10:30
1	Science	1	10:30	11:00
2	Science	1	11:00	11:30
2	English	1	11:30	12:00

Find attendance

Eg. 1: Find whether Student with student id S4 was present on 3rd June, 2019 or not.

select status from (student natural join person natural join attendance) where day_no=(select day_no from working_day where date_='03-JUN-2019') and student_id='S4';



Eg. 2: Find whether roll number 3 of standard 2nd was present on 3rd June, 2019 or not.

```
select day_no from working_day where date_='03-JUN-2019'
```

);



Find mobile number

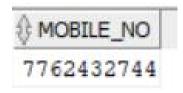
Eg: Find mobile number of student of standard 2nd with roll number 5.

Subquery method:

```
select mobile_no from person_mobile where person_id=
(
   select person_id from student where student_id=
   (
    select student_id from enrollment where roll_no=5 and standard_no=2
   )
);
```

Natural join method:

select mobile_no from enrollment natural join student natural join person natural join person_mobile where standard_no=2 and roll_no=5;



Find books

Find books of standard 3rd.

select book from subject where standard_no = 3;

```
BOOK

Mathematics, Std. 3, GCERT

Hindi language, Std. 3, GCERT

Gujarati, Std. 3, GCERT

English, Std. 3, GCERT

Science for beginners, GCERT

Social Science, Std. 3, GCERT
```

References

- Database System Concepts by Silberschatz, Korth and Sudarshan, Sixth Edition.
- Database Management System, Part I, course on Infosys Springboard (for concepts of normalization).
 https://infyspringboard.onwingspan.com/web/en/app/toc/lex_auth_0127580
 6667282022456 shared/overview
- Oracle Database Express Edition (as a database service), and Oracle SQL Developer (as an SQL IDE).
- GitMind (for ER Diagram creation): https://gitmind.com/
- DBDiagram (for relational schema creation): https://dbdiagram.io/