

Voting Systems Database

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Project Phase 2

Relational Schema, SQL, Queries, Transactions

Queries:

1. Q1 Find all candidate running in the election, their DOB, and party.

SELECT FirstName, LastName, CandidateDOB, CandidateParty FROM Candidate;

2. Q2 Display the voters last name which starts with “s”.

SELECT LastName, VoterDOB, VoterParty FROM Voter WHERE LastName LIKE ‘s%’;

3. Q3 Find all the poll location

SELECT * FROM Locations;

4. Q4 what was outcome for the Volunteer Location.

SELECT * FROM VolunteerLocation;

5. Q5 Find all the volunteer, their location, and age

SELECT FirstName, LastName, VolunteerDOB, VolunteerLocation FROM Volunteer;

6. Q6 What is the DOB for the voters and which location did they go to

SELECT VoterDOB, Locations FROM Voter INNER JOIN Votes

ON Voter.Voter_id = Votes.Voter_id;

7. Q7 Find all voter who are republican.

SELECT FirstName, LastName, VoterParty FROM Voter WHERE VoterParty = “Republican”;

8. Q8 Find all voter who are democrat.

SELECT FirstName, LastName, VoterParty FROM Voter WHERE VoterParty = “Democrat”;

Transactions:

1. T1 Delete Voter last name 'Smith'

DELETE FROM Voter WHERE LastName= "Smith";

2. T2 Update voter party 'Cliff Ikin' to Democratic.

UPDATE Voter

SET VoterParty = 'Democrat'

WHERE FirstName = 'Cliff' AND LastName = 'Ikin';

3. T3 Add new Voter into Voter table.

INSERT INTO Voter (Voter_id, FirstName, LastName, VoterDOB, VoterParty)

VALUES(0888, 'Bernie', 'Sanders', to_date ('09/08/1941','DD/MM/YYYY'), 'Democratic')

Relational Schema

Volunteer Table				
Volunteer_id	FirstName	LastName	VolunteerDOB	VolunteerLocation
001	Gene	Short	10/28/1996	Marietta
002	Bettye	Vipond	12/03/1990	Kennesaw
003	Kieron	Henry	08/15/1994	Atlanta

Location Table			
Location_id	Voter_id	Volunteer_id	PollLocation
1001	0111	001	Marietta
1002	0222	002	Kennesaw
1003	0333	003	Atlanta
1003	0444	003	Atlanta
1001	0555	001	Marietta
1002	0666	002	Kennesaw
1001	0777	001	Marietta

Volunteer Location	
VolunteerLocation	Outcome
Marietta	Democratic
Kennesaw	Republican
Atlanta	Democratic

Voter Table				
Voter_id	FirstName	LastName	VoterDOB	VoterParty
0111	John	William	04/19/1991	Democrat
0222	Cliff	Ikin	09/25/1988	Republican
0333	Miley	Morin	01/23/1972	Republican
0444	Elfrieda	Wootton	12/25/1990	Democrat
0555	Jonnie	Anderson	03/02/1991	Democrat
0666	Alphonso	Saylor	11/05/1985	Republican
0777	James	Smith	02/29/1999	Democrat

Candidate Table				
Candidate_id	FirstName	LastName	CandidateDOB	CandidateParty
100	Donald	Trump	06/14/1946	Republican
200	Joe	Biden	11/20/1942	Democrat

Votes Table	
Voter	Location
0111	Marietta
0222	Kennesaw
0333	Atlanta
0444	Atlanta
0555	Marietta
0666	Kennesaw
0777	Marietta

SQL:

```
drop table Volunteer;
drop table VolunteerLocation;
drop table Candidate;
drop table Locations;
drop table Voter;
drop table Votes;

create table Candidate (
    Candidate_id int primary key,
    FirstName varchar(20),
    LastName varchar(20),
    CandidateDOB date,
    CandidateParty varchar(20),
    FOREIGN KEY(Candidate_id) REFERENCES Volunteer(Volunteer_id)
);
insert into Candidate values
    (100, 'Donald', 'Trump', to_date ('06/14/1946','DD/MM/YYYY'), 'Republican');
insert into Candidate values
    (200,'Joe', 'Biden', to_date ('11/20/1942','DD/MM/YYYY'), 'Democrat');

create table Voter (
    Voter_id int primary key,
    FirstName varchar(20),
    LastName varchar(20),
    VoterDOB date,
    VoterParty varchar(20) foreign key references Candidate(CandidateParty)
);
insert into Voter values
    (0111, 'John', 'William', to_date ('04/19/1991','DD/MM/YYYY'), 'Democrat');
insert into Voter values
    (0222, 'Cliff', 'Ikin', to_date ('09/25/1988','DD/MM/YYYY'), 'Republican');
insert into Voter values
    (0333, 'Miley', 'Morin', to_date ('01/23/1972','DD/MM/YYYY'), 'Republican');
insert into Voter values
    (0444, 'Elfrieda', 'Wootton', to_date ('12/25/1990','DD/MM/YYYY'), 'Democrat'
);
insert into Voter values
    (0555, 'Jonnie', 'Anderson', to_date ('03/02/1991','DD/MM/YYYY'), 'Democrat')
;
insert into Voter values
    (0666, 'Alphonso', 'Saylor', to_date ('11/05/1985','DD/MM/YYYY'), 'Republican
');
insert into Voter values
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        (0777, 'James', 'Smith', to_date ('02/29/1999', 'DD/MM/YYYY'), 'Democrat');

create table Votes (
    Voter_id int,
    Locations varchar(20),
    constraint Votes1 primary key (Voter_id, Locations),
    constraint Votes2 foreign key (Voter_id)
        references Voter(Voter_id) on delete cascade,
    constraint Votes3 foreign key (Locations)
        references Locations(PollLocation) on delete cascade
);
insert into Votes values
    (0111, 'Marietta');
insert into Votes values
    (0222, 'Kennesaw');
insert into Votes values
    (0333, 'Atlanta');
insert into Votes values
    (0444, 'Atlanta');
insert into Votes values
    (0555, 'Marietta');
insert into Votes values
    (0666, 'Kennesaw');
insert into Votes values
    (0777, 'Marietta');

create table Volunteer(
    Volunteer_id int primary key,
    FirstName varchar(20),
    LastName varchar(20),
    VolunteerDOB data,
    VolunteerLocation varchar(30) foreign key references VolunteerLocation(Vo
lunteerLocation),
    FOREIGN KEY(Volunteer_id) REFERENCES Candidate(Candidate_id)
);
insert into Volunteer values
    (001, 'Gene', 'Short', to_date('10/28/1996', 'DD/MM/YYYY'), 'Marietta');
insert into Volunteer values
    (002, 'Bettye', 'Vipond', to_date('12/03/1990', 'DD/MM/YYYY'), 'Kennesaw');
insert into Volunteer values
    (003, 'Kieron', 'Henry', to_date('08/15/1994', 'DD/MM/YYYY'), 'Atlanta');

create table VolunteerLocation(
    VolunteerLocation varchar(30) primary key,
    Outcome varchar(15)

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);
insert into VolunteerLocation values
    ('Marietta','Democrat');
insert into VolunteerLocation values
    ('Kennesaw','Republican');
insert into VolunteerLocation values
    ('Atlanta','Democrat');

create table Locations(
    Location_id int primary key,
    Voter_id int foreign key references Voter(Voter_id),
    Volunteer_id int foreign key references Volunteer(Volunteer_id),
    PollLocation varchar(30) foreign key references Votes(Location)
);
insert into Locations values
    (1001,0111,001,'Marietta');
insert into Locations values
    (1002,0222,002,'Kennesaw');
insert into Locations values
    (1003,0333,003,'Atlanta');
insert into Locations values
    (1004,0444,003,'Atlanta');
insert into Locations values
    (1005,0555,001,'Marietta');
insert into Locations values
    (1006,0666,002,'Kennesaw');
insert into Locations values
    (1007,0777,001,'Marietta');
```