Online Voting System

CASE:Student Union Election

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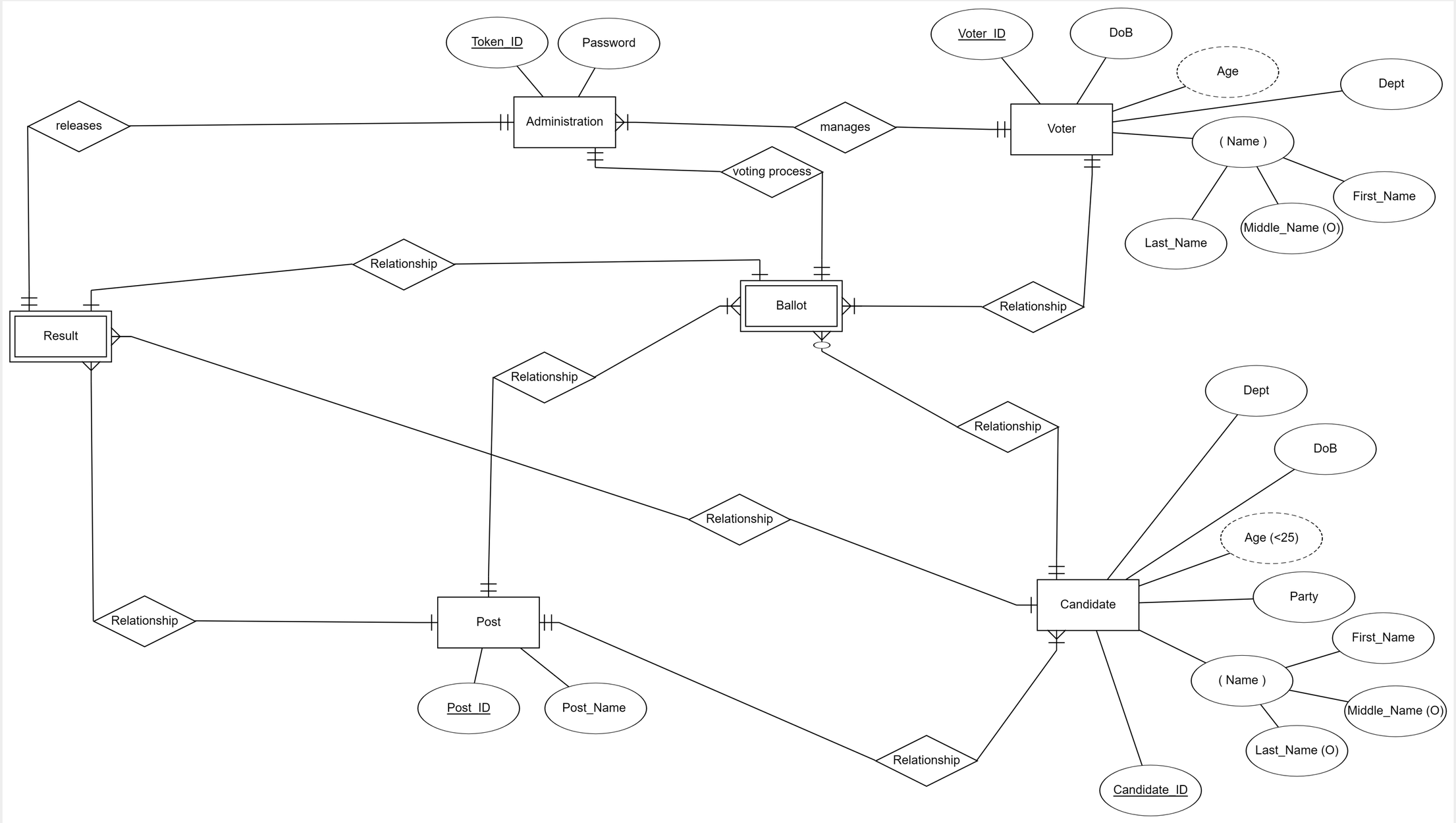
Today's Agenda

1. TABLES AND ATTRIBUTES
2. ER DIAGRAM
3. RELATIONAL SCHEMA
4. SQL QUERY
5. REVERSE ENGINEERING

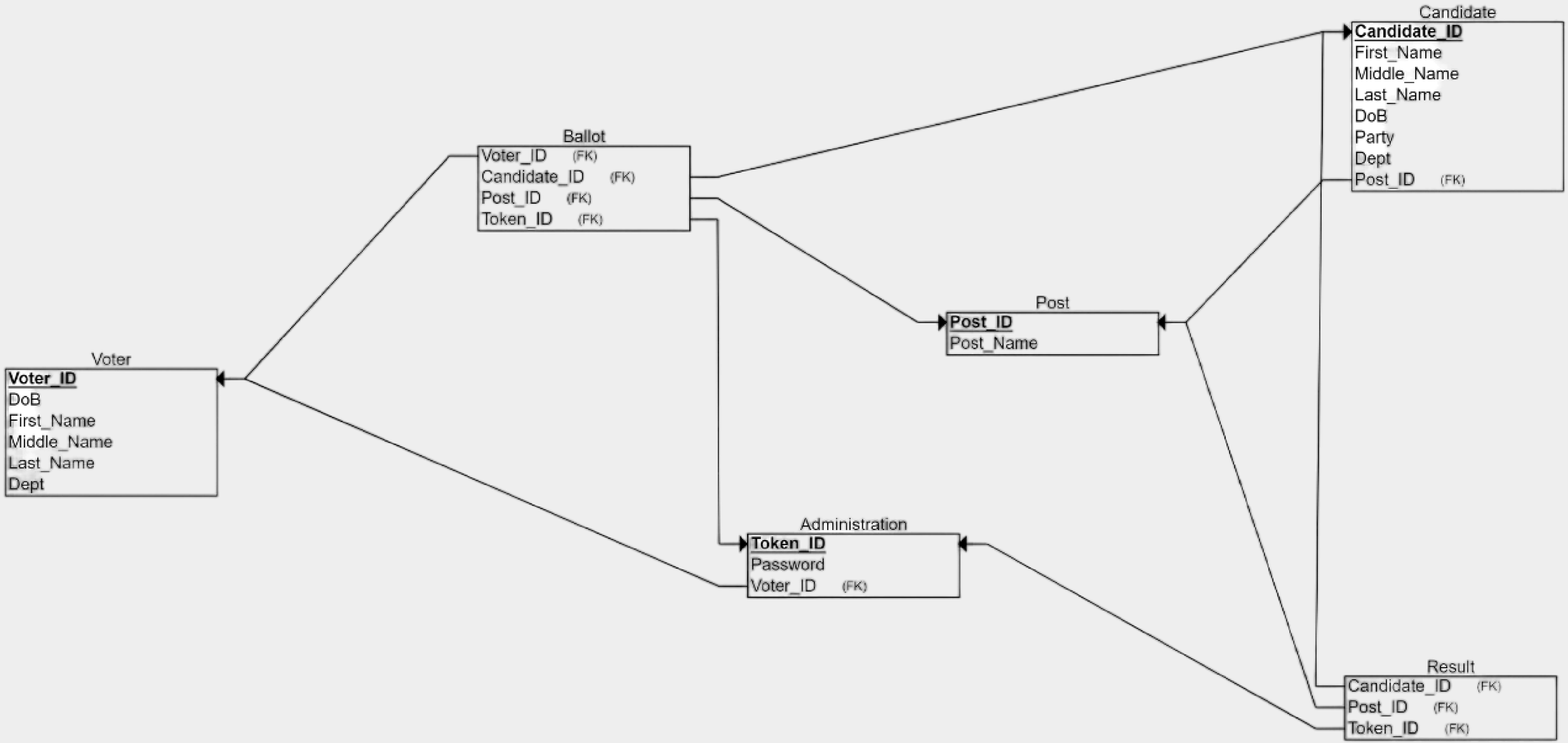
TABLES AND ATTRIBUTES

Table name	Attributes
Voter	**Voter ID,** Name, Date of Birth, Deptartment
Candidate	**Candidate ID**, *Post ID*, Name, Date of Birth, Party, Department
Post	**Post ID**, Post Name
Administration	**Token ID**, *Voter ID*, Password
Ballot	*Voter ID, Token ID, Candidate ID, Post ID*
Result	*Token ID, Candidate ID, Post ID*

ER DIAGRAM


Token_ID
Password
Administration
releases
manages
Voter_ID
DoB
Age
Dept
Voter
(Name)
First_Name
Middle_Name (O)
Last_Name
voting process
Relationship
Ballot
Result
Relationship
Relationship
Relationship
Relationship
Relationship
Dept
DoB
Age (<25)
Party
Candidate
First_Name
(Name)
Middle_Name (O)
Last_Name (O)
Candidate_ID
Post
Post_ID
Post_Name

RELATIONAL SCHEMA



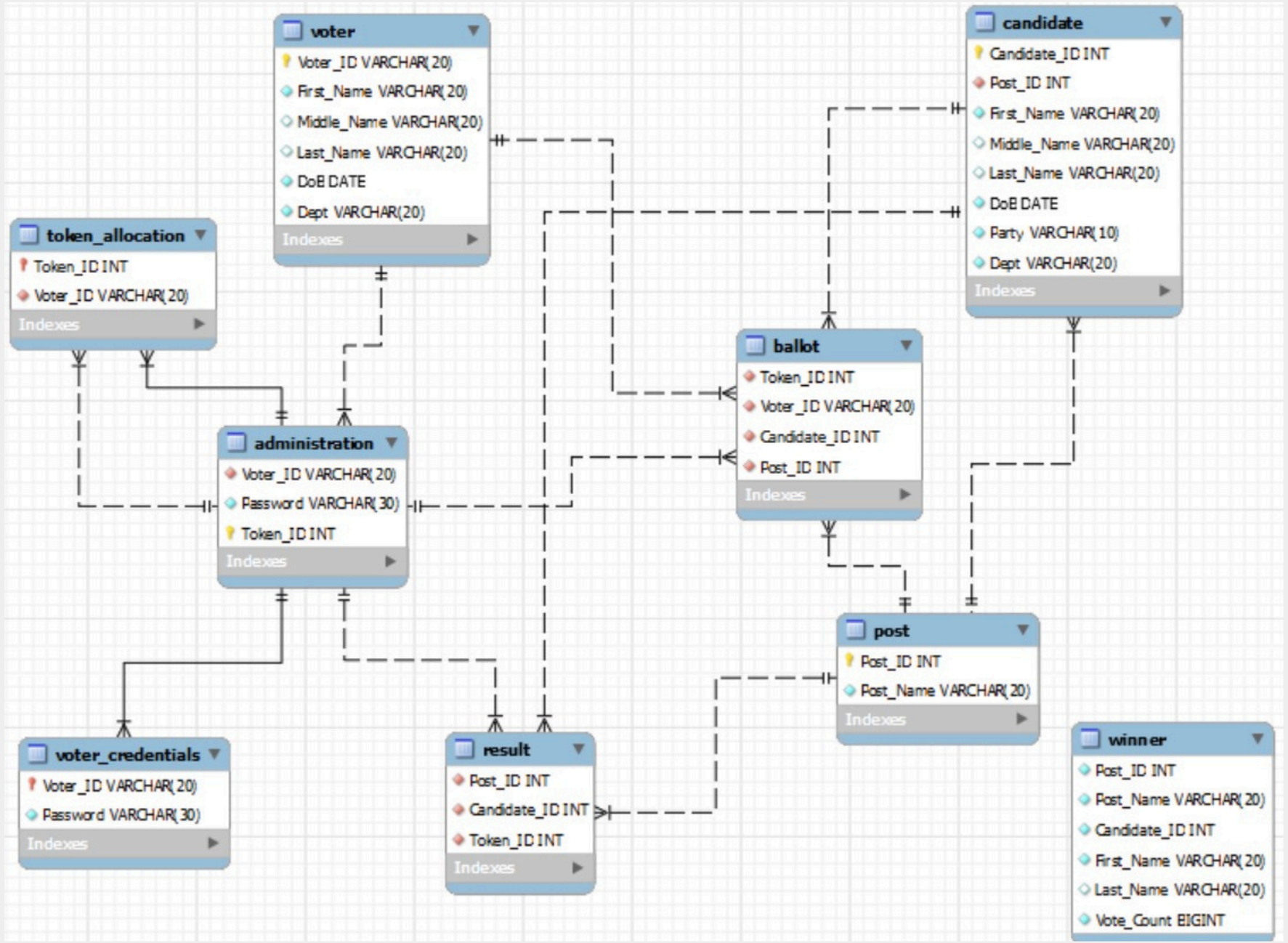
SQL QUERY

```sql
CREATE DATABASE VOTING_SYSTEM;
USE VOTING_SYSTEM;

CREATE TABLE Voter
(
  Voter_ID VARCHAR(20) NOT NULL,
  First_Name VARCHAR(20) NOT NULL,
  Middle_Name VARCHAR(20),
  Last_Name VARCHAR(20),
  DoB DATE NOT NULL,
  Dept VARCHAR(20) NOT NULL,
  PRIMARY KEY (Voter_ID)
);

CREATE TABLE Post
(
  Post_ID INT NOT NULL,
  Post_Name VARCHAR(20) NOT NULL,
  PRIMARY KEY (Post_ID)
);
```

```sql
CREATE TABLE Candidate
(
  Candidate_ID INT NOT NULL auto_increment,
  Post_ID INT NOT NULL,
  First_Name VARCHAR(20) NOT NULL,
  Middle_Name VARCHAR(20),
  Last_Name VARCHAR(20),
  DoB DATE NOT NULL,
  Party VARCHAR(10) NOT NULL,
  Dept VARCHAR(20) NOT NULL,
  PRIMARY KEY (Candidate_ID),
  FOREIGN KEY (Post_ID) REFERENCES Post(Post_ID)
);

CREATE TABLE Ballot
(
  Token_ID INT NOT NULL,
  Voter_ID VARCHAR(20) NOT NULL,
  Candidate_ID INT NOT NULL,
  Post_ID INT NOT NULL,
  FOREIGN KEY (Voter_ID) REFERENCES Voter(Voter_ID),
  FOREIGN KEY (Candidate_ID) REFERENCES Candidate(Candidate_ID),
  FOREIGN KEY (Post_ID) REFERENCES Post(Post_ID),
  FOREIGN KEY (Token_ID) REFERENCES Administration(Token_ID)
);
```

Let's Reverse!

REVERSE ENGINEERING



WINNER

Post_ID	Post_Name	Candidate_ID	First_Name	Last_Name	Vote_Count
101	President	1	Aarav	Patel	5
102	Vice President	6	Aaradhya	Singh	3
102	Vice President	7	Advait	Kumar	3
103	Cultural Sec.	13	Kabir	Shah	4
104	Sports Sec.	19	Saavi	Patel	5
105	Literary Sec.	25	Soham	Patel	4

Thank you for joining!

Have a great weekend!