Online Voting System

CASE:Student Union Election

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🔍 Today's Agenda

1 TABLES AND ATTRIBUTES
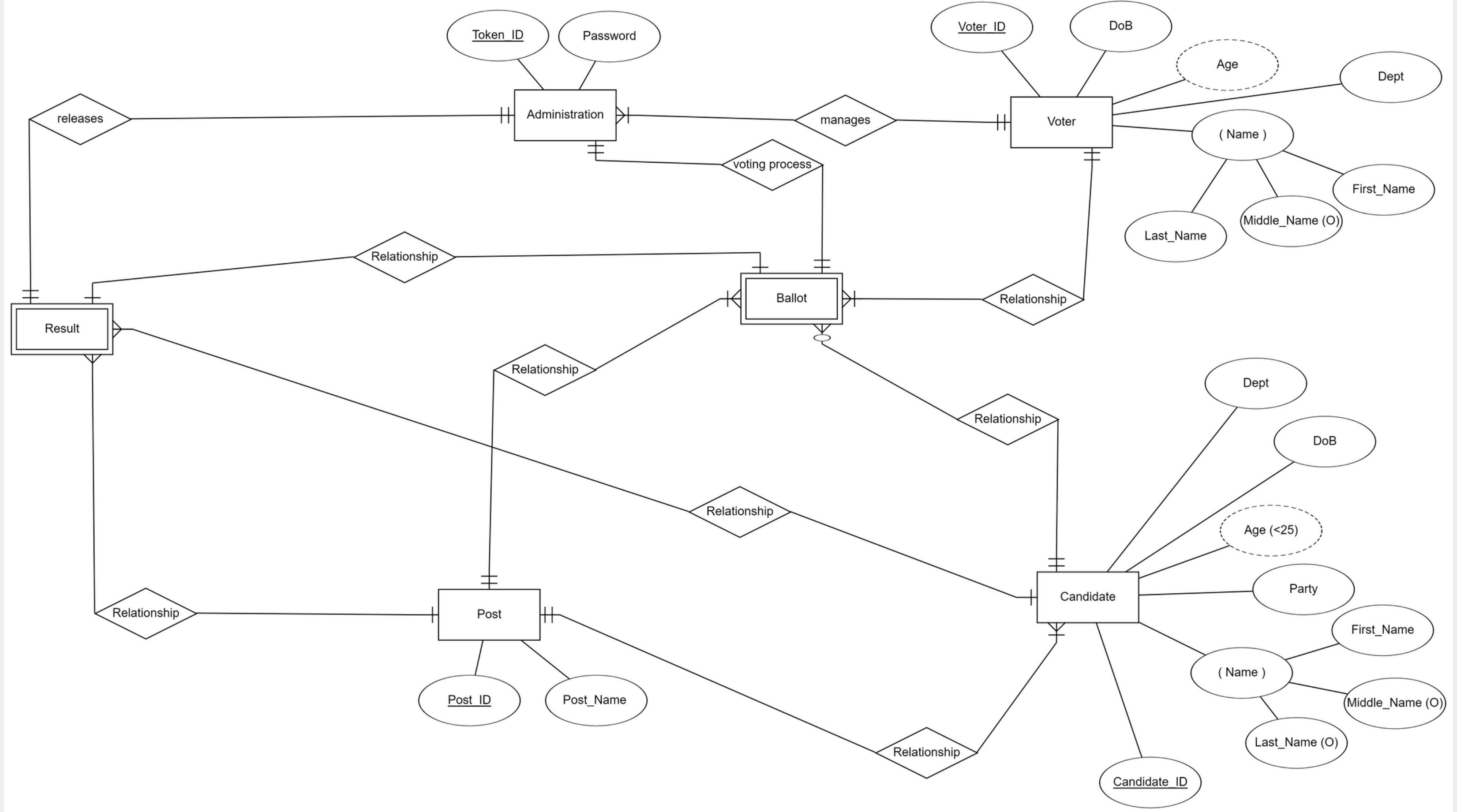
2 ER DIAGRAM

3 RELATIONAL SCHEMA

4 SQL QUERY
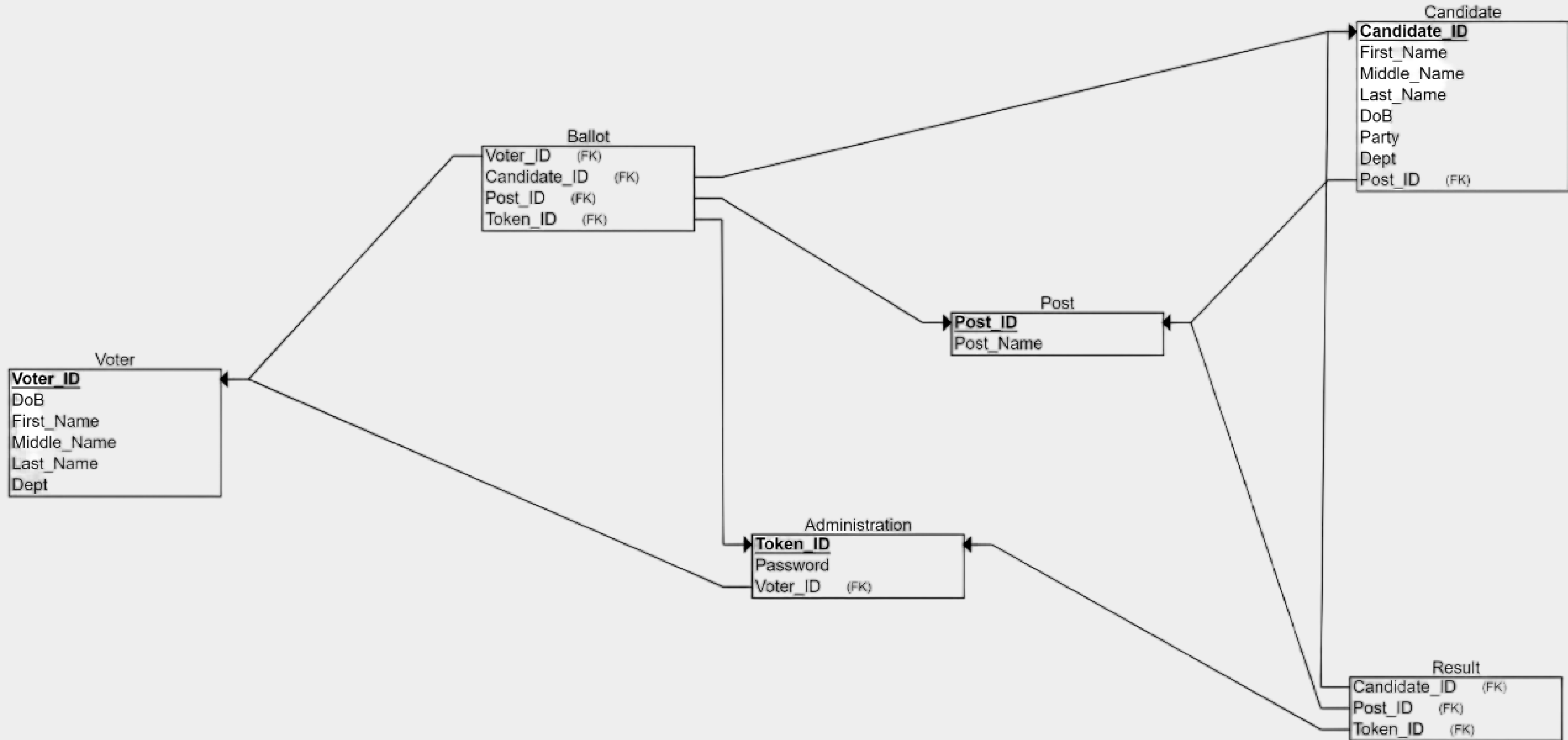
5 REVERSE ENGINEERING

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

RELATIONAL SCHEMA

Candidate
- **Candidate_ID**
- First_Name
- Middle_Name
- Last_Name
- DoB
- Party
- Dept
- Post_ID (FK)

Ballot
- Voter_ID (FK)
- Candidate_ID (FK)
- Post_ID (FK)
- Token_ID (FK)

Post
- **Post_ID**
- Post_Name

Voter
- **Voter_ID**
- DoB
- First_Name
- Middle_Name
- Last_Name
- Dept

Administration
- **Token_ID**
- Password
- Voter_ID (FK)

Result
- Candidate_ID (FK)
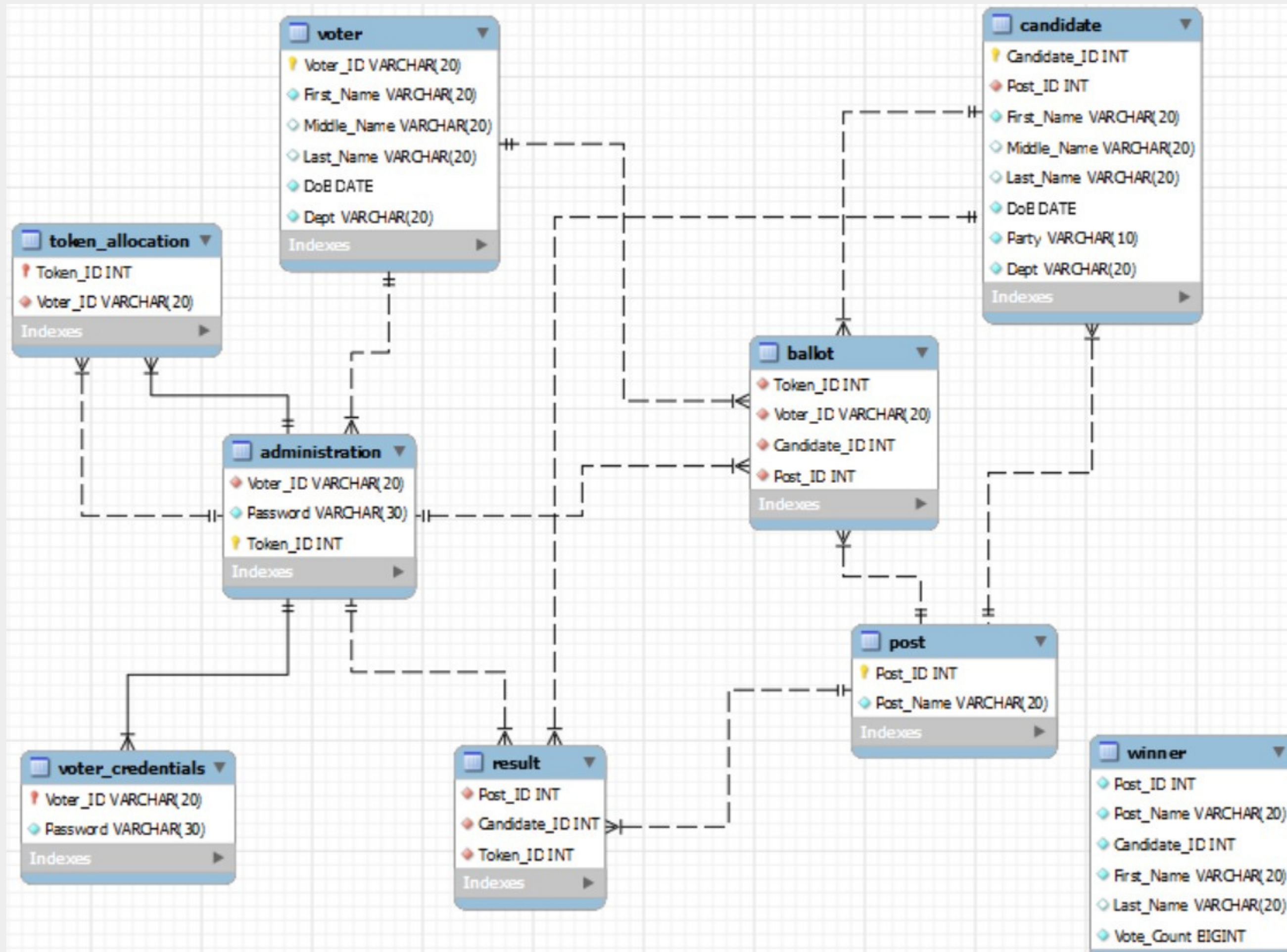- Post_ID (FK)
- Token_ID (FK)

SQL QUERY

```sql
1   CREATE DATABASE VOTING_SYSTEM;
2   USE VOTING_SYSTEM;
3
4   CREATE TABLE Voter
5   (
6       Voter_ID VARCHAR(20) NOT NULL,
7       First_Name VARCHAR(20) NOT NULL,
8       Middle_Name VARCHAR(20),
9       Last_Name VARCHAR(20),
10      DoB DATE NOT NULL,
11      Dept VARCHAR(20) NOT NULL,
12      PRIMARY KEY (Voter_ID)
13  );
14
15  CREATE TABLE Post
16  (
17      Post_ID INT NOT NULL,
18      Post_Name VARCHAR(20) NOT NULL,
19      PRIMARY KEY (Post_ID)
20  );
```

```sql
31  CREATE TABLE Candidate
32  (
33      Candidate_ID INT NOT NULL auto_increment,
34      Post_ID INT NOT NULL,
35      First_Name VARCHAR(20) NOT NULL,
36      Middle_Name VARCHAR(20),
37      Last_Name VARCHAR(20),
38      DoB DATE NOT NULL,
39      Party VARCHAR(10) NOT NULL,
40      Dept VARCHAR(20) NOT NULL,
41      PRIMARY KEY (Candidate_ID),
42      FOREIGN KEY (Post_ID) REFERENCES Post(Post_ID)
43  );
44
45  CREATE TABLE Ballot
46  (
47      Token_ID INT NOT NULL,
48      Voter_ID VARCHAR(20) NOT NULL,
49      Candidate_ID INT NOT NULL,
50      Post_ID INT NOT NULL,
51      FOREIGN KEY (Voter_ID) REFERENCES Voter(Voter_ID),
52      FOREIGN KEY (Candidate_ID) REFERENCES Candidate(Candidate_ID),
53      FOREIGN KEY (Post_ID) REFERENCES Post(Post_ID),
54      FOREIGN KEY (Token_ID) REFERENCES Administration(Token_ID)
55  );
```

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!