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**Practical 06:** Identify the classes. Classify them as weak and strong classes and draw the class diagram for the specified Case Study.

## For E-Voting System

### Strong Classes

Strong classes are the core components of the system. They represent the primary entities that drive the system's key functionality.

#### Characteristics:

- Essential for the system to operate.
- High cohesion with other core classes.
- They contain critical attributes and methods that are necessary for completing the system's primary tasks.
- Their absence or malfunction can cause the system to fail or not meet its purpose.

Voter
+ Voter ID + Name + Age + Address + Eligibility Status
+ Register() + Authenticate() + CastVote()

Election
+ Election ID + Election Name + Start Date + End Date
+ ScheduleElection() + AnnounceResults() + CloseElection()

Candidate
+ Candidate ID + Name + Party + Election ID
+ RegisterCandidate() + GetVotes()

Vote
+ Vote ID + Voter ID + Candidate ID + Timestamp
+ SubmitVote() + ValidateVote()

Admin
+ Admin ID + Name + Email + Permissions
+ ManageElection() + VerifyVoter() + ApproveCandidate()

Results
+ Election ID + Total Votes + Candidate ID + Votes Count
+ CalculateResult() + AnnounceWinner()

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## **Weak Classes**

Weak classes are supporting or utility components. They assist the strong classes by handling auxiliary functions.

### **Characteristics:**

- Not critical on their own but help the system function smoothly.
- They often manage background operations, such as data storage, authentication, or notifications.
- Their absence might not break the system but could degrade performance or user experience.

