



# **INFO 5100/INFO 5001**

## **Design and Implement An online Voting App**



# Who are the players?

- Election slot –positions-roles
- Election officials
  - Managing the election
- Locations, areas, communities, divisions, and subdivisions
- Candidates who want to run for positions
- People in the community
- People who are qualified to vote
- People who actually vote

# Steps

- Election officials are selected to run the election
- Election is configured for district coverage for different areas, and electable positions created
- Candidates sign up and declare their candidacy for the positions they want to run for
- Eligible citizens are given vote ballots to vote for the candidates

Election Coverage

District

Precinct

Precinct

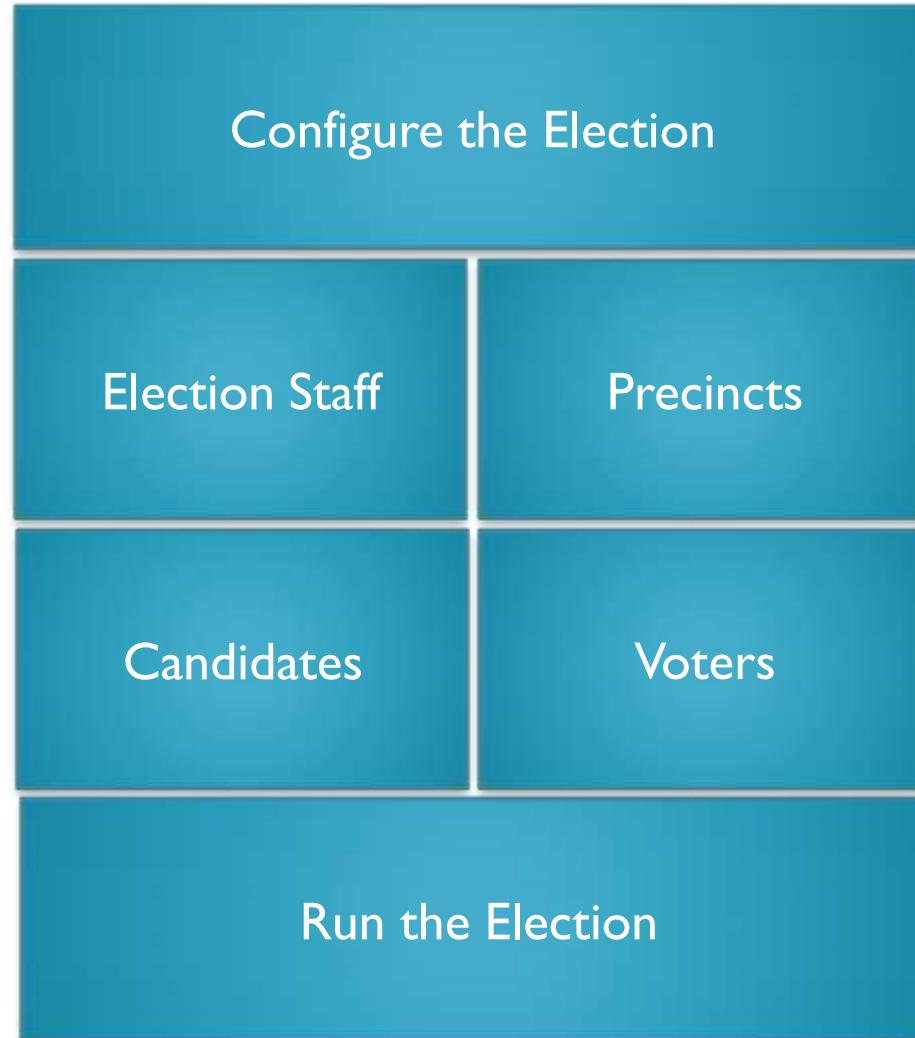
House

Family

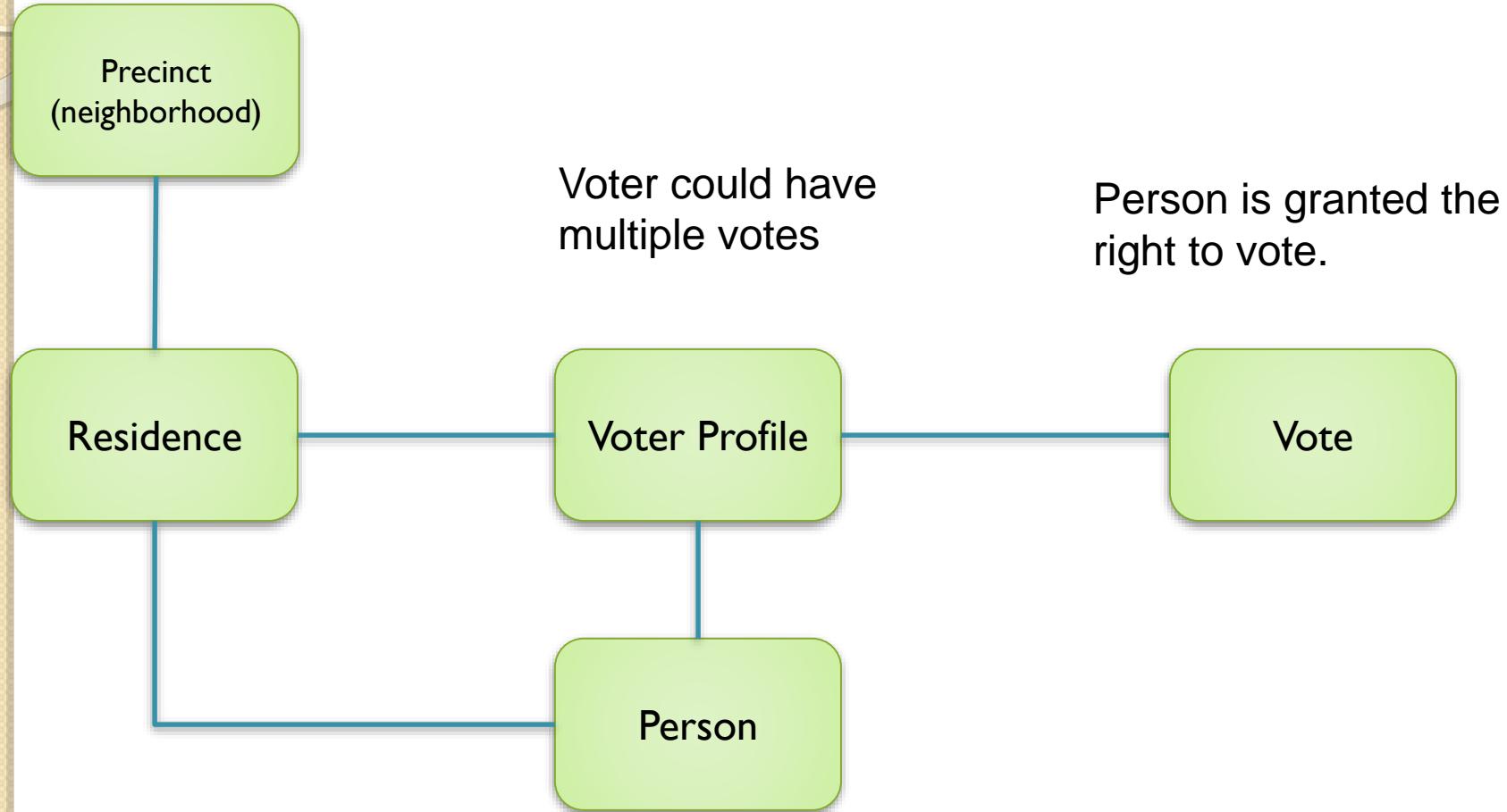
Person

Voter

# Election Process Steps



# Persons who have a right to vote

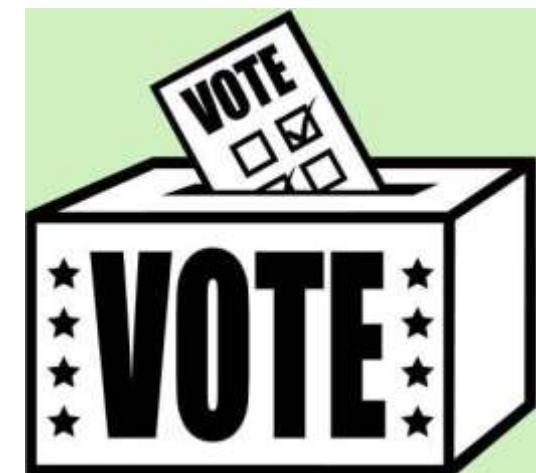
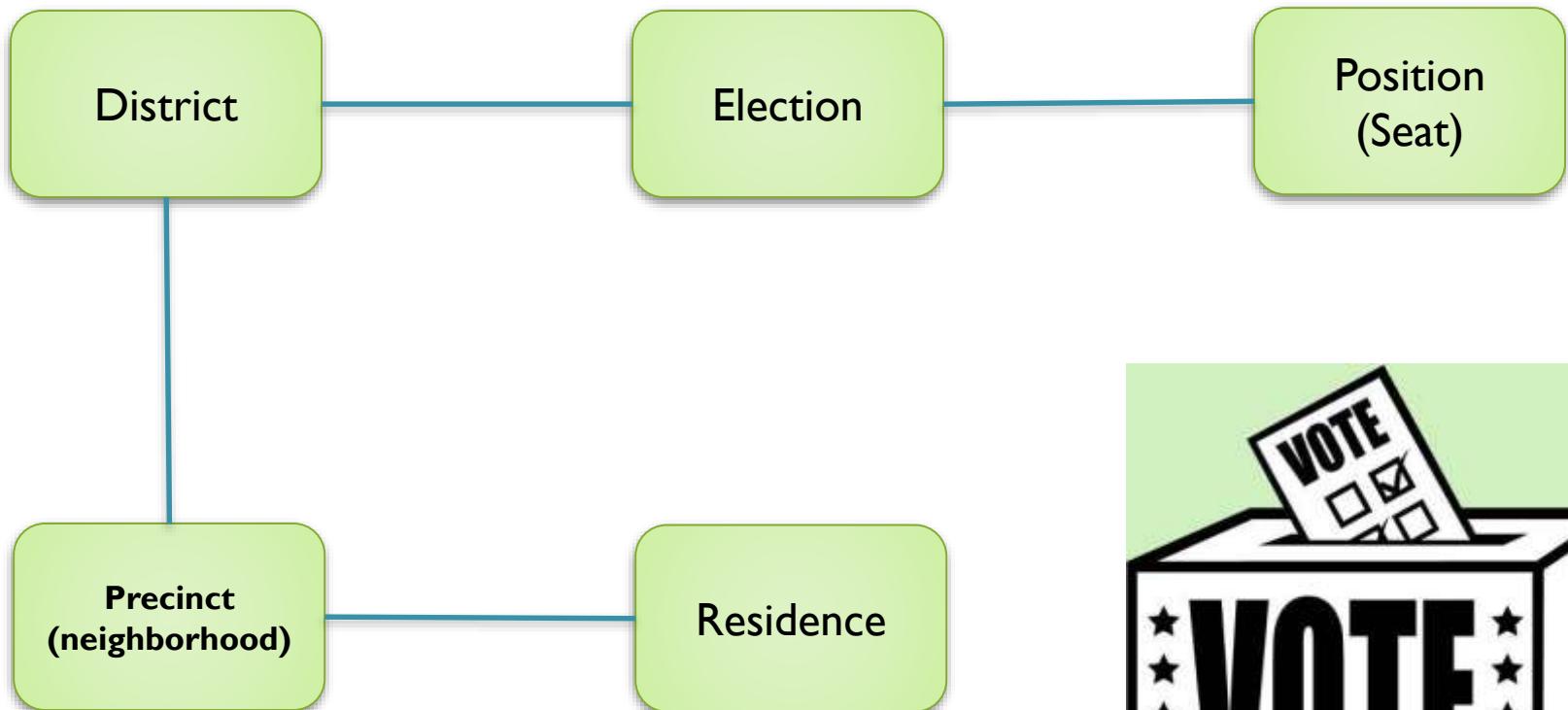


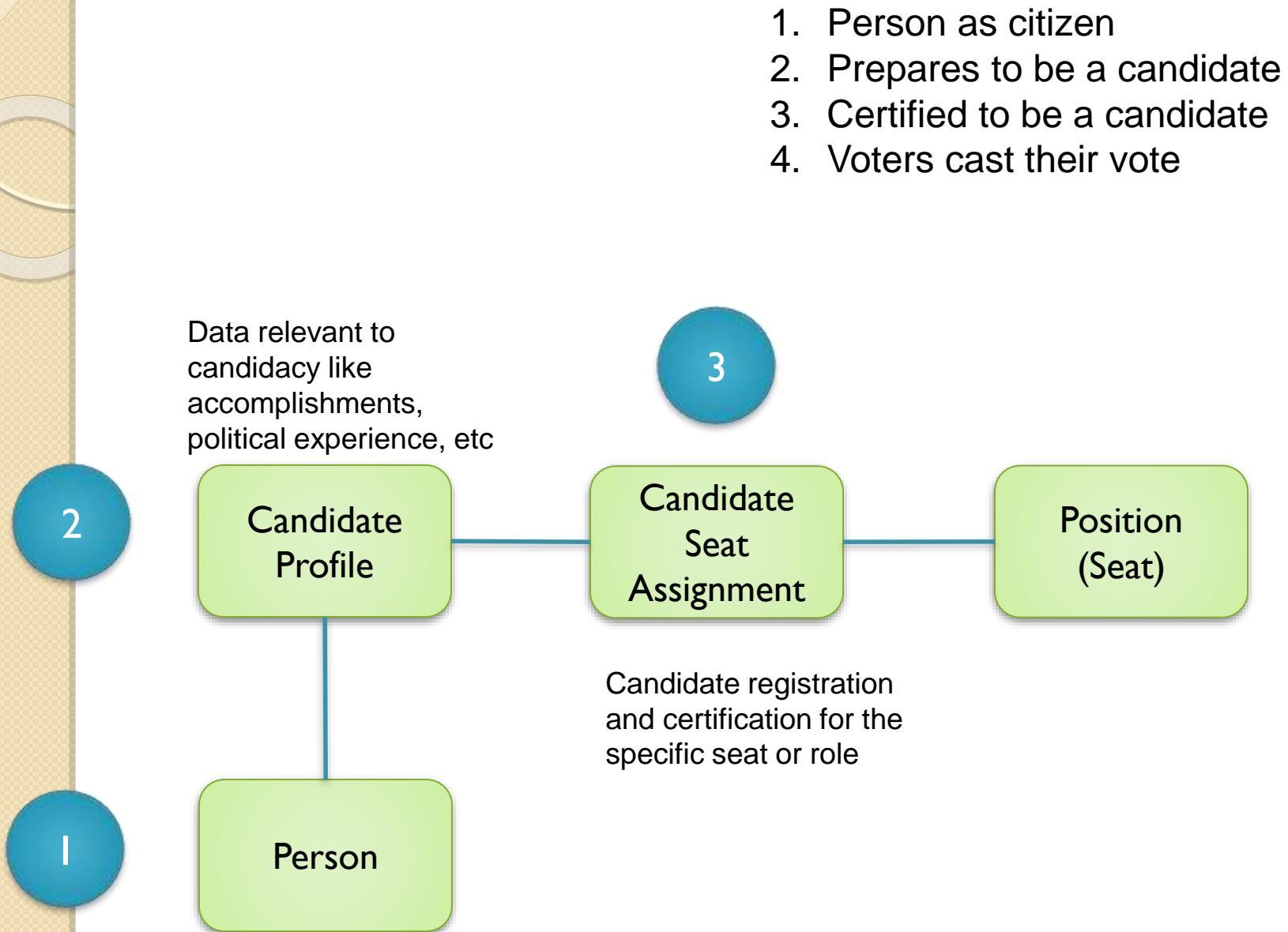
One has to register to get a ticket to vote

geographical area for the citizens who live there

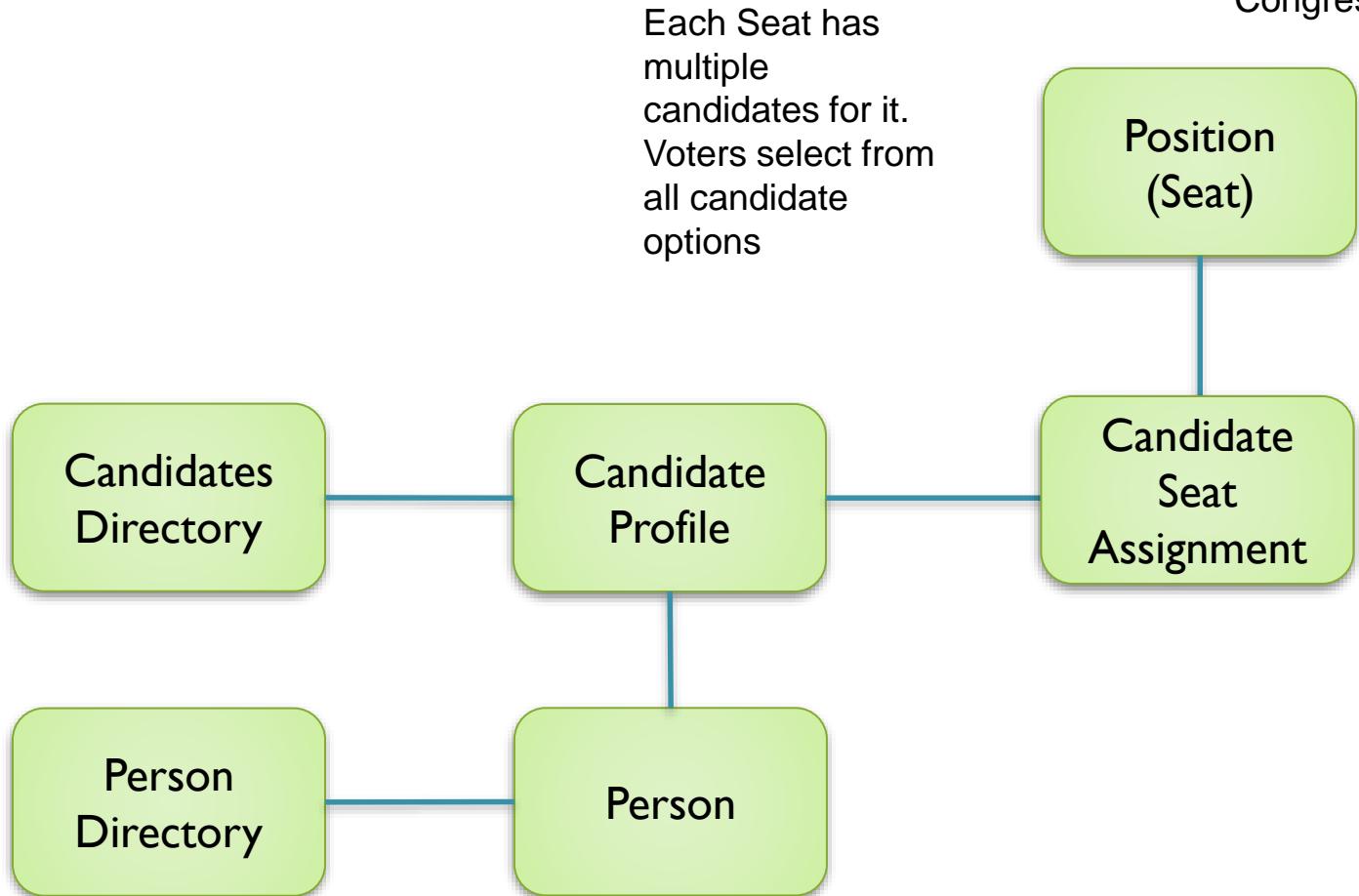
Election involving multiple positions that is scheduled in a

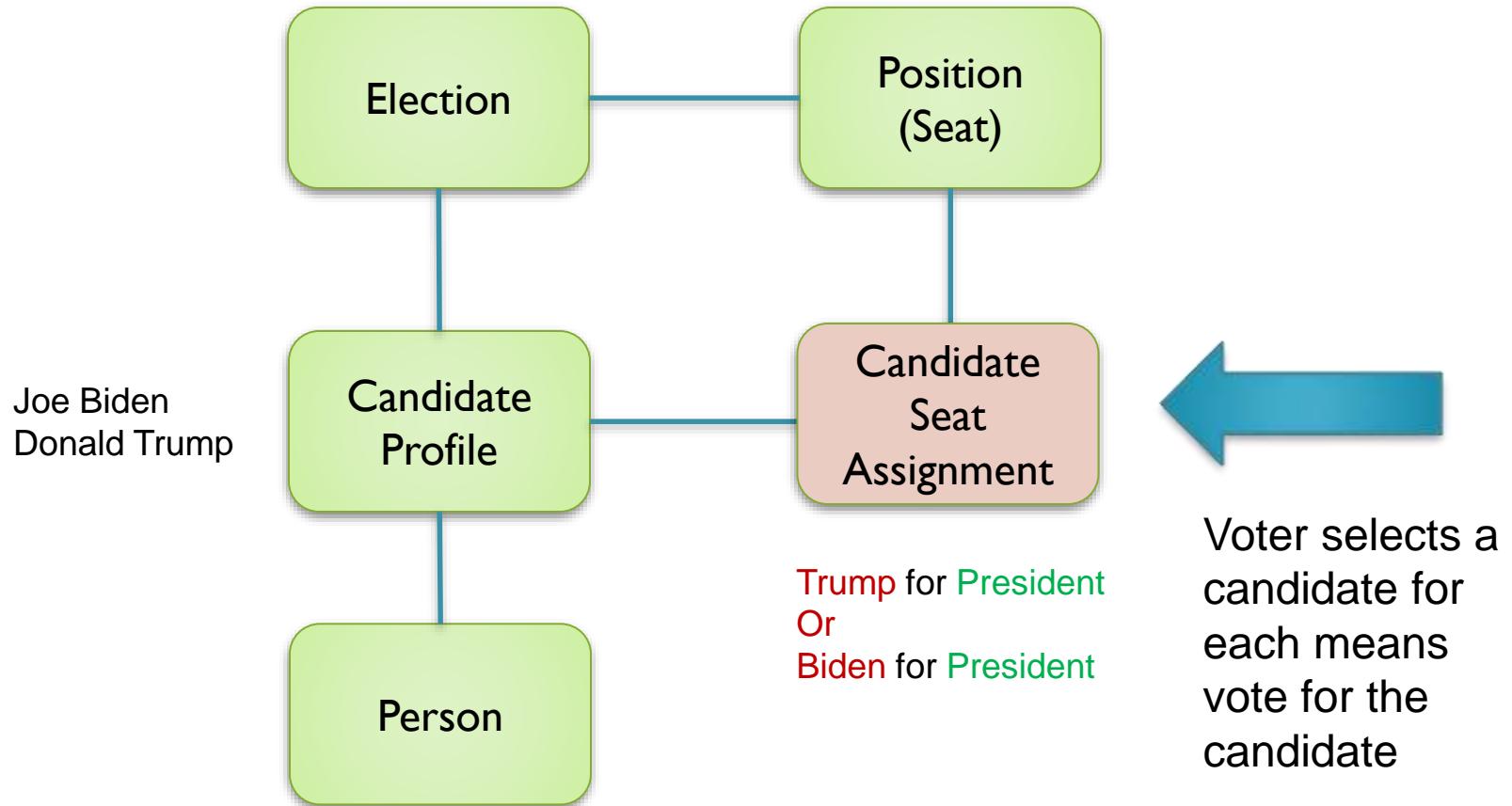
An electable seat like the mayor seat or president





Example:  
President  
Mayor  
Senator  
Congress





# Election Class

## Definition

```
PersonDirectory persondirectory;
CandidateDirectory candidatedirectory;
ArrayList<Seat> seatlist;
District district;
```

## Constructor

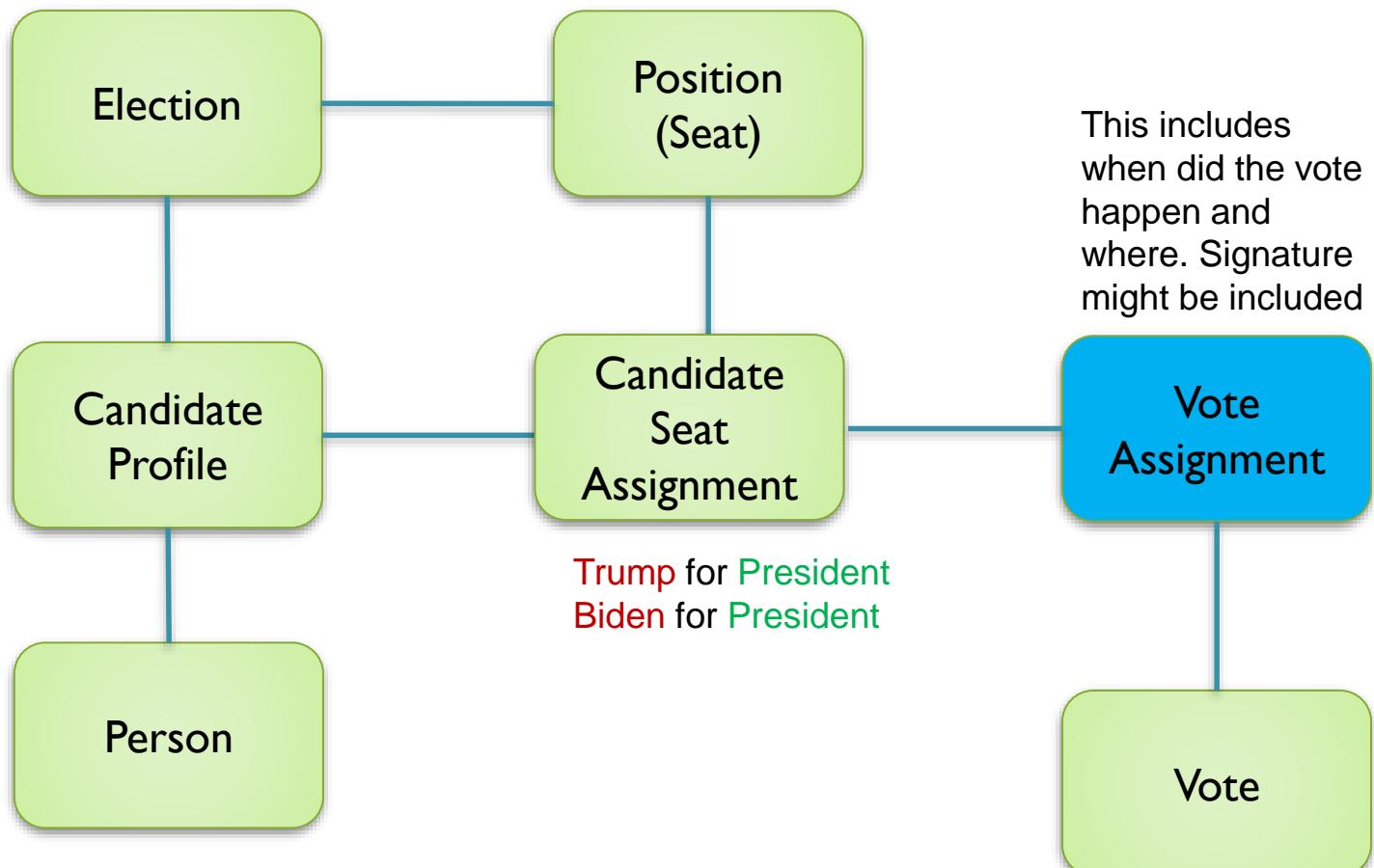
```
public Election(District d){
    candidatedirectory = new CandidateDirectory(this);
    seatlist = new ArrayList();
    district = d;
```

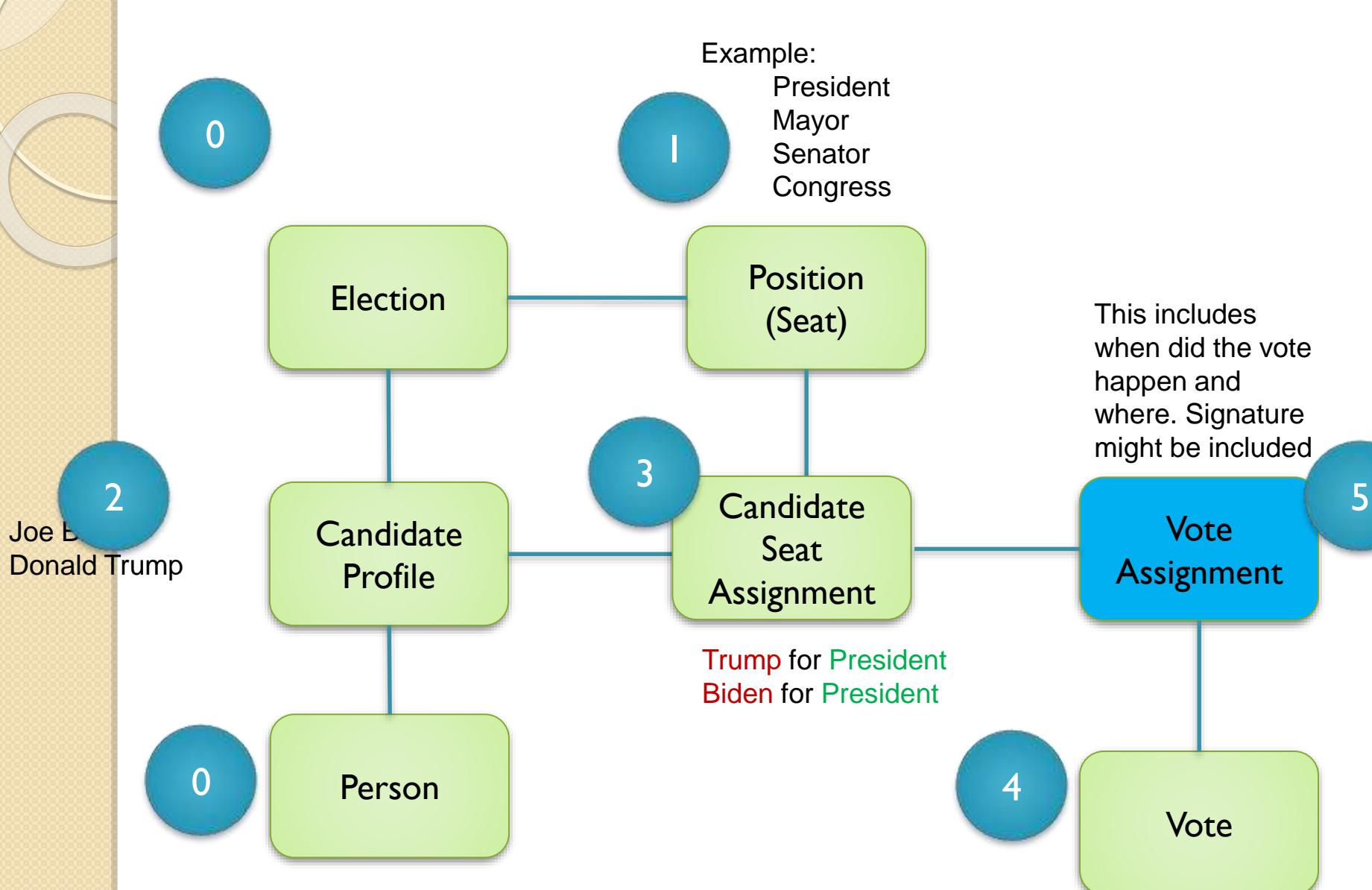
## Key Functions

1. **newSeat(int code, String name)**
2. **RegisterPerson(String ssn)**
3. **registerCandidateProfile(String ssn)**
4. **assignCandidateToASeat(String name, int code, CandidateProfile cp)**
5. **getRunningCandidatesForSeat(String n, int c)**

Joe Biden  
Donald Trump

Example:  
President  
Mayor  
Senator  
Congress





# CandidateSeatAssignment

## Definition

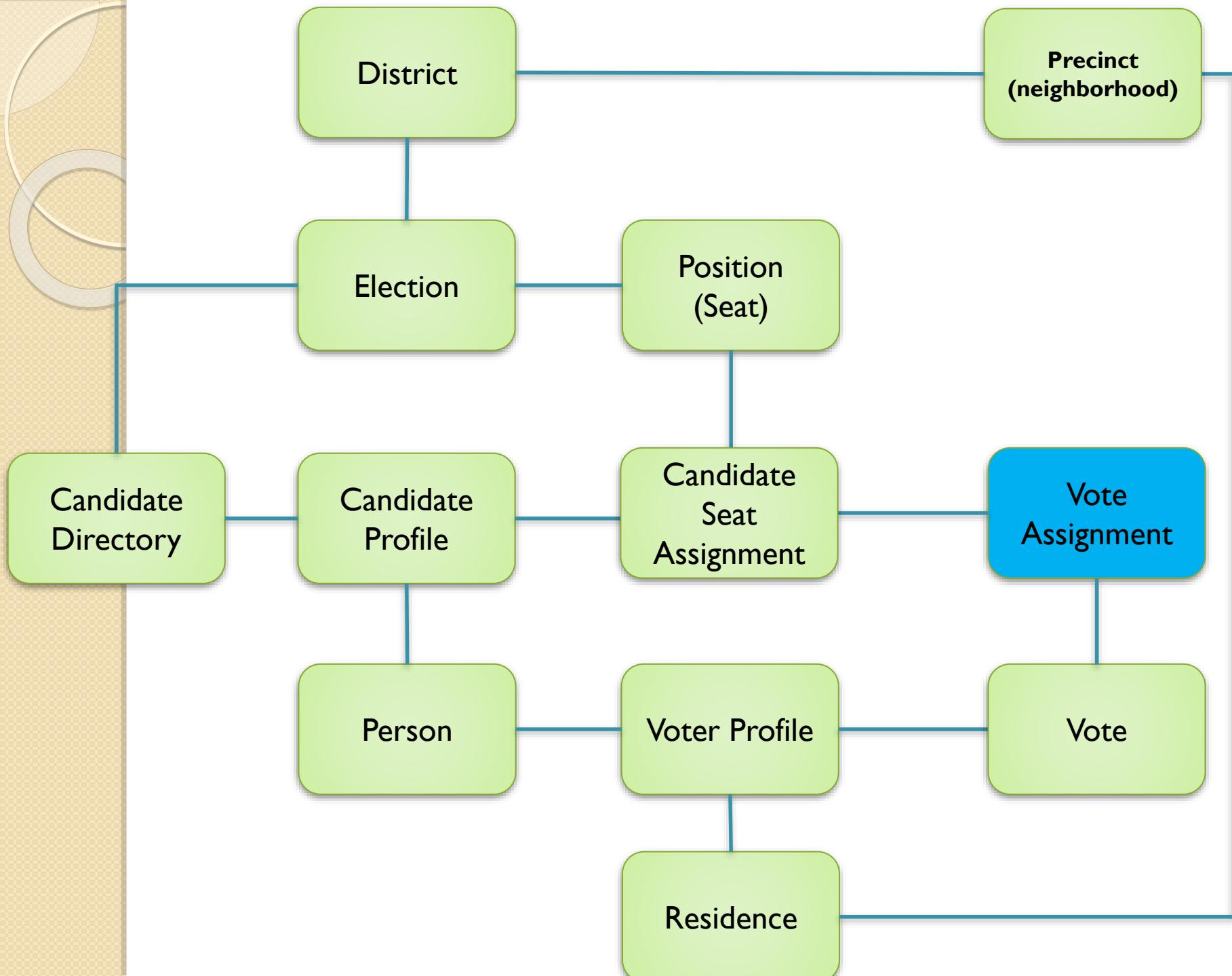
```
CandidateProfile candidateprofile;  
Seat seat;  
ArrayList<VoteSeatAssignment> receivedvotes;
```

## Constructor

```
CandidateSeatAssignment(CandidateProfile cf, Seat s)
```

## Methods

**castVoteForCandidate(Vote v)**



## Configure the Election

Election Staff

Precincts

Candidates

Voters

## Run the Election

# VoterProfile

```
*/  
public class VoterProfile {  
  
    Person person;  
    String party;  
    HashMap<Seat, Vote> votes;  
  
    public VoterProfile(Person p){  
        person = p;  
        votes = new HashMap<Seat, Vote>();  
    }  
  
    public void newVoteForSeat(Seat s){  
  
        Vote v = new Vote(this, s);  
        votes.put(s, v);  
  
    }  
}
```

# Vote for a candidate

```
public class Vote {  
  
    VoterProfile voterprofile;  
    Seat seat;  
    CandidateSeatAssignment selectedcandidate;  
  
    public Vote(VoterProfile vp, Seat s){  
        voterprofile = vp;  
        seat = s;  
    }  
    public void assignCandidateToVote( CandidateSeatAssignment c){  
        selectedcandidate = c;  
    }  
}
```

This version links the vote directly to candidateSeatAssignment.  
In a future update we will add the VoteAssignment component