

## **Group 18 Peer Group 6**

### **Index of Flaws**

Seq. No	Page no	Remedies
1	6	System has no function to conduct Election
2	29	validateDetails() on login page it Should have on Controller
3	40	Application Controller Should have Generate Username & Password Operation b'Coz it Mentioned in Sequence Diagram
4	40 to 50	All Database Class have operations
5	22, 29, 41	As Per Functional Requirement User Can Register/Change Password but it was not mentioned in Activity Diagram, Sequence Diagram and Class Diagram
6	13	When user login into system how to Identify user is Candidate/voter/ElectionCommission?
7	13	Use Case Description of Login is only for Voter not for Candidate/Election Commission
8	13	Use case description is not in proper format. like for e.g. primary actor, secondary actor, not numbering in basic flow and alternate flow.
9	6	FR not describe in detailed.
10	13	You not motioned here about forgot password.
11	34	If Candidate Details found it not showing on update Candidate Page
12	16	In Vote Cast Usecase Description it was not mentioned voter what verifies and How?
13	38	Not Proper flow in Vote cast Sequence Diagram
14	52	No Constraint for voter can vote only one time
15	14,31,43	Confusing Apply for new Voter & Apply for new Voter ID (Use Case Description & Sequence Diagram)

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# **Software Requirements Specification**

## **For Online Election**

**Version 3.0**

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**DA-IICT**

**30<sup>th</sup> march 2016**

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## Revision History

Name	Date	Reason For Changes	Version
Online Election	27 <sup>th</sup> Jan 2016	Format	1
Online Election	28 <sup>th</sup> Jan 2016	Format	2
Online Election	30th march	Edit Use case etc	3

# **1. Introduction**

## **Purpose**

To create such a system that facilitate the voters so that they can vote from anywhere using their voter\_id and password which include verification system using face recognition or fingerprint scanner whatever is feasible to voter and election committee to conducting elections fastest and easy way and also to candidates to upload their election manifesto and do their election campaign online

## **Objectives**

The specific objectives of the project include:

- Reviewing the existing/current voting process or approach in India.
- Coming up with an automated voting system in India.
- Implementing a an automated/online voting system;
- Validating the system to ensure that only legible voters are allowed to vote.

## **Background:**

### **Contribution:**

In many of the countries they follow a traditional voting system which is through E.V.M. Or through ballot paper, which is time consuming, costly, have low tally speed and sometimes party loyalist may capture booth which is electoral fraud.

Our system tries to overcomes all this problem because as it is online it will declare result within 2 hours, as it will use least paperwork so it also reduce cost of whole system and least people have to go to voting booth.

### **Technologies to be use:**

#### **Software:**

- Microsoft Windows 7 or above
- Oracle
- Opera, Chrome or any browser
- .NET framework 3.5 or above

#### **Hardware:**

- Camera
- Fingerprint Scanner

## **Stack holder & their interest:**

**Election committee:** It will be cost efficient and easy to conduct election for them.

**Candidates:** They can submit their documents and register themselves online and they can post their speeches and their objectives to their voters from anywhere.

**Voters:** They can login and vote from anywhere with the help of internet using electronics devices.

## **Overview of Functional Requirement**

FR 1 Election Commission Login

FR 1.1 Election Commission Registration

FR 1.2 Change Password

FR 2 Candidate Login

FR 2.1 Candidate Registration

FR 2.2 Change Password

FR 3 Votes Login

FR 3.1 Voters Registration

FR 3.2 Voters Document Verification

FR 3.3 Change

FR 4 Candidates Manifesto Posting

FR 4.1 Upload Manifesto

FR 4.2 Update Manifesto

FR 5 Voting

FR 5.1 Voter's Verification

FR 5.2 Select Candidates

FR 5.3 Confirmation

FR 6 Voter's Document Verification

FR 6.1 Upload Documents

FR 6.2 Update Documents

FR 6.3 Documents verified by Election Commission

FR 7 Candidate's Document Verification

FR 7.1 Upload Documents

FR 7.2 Update Documents

FR 7.3 Documents verified by Election Commission

FR 8 Result Declaration

FR 8.1 Result uploads by Election Commission

FR 8.2 Result update by Election Commission

FR 8.3 Result confirms by Election Commission

FR 8.4 Generate Territories wise Graph

## **Overview of Non Functional Requirement**

### **Usability**

It is expected that the user should be able to vote easily online. Administration of the page also should be user friendly. Provide step by step guide for both admin and users. User should complete voting in a few minutes. Provide an online help. Provide also a quick guide for users.

### **Reliability**

The system should be reliable. Security is a major concern for an e- voting system. Process used in this system should be secure enough to be able to meet the requirements mentioned for e-voting. It requires database connections and network connections. Changes can be done in the databases to store the votes. All changes needs to be confirmed and if the transfer is complete the confirmation should be displayed. The changes should be monitored.

### **Performance**

There might be many users accessing to the web server simultaneously. As an online e-voting tool performance shouldn't be affected much and response time for submitted page should be less than a minute.

### **Supportability**

Version 1.0.0.0 is the first version of the e-voting system. Future release features will be considered during the design. Phone support can be provided with all dial in details in the initial version release. In the future versions this

can be improved by supporting an online chat facility. Future enhancements or improvements can be considered during the design and development.

### **Safety**

Web server should be secure. Regular backups should be in place.

### **Security**

Customer's voting is secure. Customer's registration information is confidential.

## **2. Overall Description**

### **Software Interface**

- i. **MYSQL DBMS-** it allows combination, extraction, manipulation and organization of data in the voters' database. It is platform independent and therefore can be implemented and used across several such as Windows, Linux server and is compatible with various hardware mainframes. It is fast in performance, stable and provides business value at a low cost.
- ii. **HTML -Hypertext Markup Language-** This is currently the core of the web world, it is a language used to make up web page. It is the glue that holds everything together. Although HTML was used for the implementation of the OVS, it is highly compatible with eXtensible HTML (XHTML) which is designed to be a replacement of HTML made to handle data and is also portable between different browsers and platforms with little or no alterations in code. Macromedia Dreamweaver is a preferred tool for designing HTML pages and that is the tool used in coming up with this OVS system.
- iii. **PHP coding-** This is for advanced user who find PHP codes easy to work with.
- iv. **Testing** is done via WAMP SERVER.
- v. **Web browsers:** Mozilla Firefox, Google chrome, Opera and Internet Explorer
- vi. **Reporting Tool** i.e. through Data Report.



## **Hardware Interface**

Desktop or laptop with at least 2.0 GHz Processor speed, At least 40 GB Hard Disk Capacity and 512 RAM and Printer.

## **Product Functions**

The system can function in two modes, namely, Normal Interactive Mode and Election Mode. The system will be in Election Mode, for the purpose of vote polling only on the Election Day. Normal Interactive Mode is for accepting registrations, discussions between voters and candidates, campaigns and the system is available in this mode all the time except Election Days.

### **Normal Interactive Mode**

#### **Voter Registration**

That system will be used only by the people who have been registered to the system. Main actor of the registration operator is the voter. The registration operator is approved by the Election commission.

#### **Approve Applicant**

By using this function, Election commission approves the application sent by the voters in order to use the Online election system. The main actor is the Election commission.

#### **Update Registered Voters**

Election commission deletes voters from the system who cannot use their vote officially. Election commission also updates voter's information. The main actor is the Election commission.

#### **Open Candidate Account**

The Candidate's profile must be created by the Candidate. This functionality helps to perform this action. The Candidate is the main actor of this functionality.

#### **Approve Candidate Application**

The Candidate's profile must be approved by Election commission

#### **Login/Logout**

All of the system users login to system by their user ids and passwords. All of the users are the main actor of this use case.

#### **Account Update**

By using this function the Candidate may change his password that enters the system. The main actor of this use case is the Candidate.

#### **View EC Information**

This function allows the voters to reach information about the Candidate such as their CVs, promises etc. Main actor is the voter for this use case.

### **Ask To Candidate**

By using this functionality the voters can direct questions to the Candidate s about their election campaigns. The main actor for this use case is voter.

### **CV Edit**

This function provides the Candidate to edit his CV information on his own profile. The Candidate is the main actor of that functionality.

### **Read/Answer Questions**

This function provides Candidate s to read or answer questions about their election campaigns. The main actor is the Candidate.

### **View Election Results**

This functionality provides voters to see the current or past years' election result in a proper way. The main actor is the voter.

## **Election Mode**

### **Open System**

This function provides Election commission to start the system during the Election Day or before. The Election commission is the main actor of this operation.

### **Approve Voter**

All voters should be approved by the system using face recognition system or fingerprint scanner

### **Online Vote**

This is the main function of the system that provides online voting for the general public. The main actor is the voter and votes are collected in the DB.

### **2.3.2.3. Display Result**

This is the main function of the system that provides declaration of Election result.

## **Constraints / Assumptions**

The system enables voters to poll their vote from any terminal connected to the Internet, the voters should initially contact the election administrator's office for document verification and establish their voter-ids. This constraint is imposed to ensure that only the genuine person is allowed to vote in the elections.

Also, it is assumed that only the Election commission has access to the server that hosts the election

Security and safety are the most crucial fundamentals of the online voting system. The system has zero-tolerance with regard compromising. The system should not allow anyone to download votes to infer how voters in their regions have voted. The system should provide means for protecting and securing recounts of ballots cast in election. it reserves the right of secret voting every voter should be above 18 and every candidate should be above 25 years and both should be Indian citizen

## **Assumption**

For the proper working of the system we can list our assumptions as follows.

Working internet connection

A web server should have Java installed on the machine.

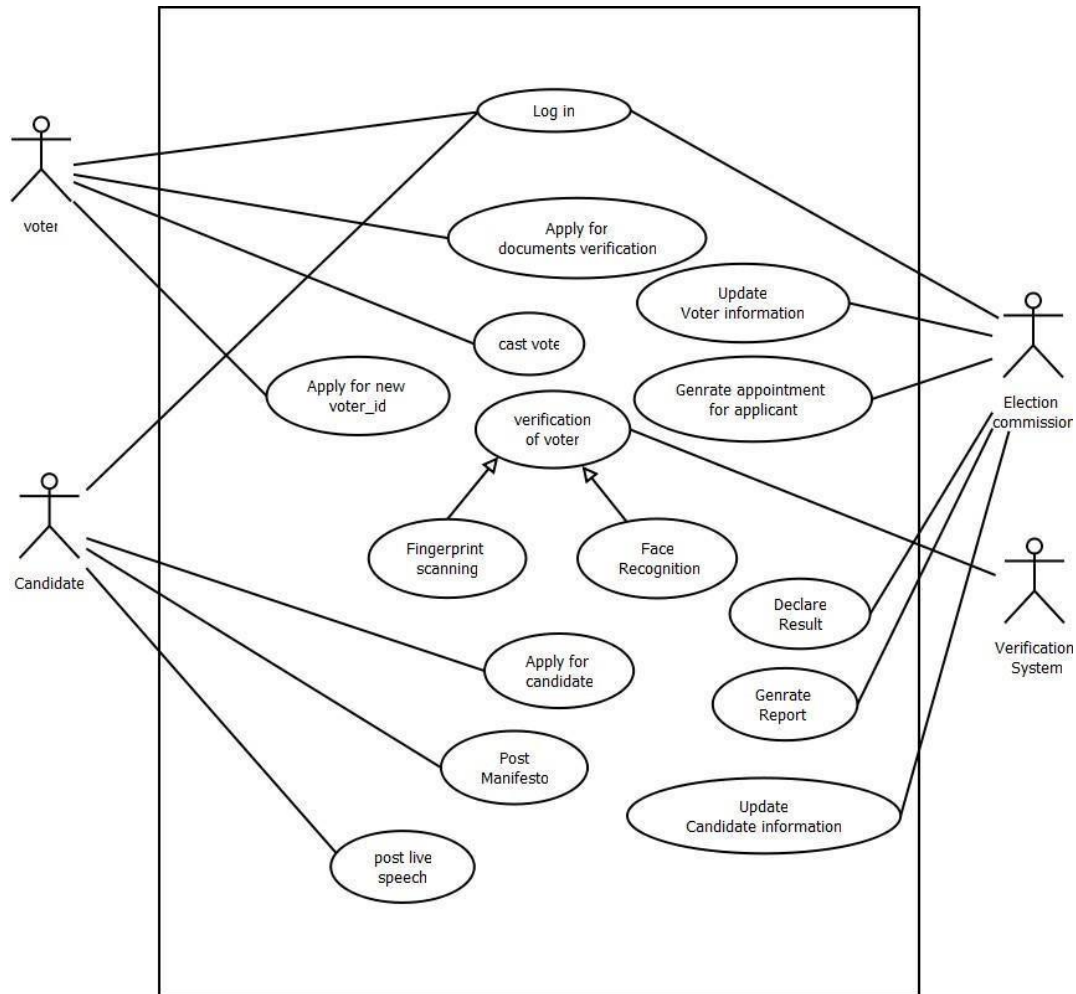
The election server runs on a http server, that is "jsp" enabled.

A web browser through which the voters access the server should have minimal

support for cookies and encrypted transactions.

voter should have either web cam or fingerprint scanner for verification booth set up by govt. for the persons who don't have computer or webcam or fingerprint scanner with them

## Use case Diagram



## Use Case Textual Description



Use Case name	Login
<b>Description:</b>	Voter can Login in this System with voter_id and password provided by Election commision.
<b>Precondition:</b>	Voter visit this system and get detail about system
<b>Post condition:</b>	Voter can see all the details of candidate and can cast vote.
<b>Basic Flow :</b>	Voter will enter voter_id and password and will be able to enter and use this system.
<b>Alternate Flow</b>	If voter id or password will wrong then voter will be redirected on login.

Use Case name	Apply for candidate
<b>Description:</b>	Any eligible person who fulfills all the criteria according to Indian Government can apply being a candidate.
<b>Precondition:</b>	Candidate will have to login through his Voter ID and password.
<b>Post condition:</b>	Once person apply for new Candidate, he/she will receive a confirmation Email and an appointment .
<b>Basic Flow :</b>	After voter login they have to go to the new Candidate page , Fill up their details and accept terms and conditions .
<b>Alternate Flow</b>	If that person who is applying as a candidate isn't allegeable for candidate then system wont allow voter to apply for the Candidate's Election .

<b>Use Case name</b>	<b>Apply for new Voter ID</b>
<b>Description:</b>	New Voters can apply for their new Voter ID
<b>Precondition:</b>	User have to go to the system website and fill the basic information in the Application form.
<b>Post condition:</b>	Once person apply for new Voter ID, he/she will receive a confirmation Email and an appointment .
<b>Basic Flow :</b>	Voter will Fill up their details and accept terms and conditions and can request a appointment and will visit to the Center at the time given. The authorized officers will verify documents and issue a Voter ID.
<b>Alternate Flow</b>	If voter isn't eligible for Voting then system wont allow voter to apply for new Voter ID.

<b>Use Case name</b>	<b>Post manifesto</b>
<b>Description:</b>	Candidate can upload their manifesto on Election Commission website.
<b>Precondition:</b>	Candidate have to login with the correct voter_id and password and should be approved by Election Commission.
<b>Post condition:</b>	Once Candidate upload his/her manifesto ,candidate will receive a conformation message and now everyone can see candidate manifesto.
<b>Basic Flow :</b>	After voter login they can upload their manifesto , So that the voters will aware of their aims .
<b>Alternate Flow</b>	If manifesto not in proper format (only .pdf is allowed), system wont allow candidate to post his/her manifesto.

Use Case name	Post Live Speech
Description:	Candidate can upload their speech on Election Commission website or upload a link to his/her live speech.
Precondition:	Candidate have to login with the correct voter_id and password.
Post condition:	Once Candidate upload his/her speech or link ,candidate will receive a conformation message and now everyone can see candidate's speech.
Basic Flow :	After voter login they can to upload their speech or link.
Alternate Flow	If speech isn't in proper format (only .mp4,.mp3,AVL,MKV,M4a will allow), system wont allow candidate to post his/her manifesto.

Use Case name	Update voter information
Description:	Election commission updates the information of voter
Precondition:	Election commission login and go to the update voter page
Post condition:	Election commission send the confirmation email to voter with updated information
Basic Flow :	Election commission login and enter the voter id of the voter they want to update election commission will get the current information of voter then he can change the voter information and then save the information
Alternate Flow	if voter id is not exist then it will generate the error

<b>Use Case name</b>	<b>Cast Vote</b>
<b>Description:</b>	The voter get the list of candidates and they select one candidate and cast the vote
<b>Precondition:</b>	Voter login with the correct voter_id and password.
<b>Post condition:</b>	Once voter cast their vote they will get the summary of vote they just casted and now they will not able to submit second response
<b>Basic Flow :</b>	<p>After voter login they have to pass verification , here system has two verification options</p> <ul style="list-style-type: none"><li>1)Face recognition</li><li>2)Fingerprint Scanner</li></ul> <p>Voter can select any one as per their choice. After they pass the verification, system start the session and they will get the list of candidate of their own territory only. Voter have to select only one candidate from the list and submit their vote. After submitting vote, voter will not able to caste other vote</p>
<b>Alternate Flow</b>	<p>If user fail in face recognition or in Fingerprint scanner for three times then system will be automatically log out</p> <p>If user select more than one candidate then it will not submit the response if user has not submit their response in 5 minute then session will be expire</p> <p>If any breakdown happen before the submission then it will restart the session</p>

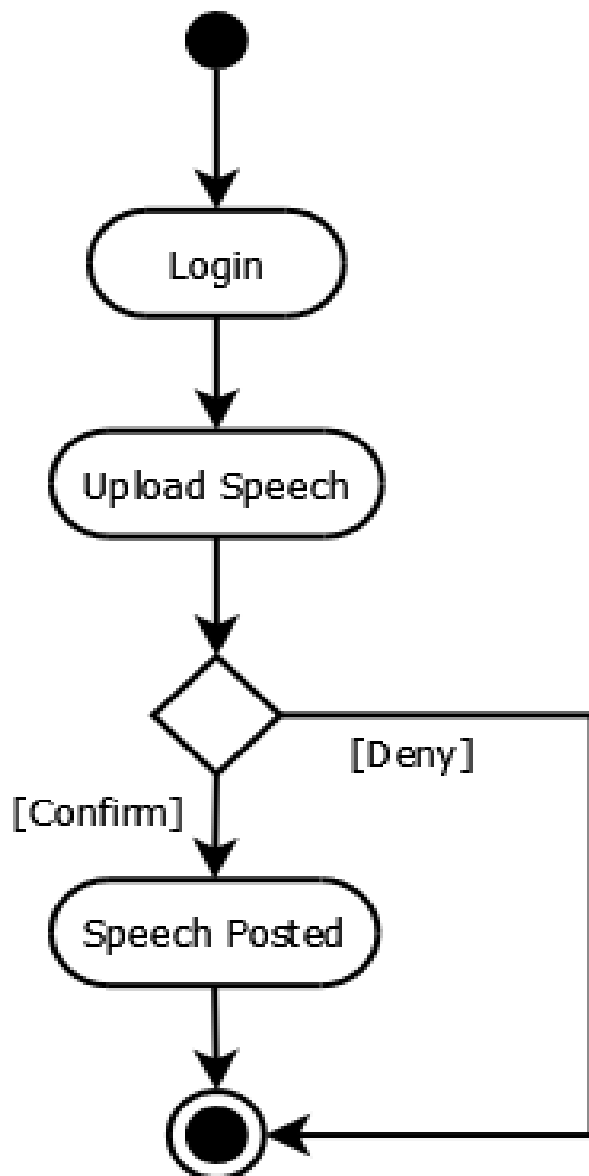


Use Case name		Apply for document verification
<b>Description:</b>		Voters can apply for their document verification so that they can get user id and password for the system
<b>Precondition:</b>		User have to go to the system website and fill the basic information in the Application form.
<b>Post condition:</b>		Once person apply for document verification, he/she will receive a confirmation Email and an appointment .
<b>Basic Flow :</b>		Voter will Fill up their details and accept terms and conditions and can request a appointment and will visit to the Center at the time given. The authorized officers will verify documents and issue a user id and password for them
<b>Alternate Flow</b>		If voter isn't eligible for Voting then system wont allow voter to apply for document verification.

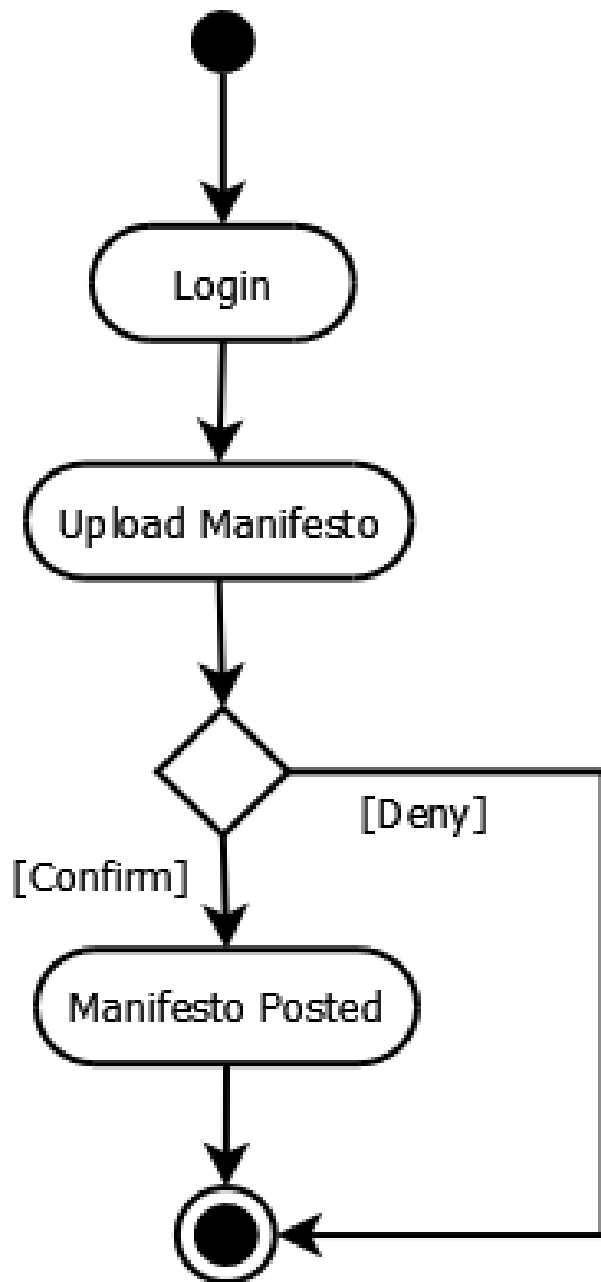
Use Case name		Declare Result
<b>Description:</b>		Votes will be automatically calculated for every candidate and compare who got the maximum votes and will be announced as a winner of that election .
<b>Precondition:</b>		Cast vote time should be completed
<b>Post condition:</b>		Winner of election will be declared and generate report for that.
<b>Basic Flow :</b>		Votes will be counted and result will be generated and winner will declared from that result And every one can see the results
<b>Alternate Flow</b>		

## Activity Diagrams

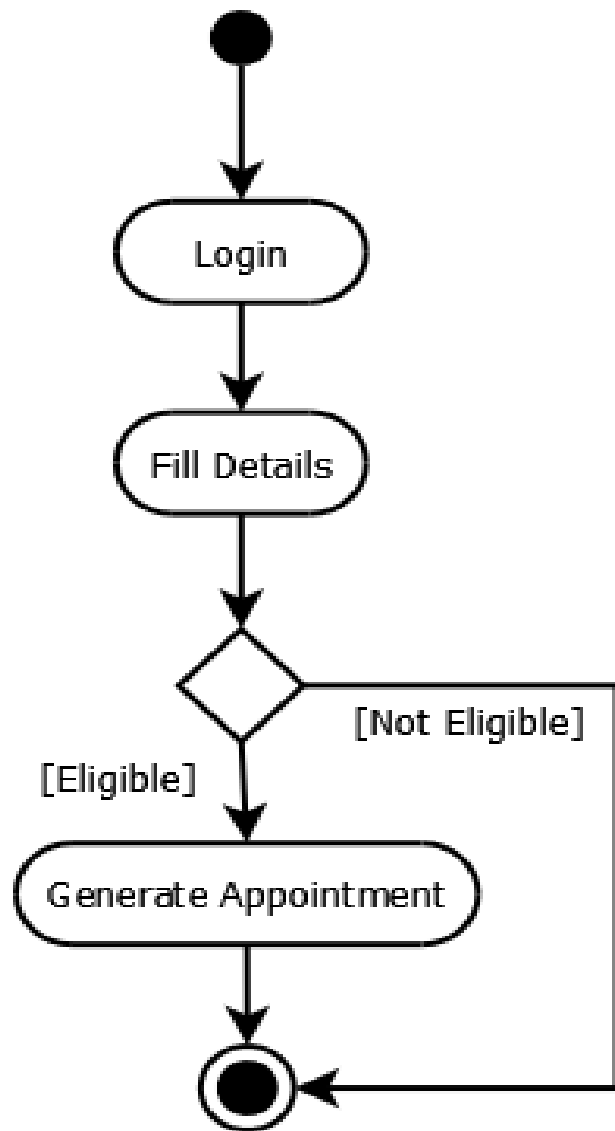
Post Live Speech:



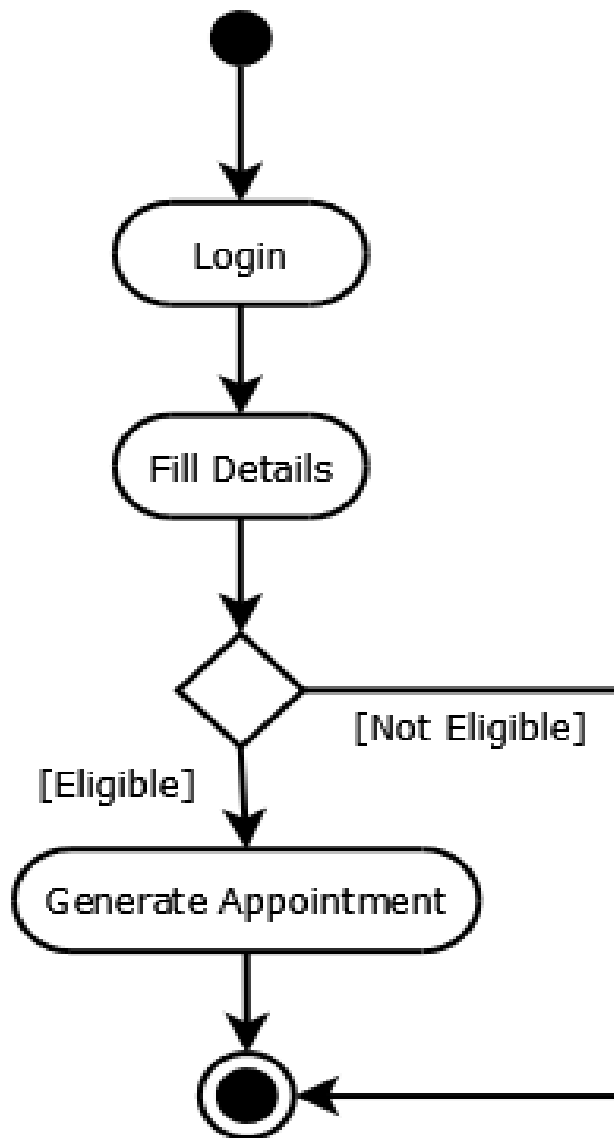
Post Manifesto:



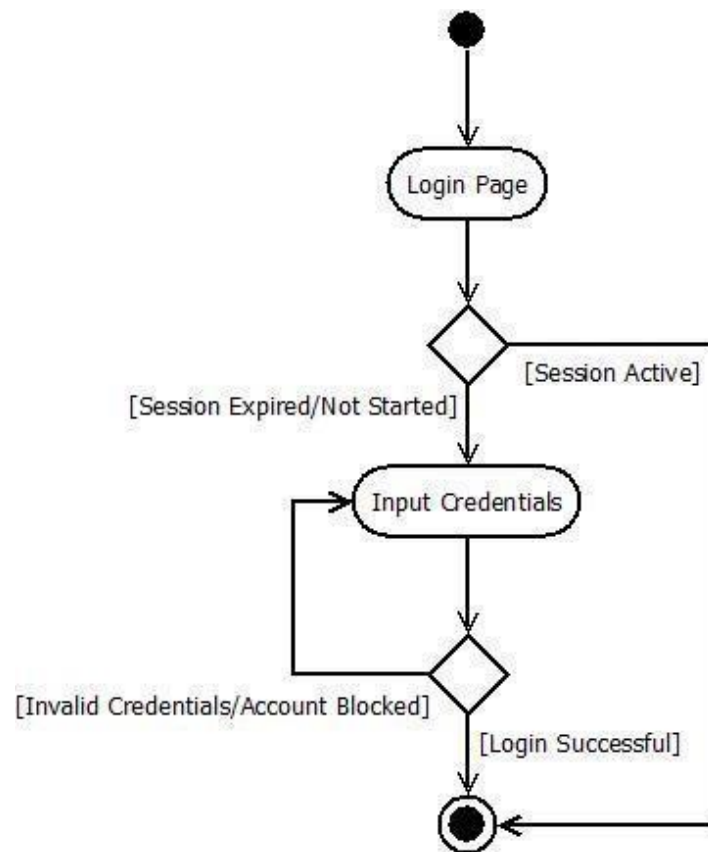
Apply For Candidate:



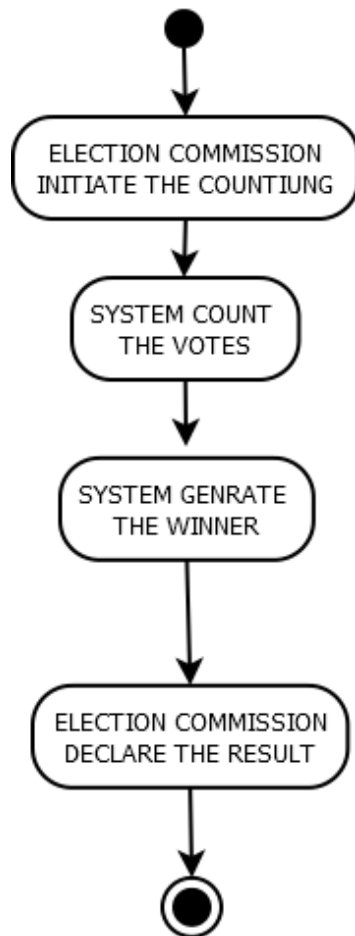
Apply for Document Verification:



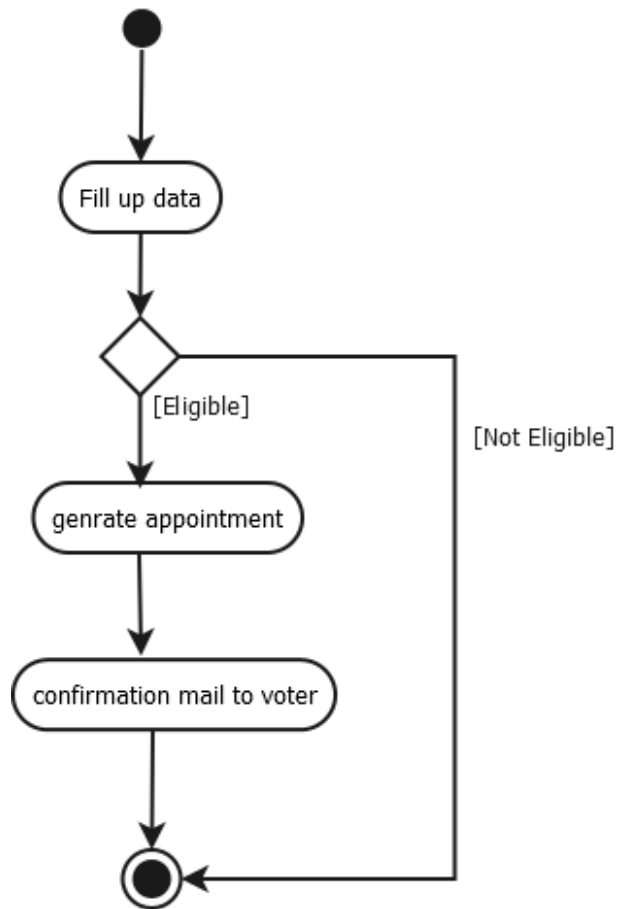
Login:



Generate Result:

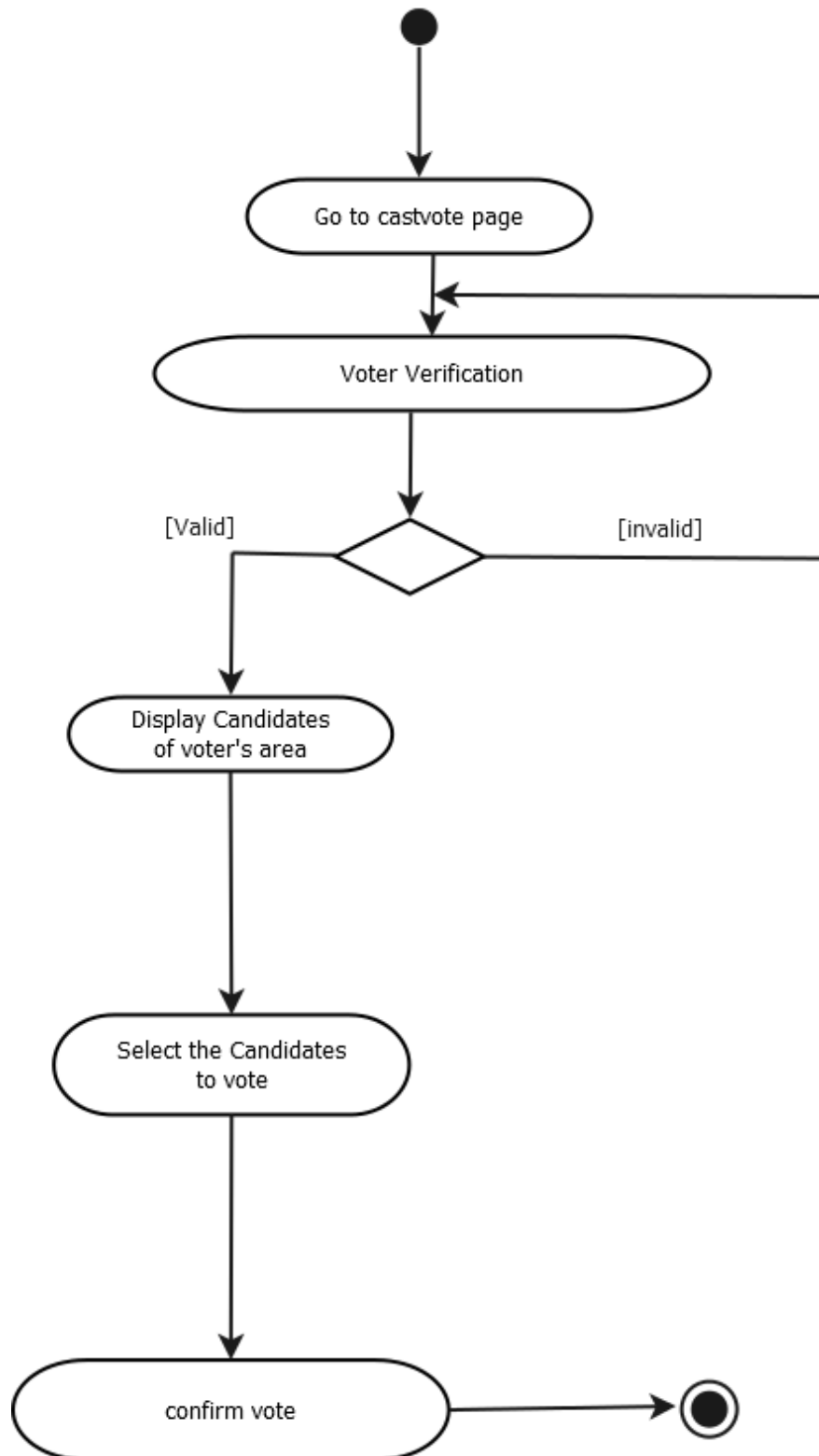


Apply for new Voter Id:

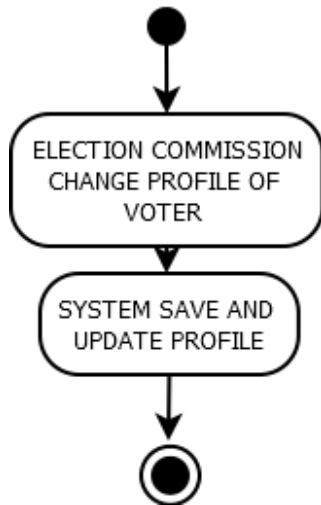




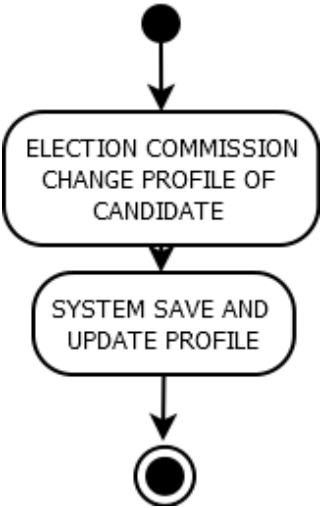
Caste Vote:



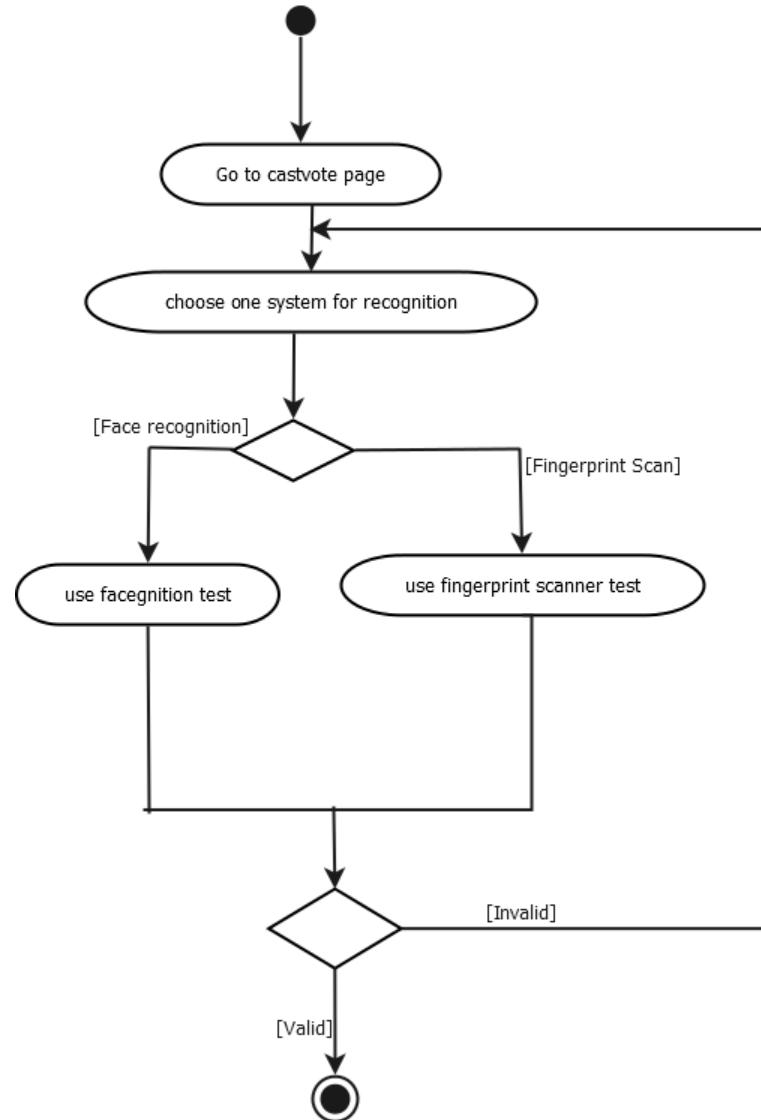
Update Voter Info:



Update Candidate Info:

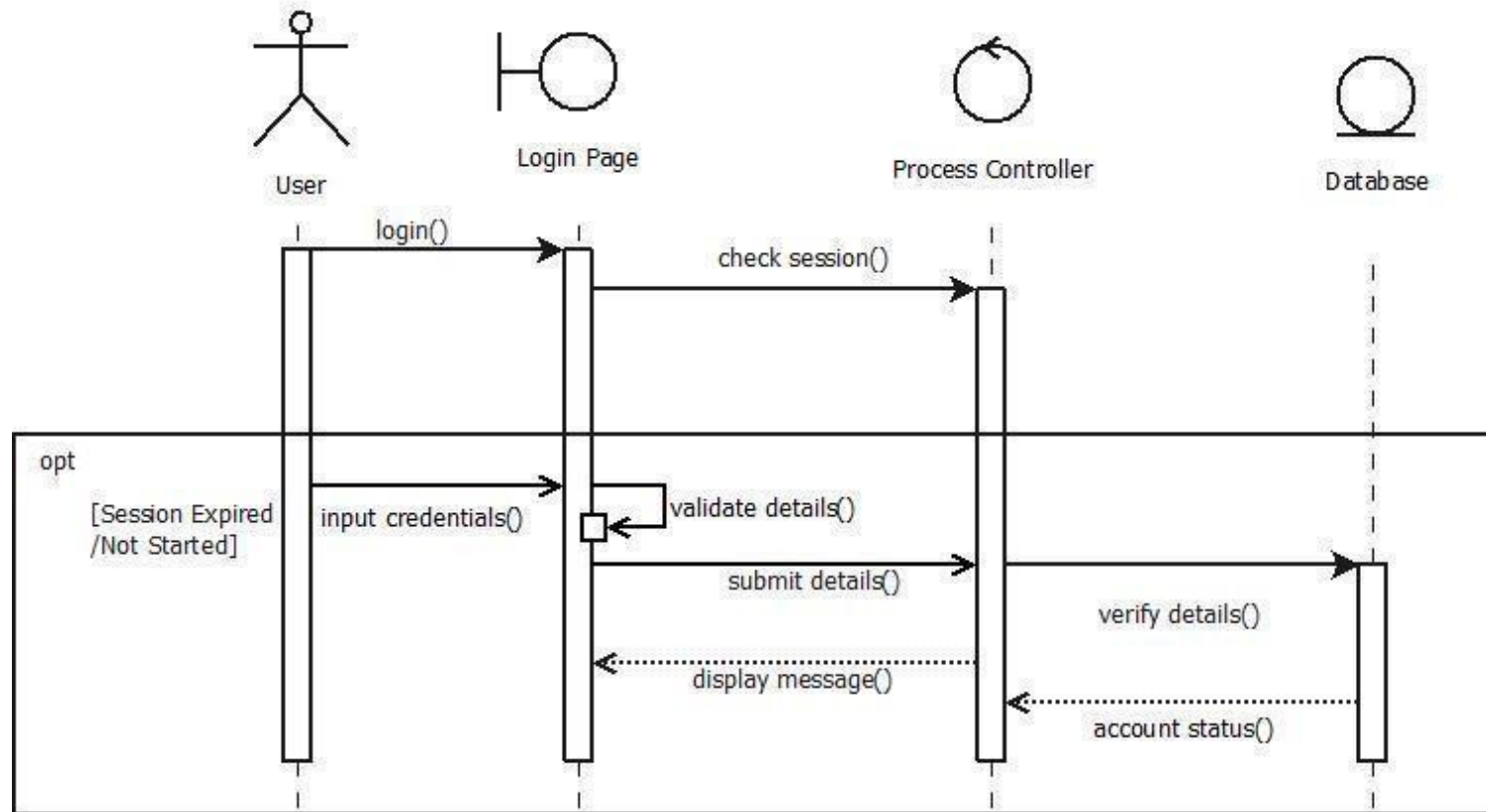


# Voter Verification

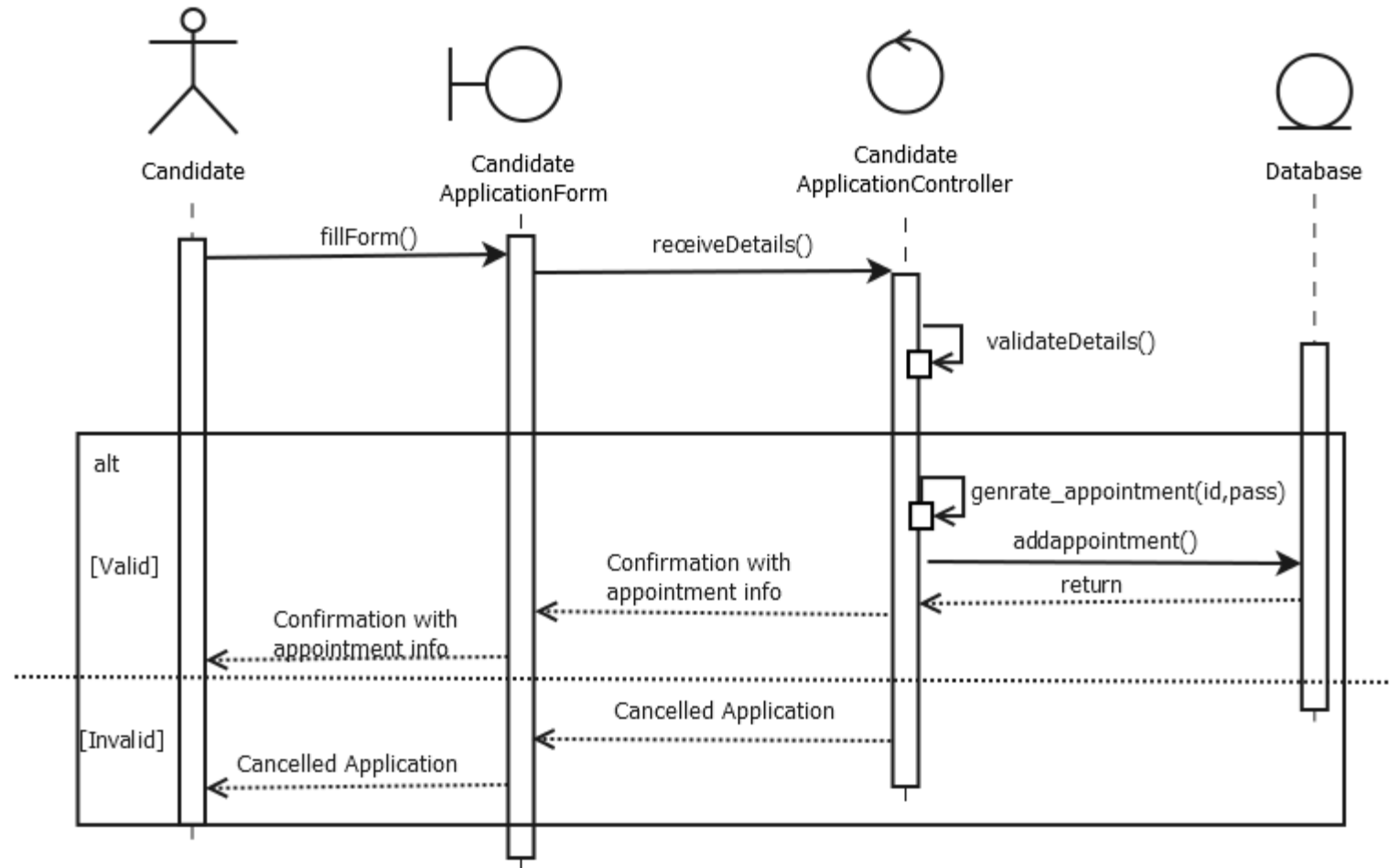


# Sequence Diagram

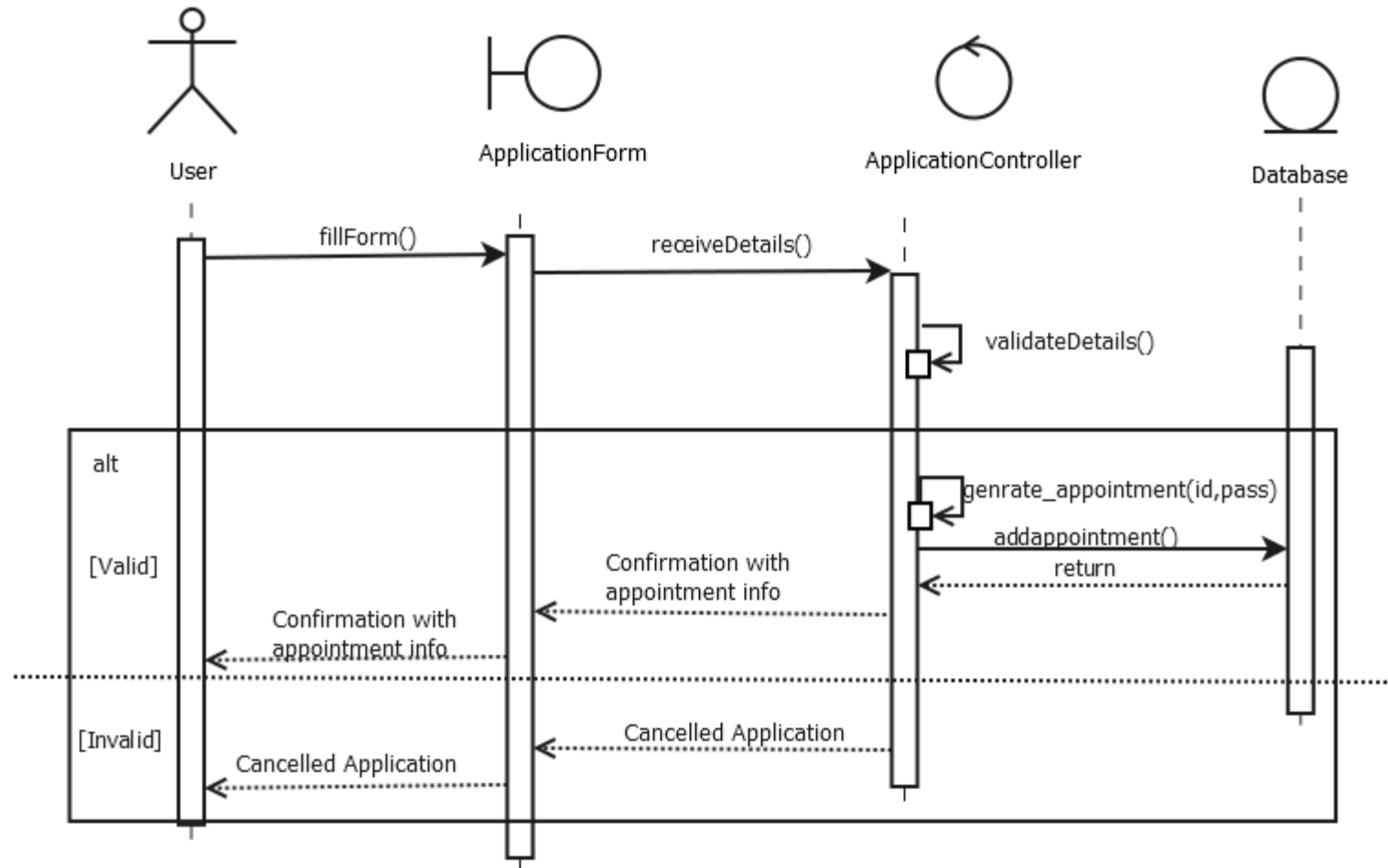
## Login



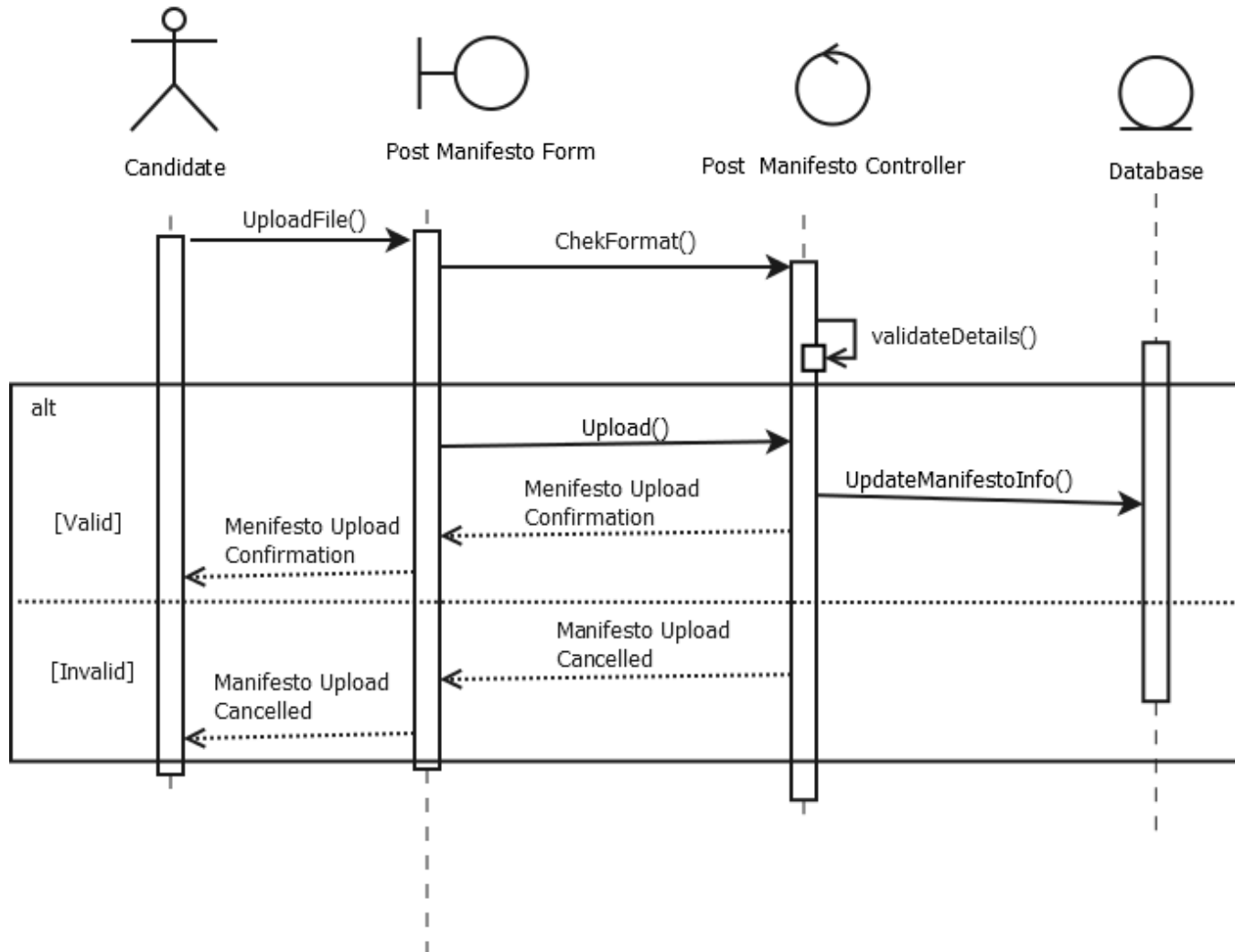
## Apply For Candidate



## Apply For New Voter

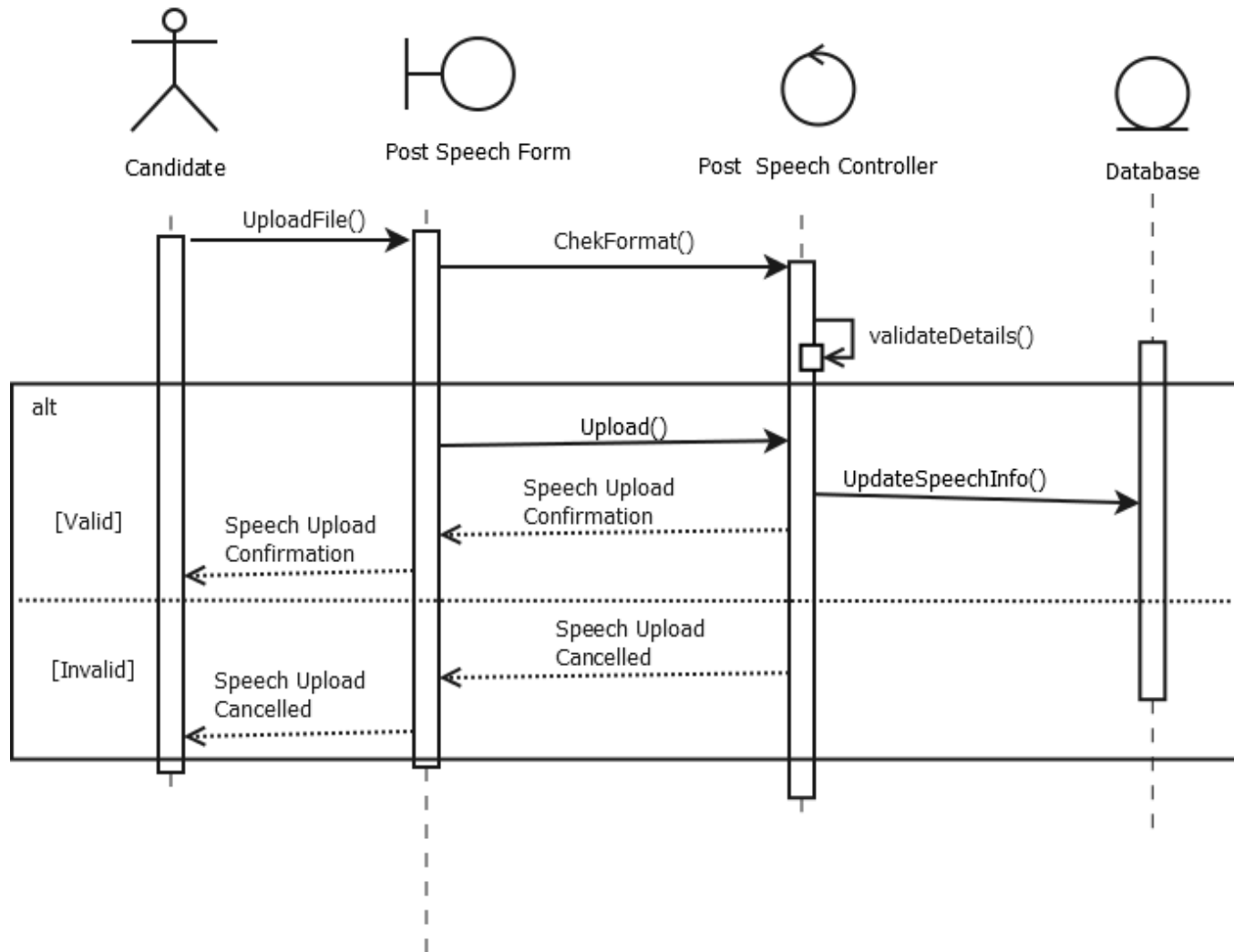


## Post Manifesto

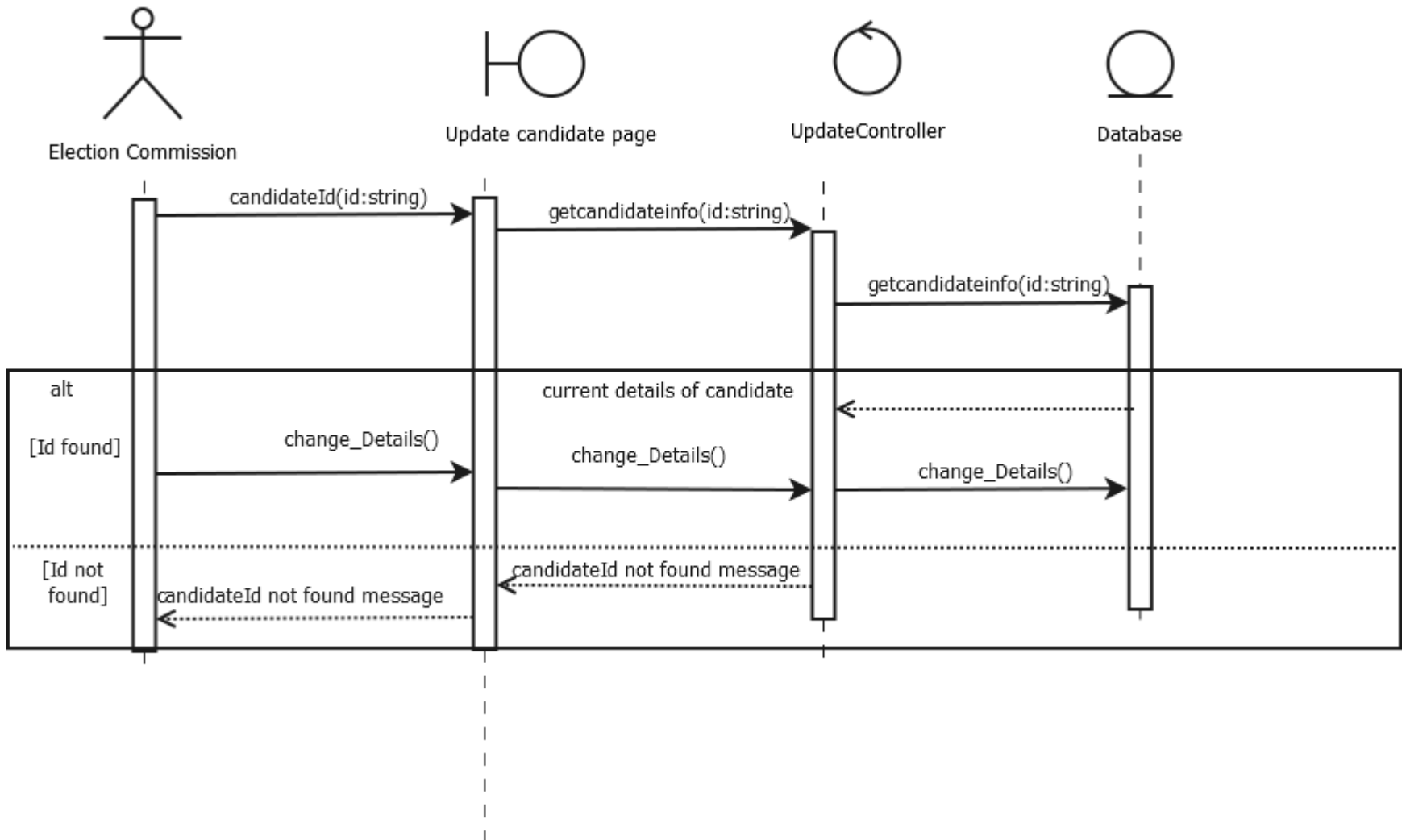




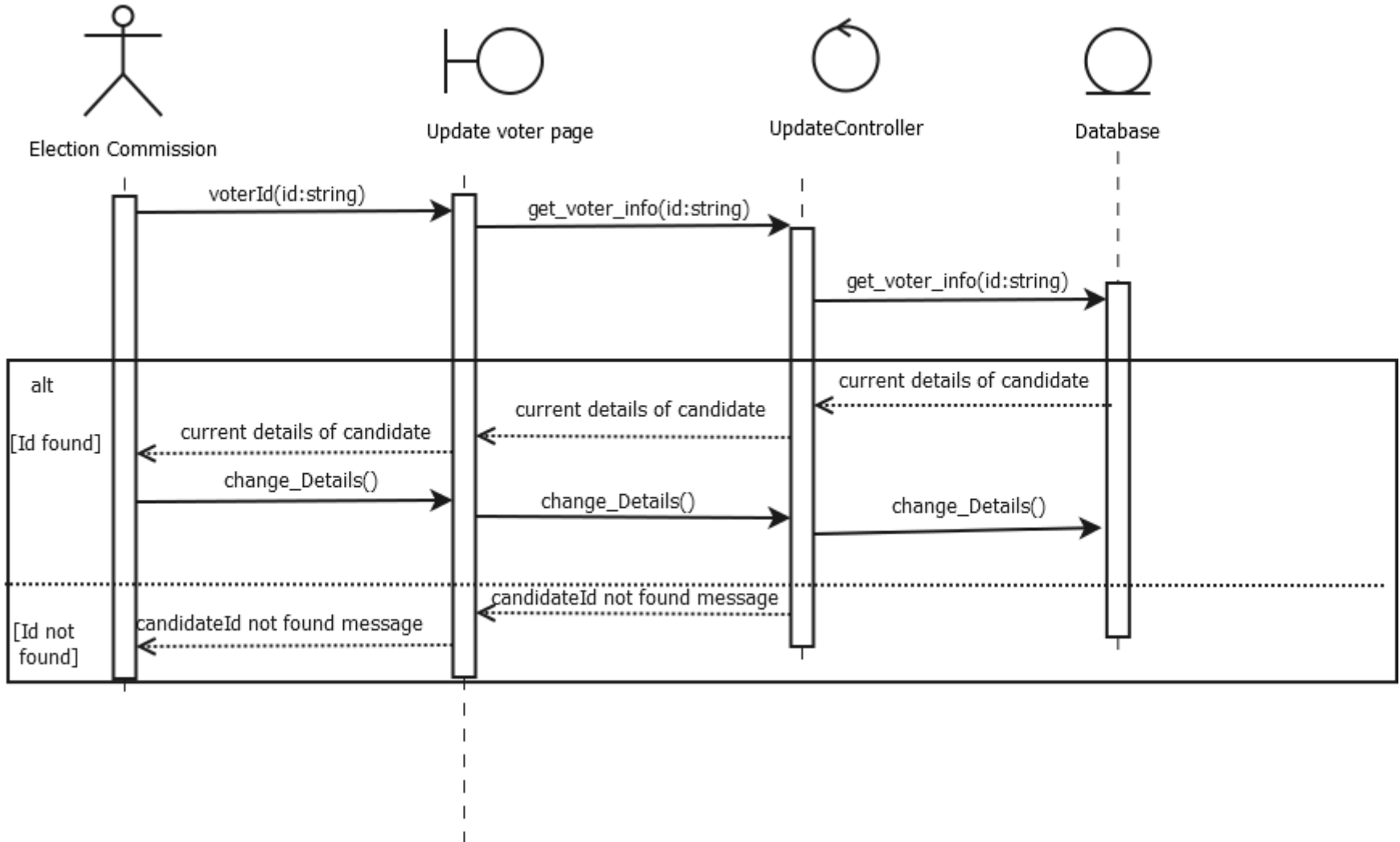
## Post Speech



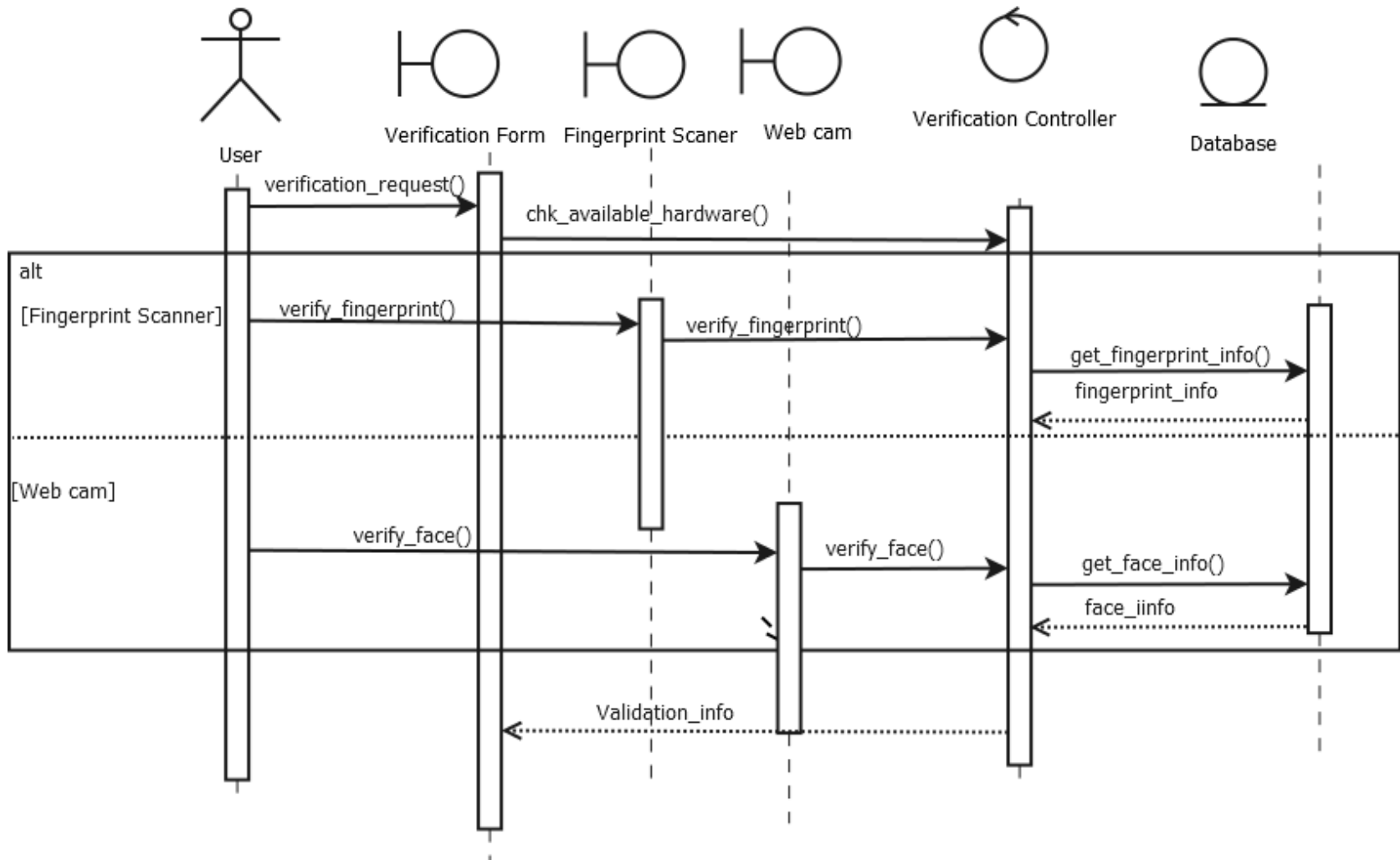
## Update Candidate Info



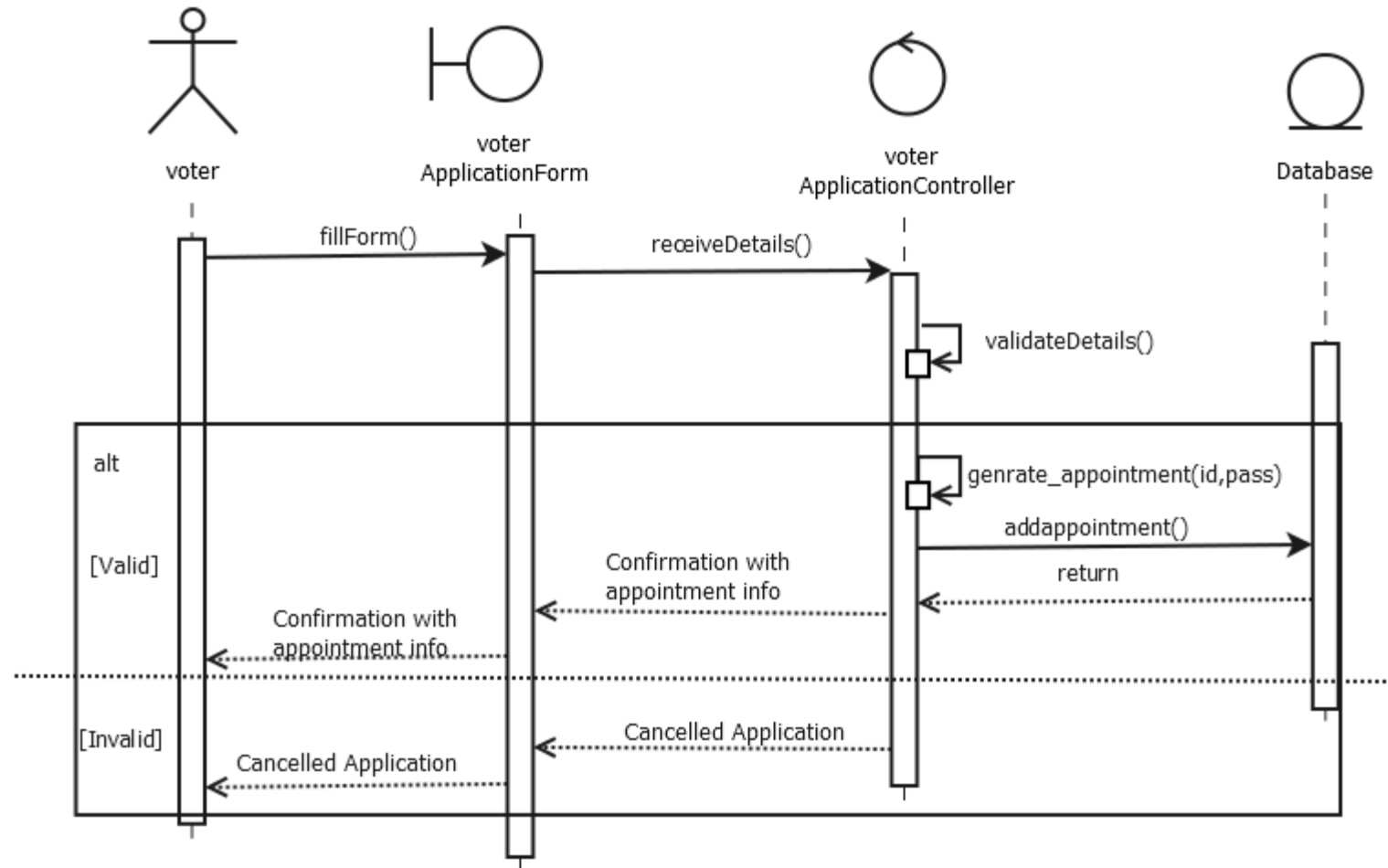
## Update Voter Info



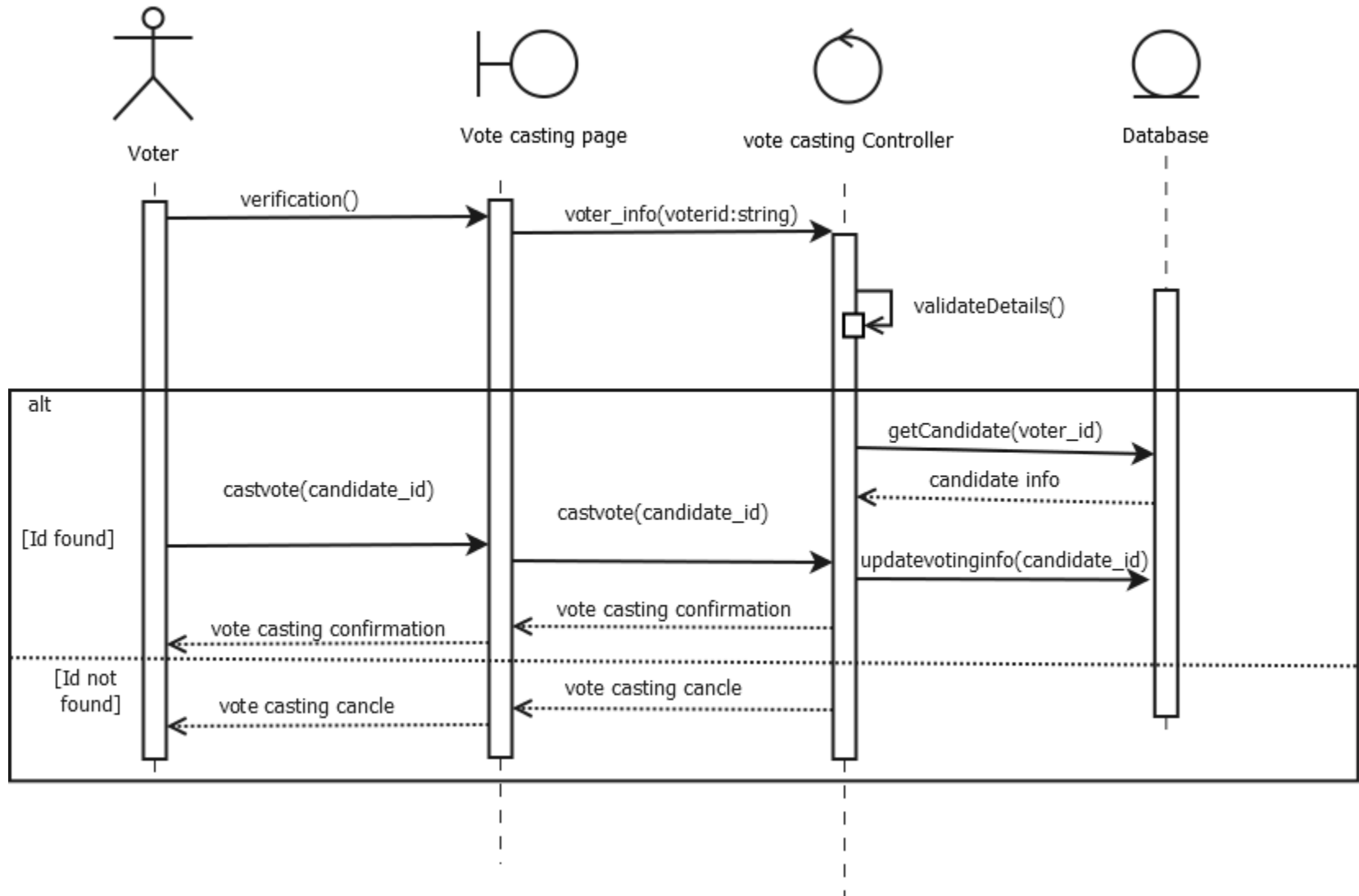
# Voter Verification



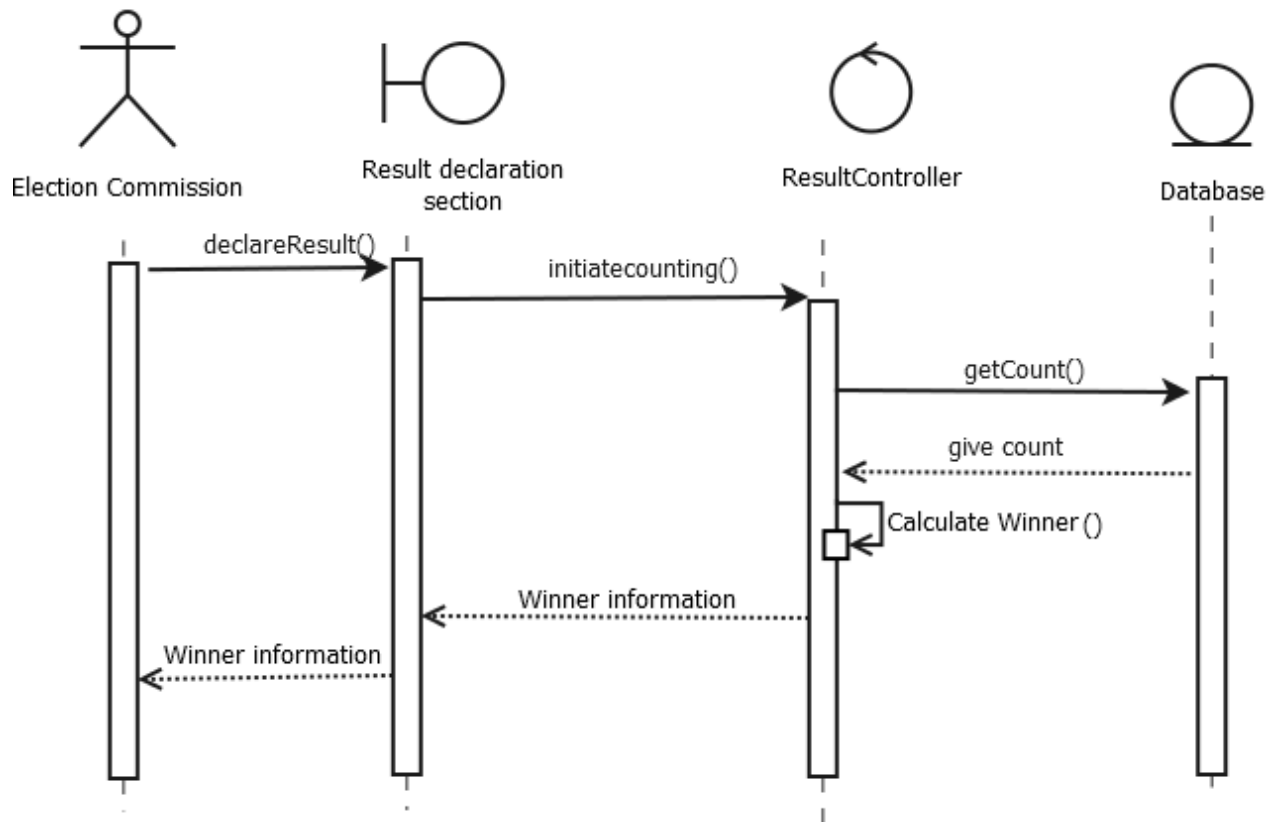
## Apply For Documentation Verification



# VoteCast

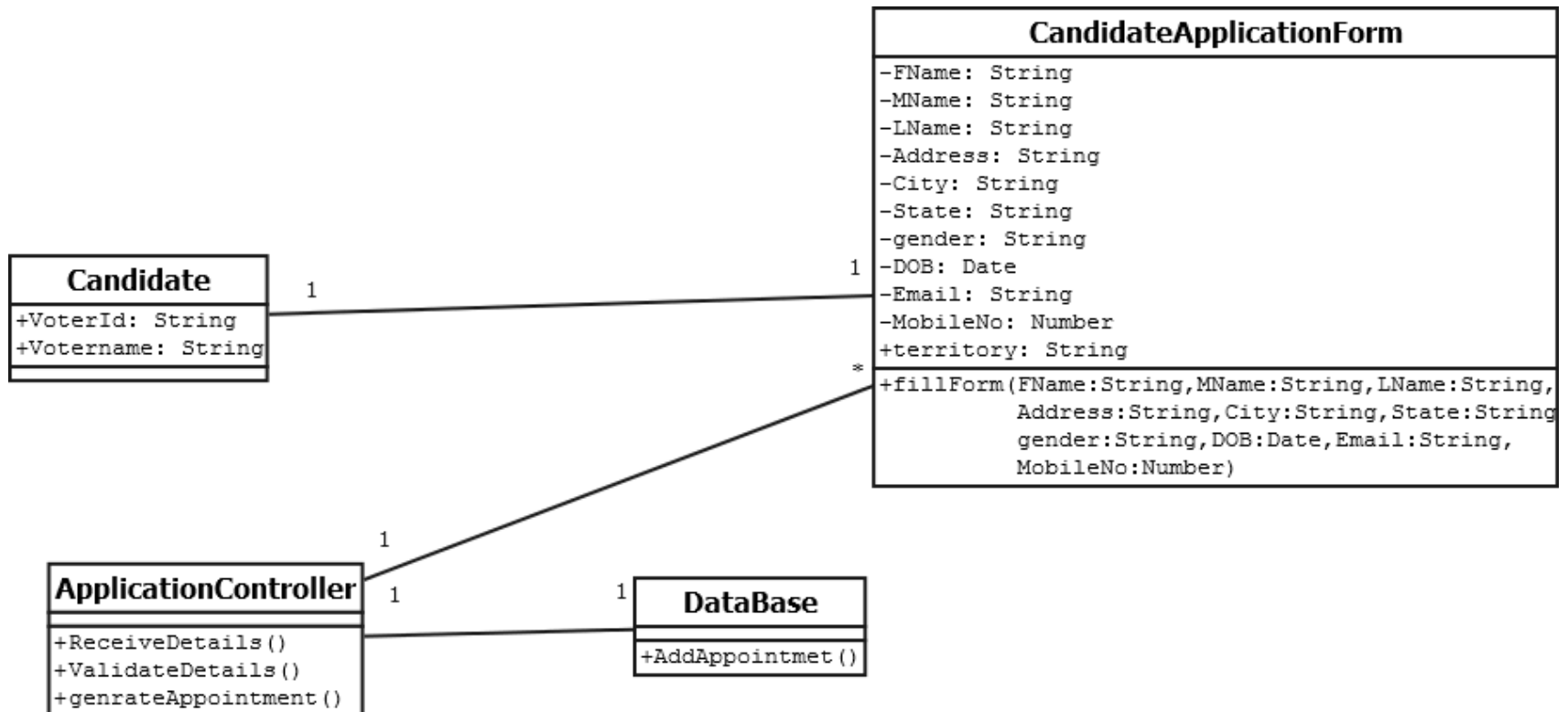


## Declare Result



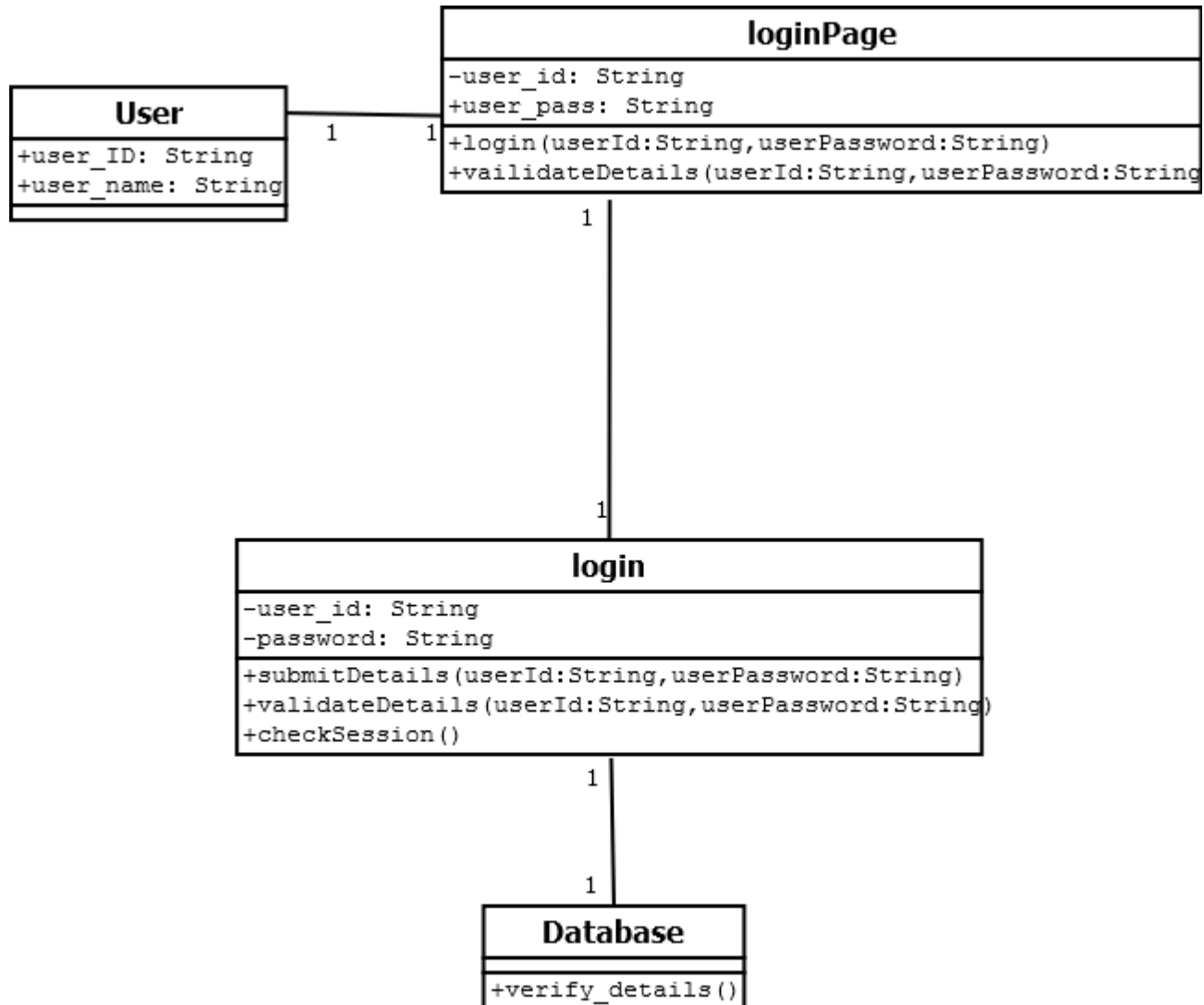
# Analysis Modeling

## Candidate Application Request

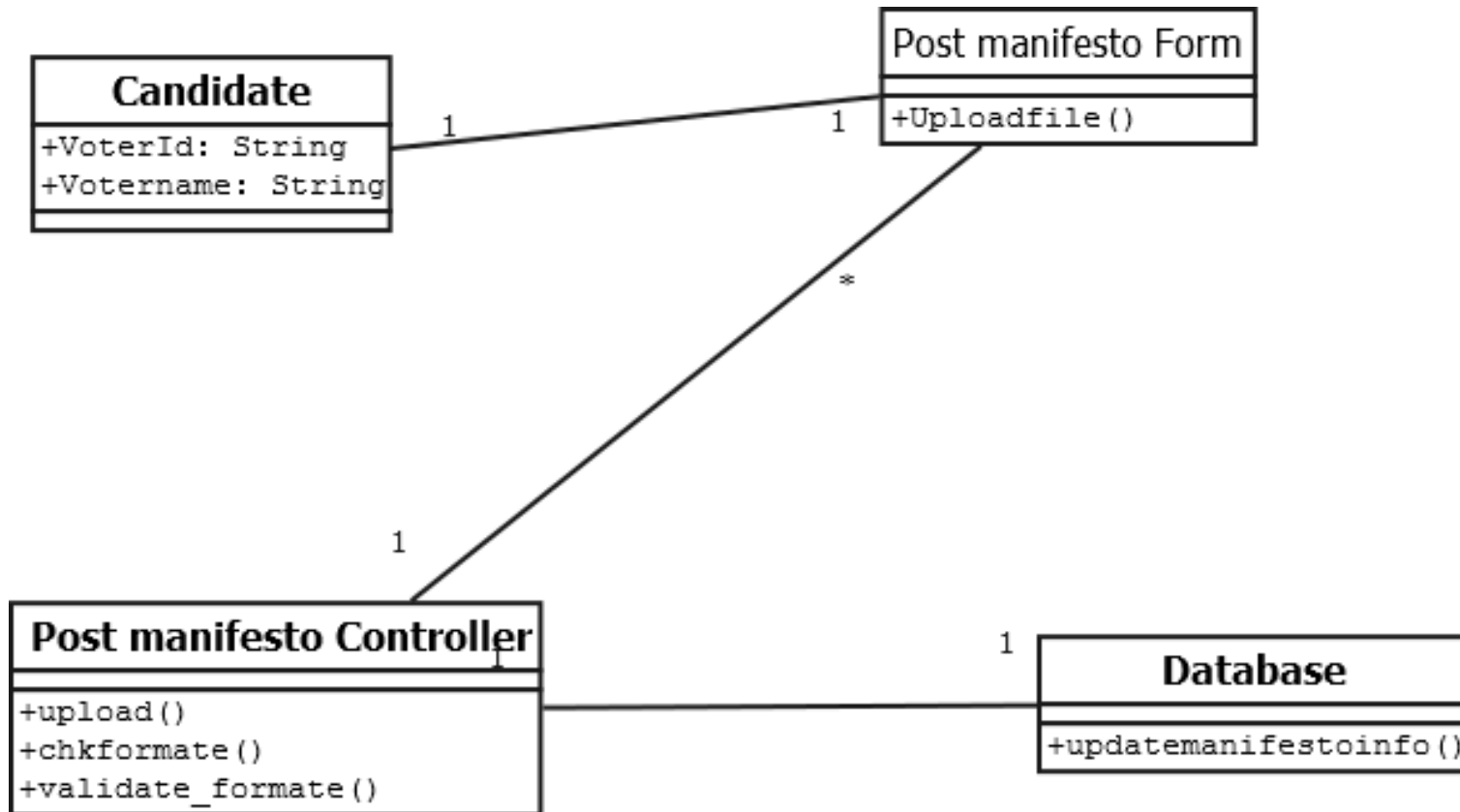




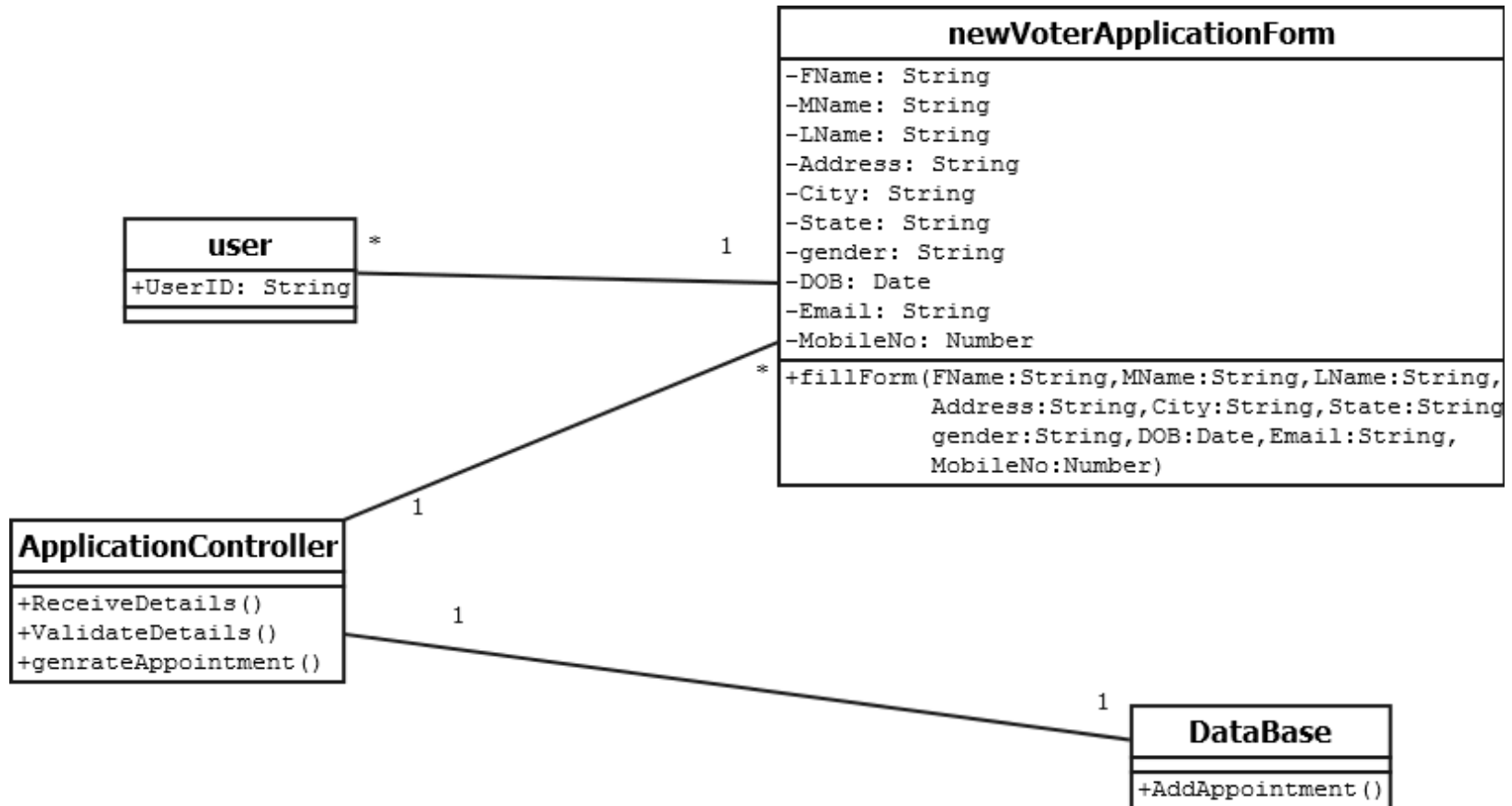
## login



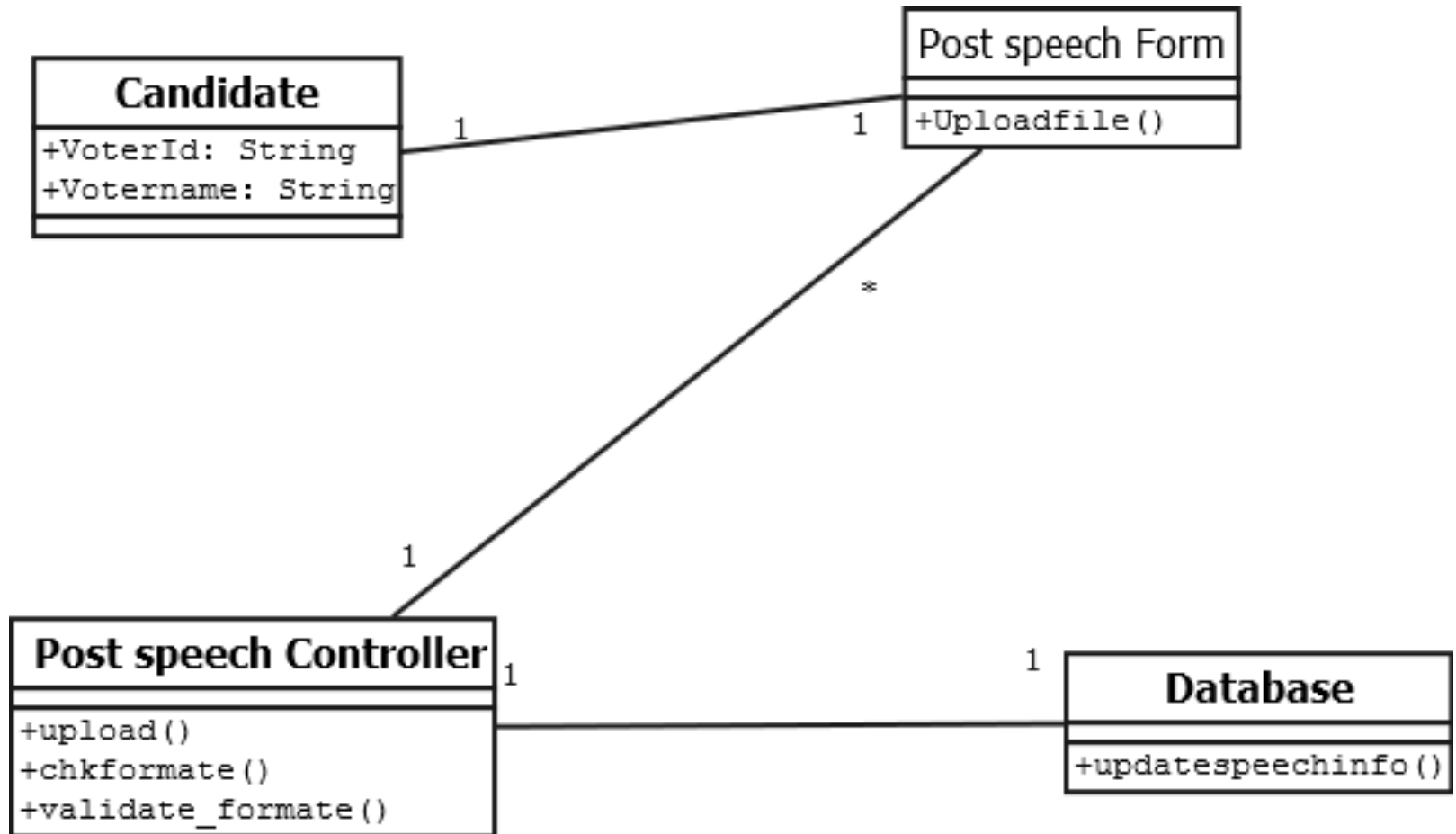
## Post Manifesto



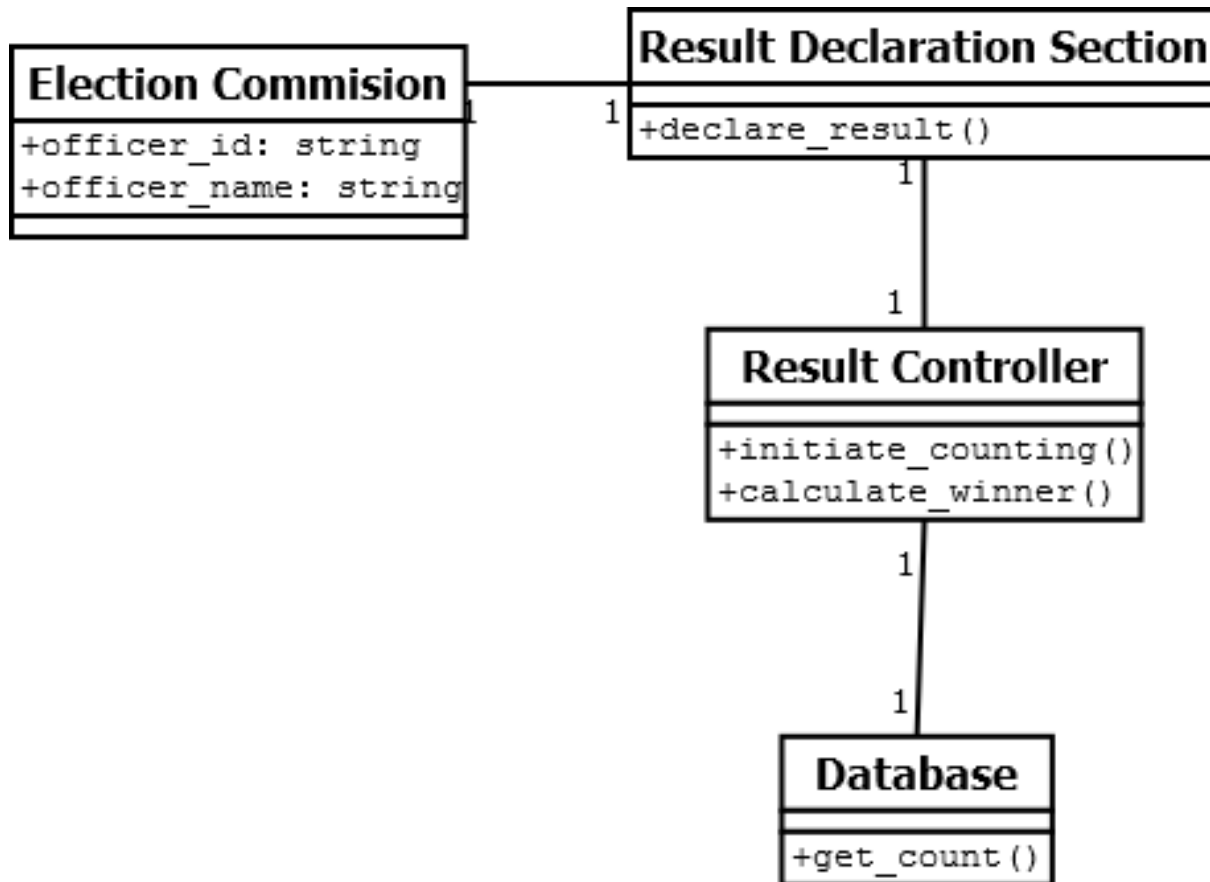
## Apply for new voter



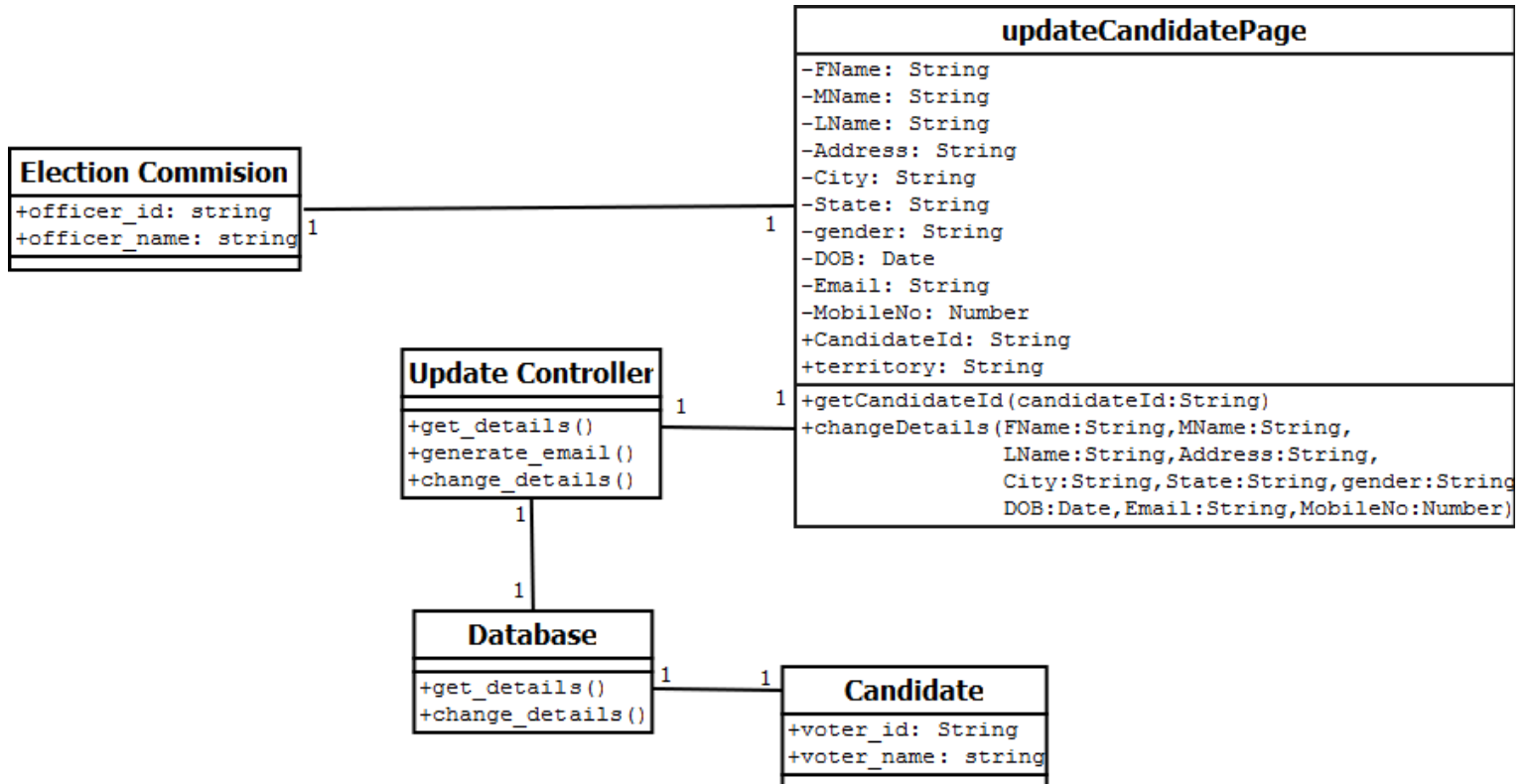
## Post Speech



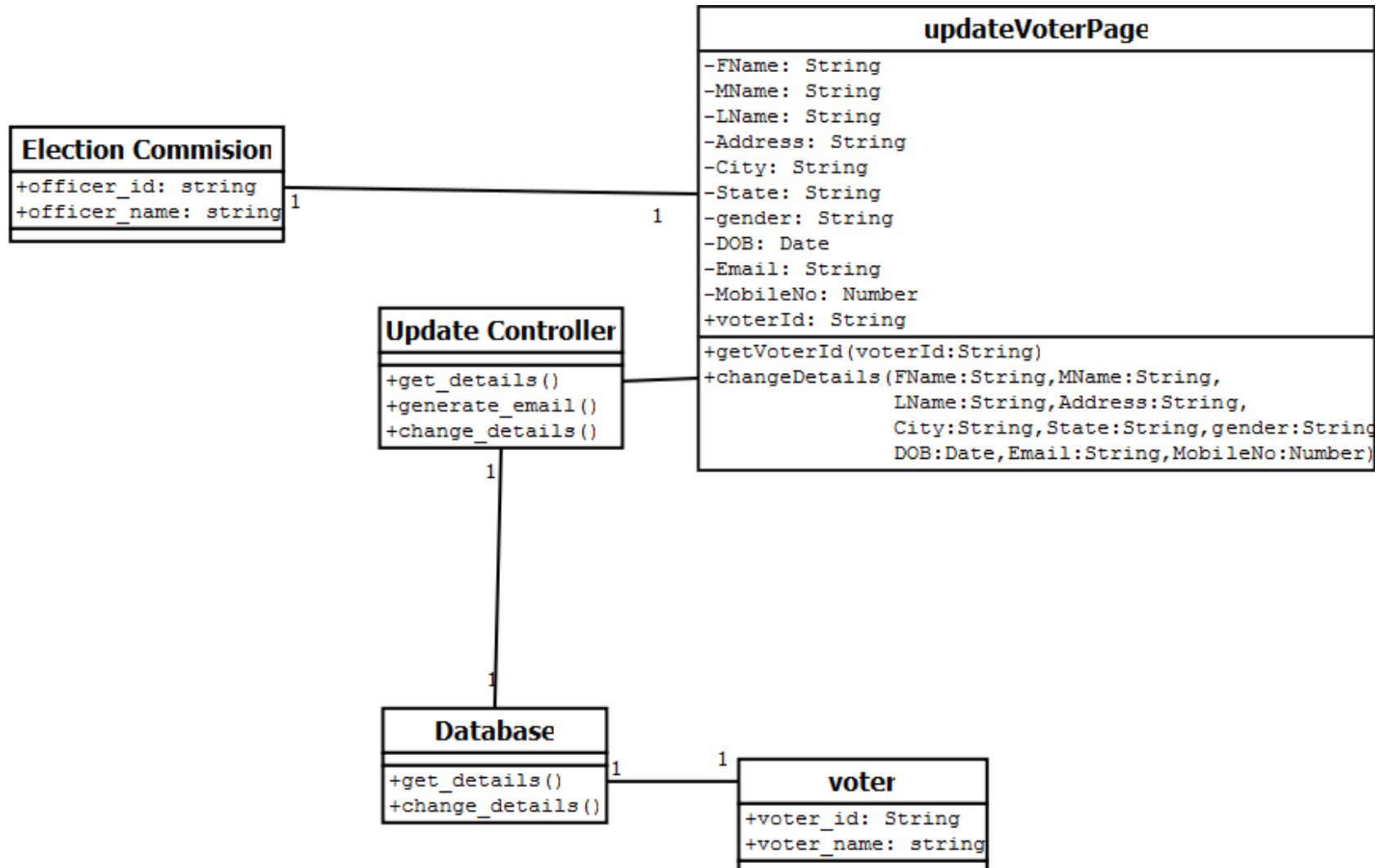
## Result Declaration



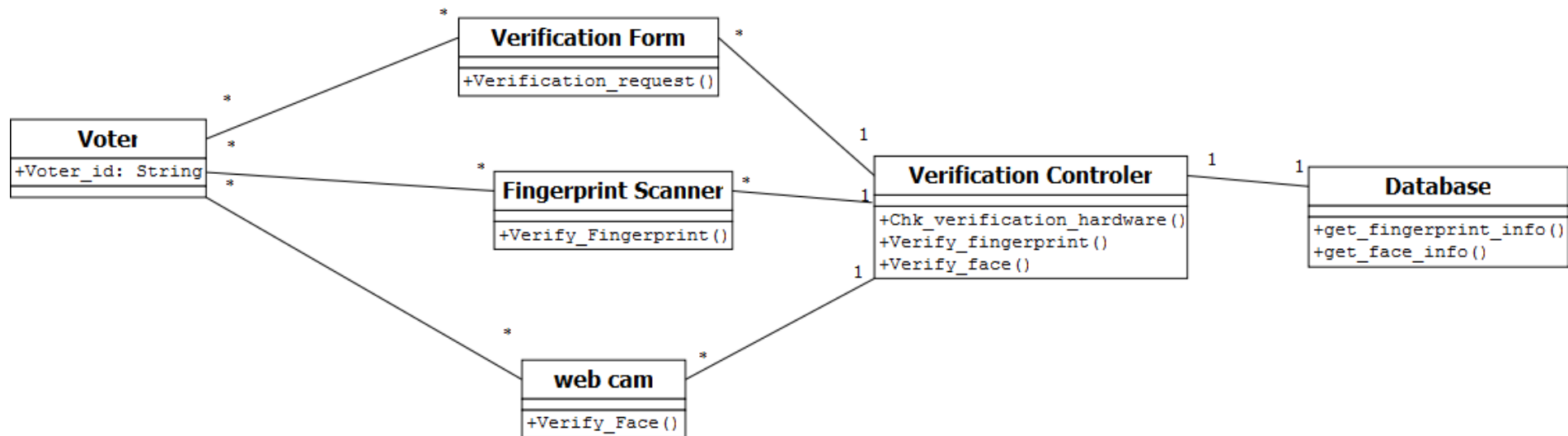
## Update Candidate Information



## Update Voter Information

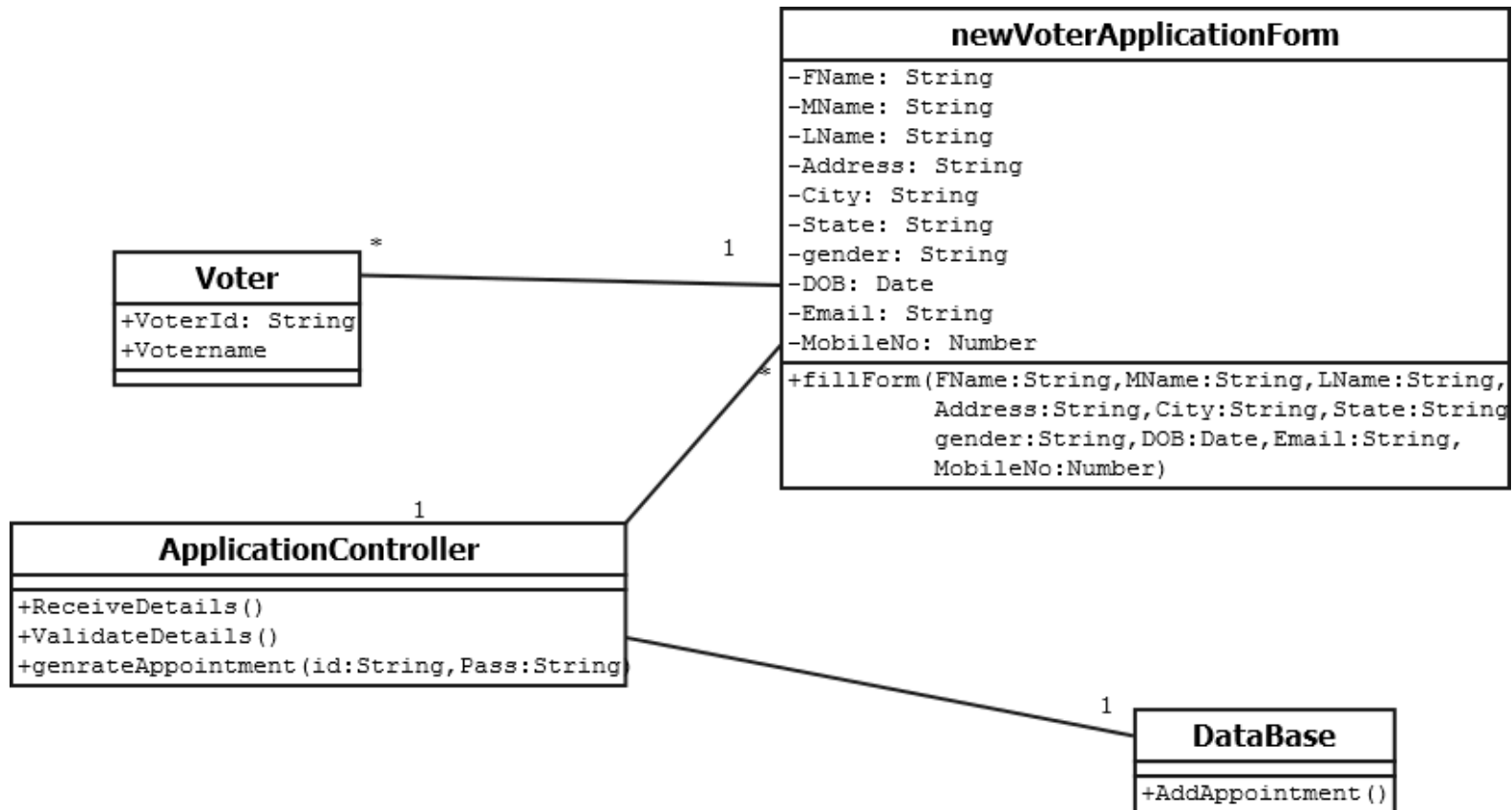


# Voter Verification

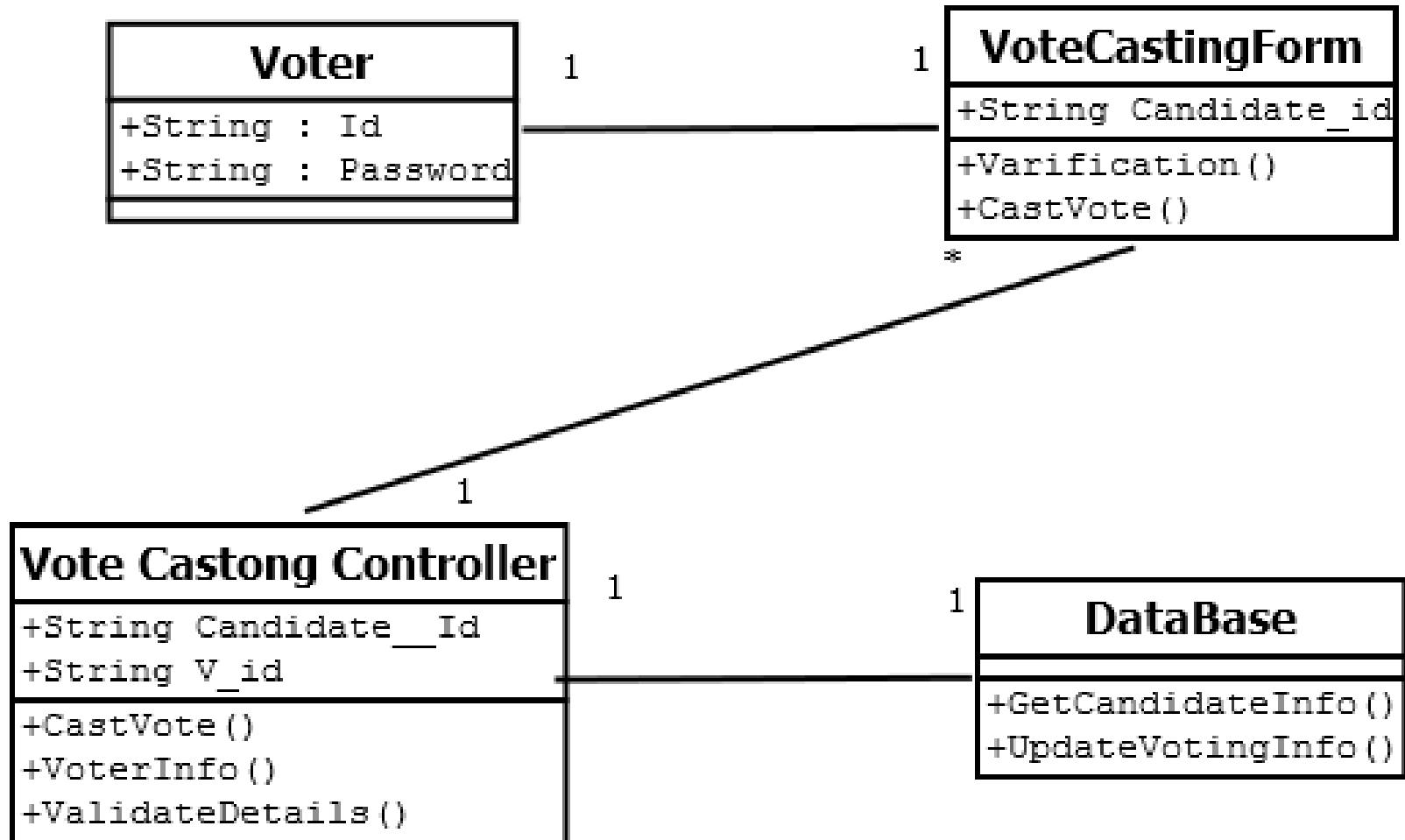




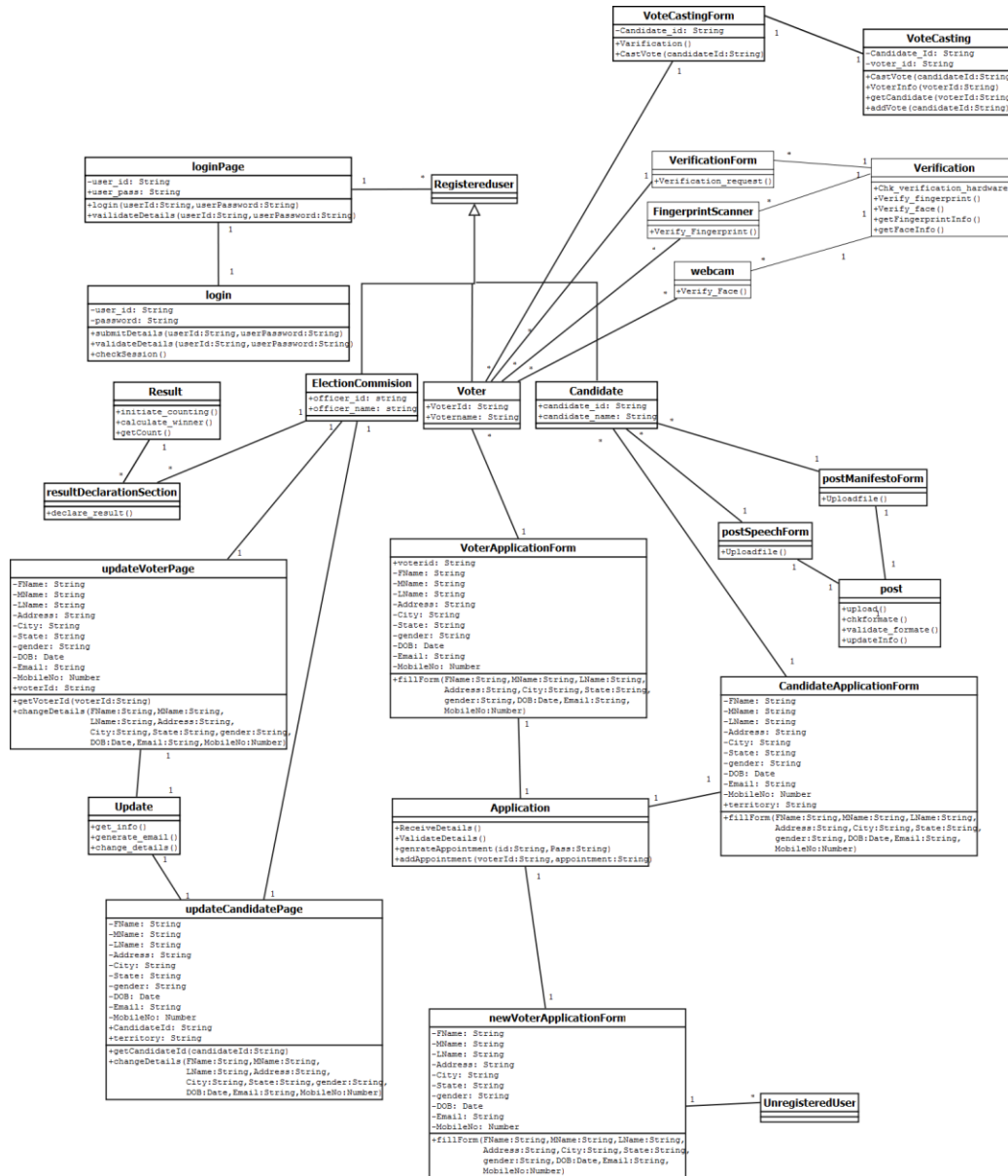
## Documentation Verification



## Vote Cast



# OCL



# OCL

