Software Requirements Specification
Version 1.1
10.09.2020

System for Biometric Authorization of Voters

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1.0 INTRODUCTION

1.1 PURPOSE:

This Software Requirements Specification provides a complete description of all the functions and specifications of the system, Biometric Authorization of Voters (BIOAOV).

This system aims at easing the complex processes involved in the current voting scenario in India.

1.2 SCOPE:

The system will run on secure servers at Election polling centres. It allows Voters to authenticate themselves using biometric machines. The data will be held in an NoSQL database on a secure server managed by the Election Commission of India.

1.3 GLOSSARY:

ECI:	Election Commission of India
UIDAI:	Unique Identification Authority of India
SRS:	Software Requirements Specification
Admin:	Administrator at Voting Centre

1.4 REFERENCES:

https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airline-database

https://freshcodeit.com/freshcode-post/how-to-create-srs-system-requirements-specification

1.5 DOCUMENT OVERVIEW:

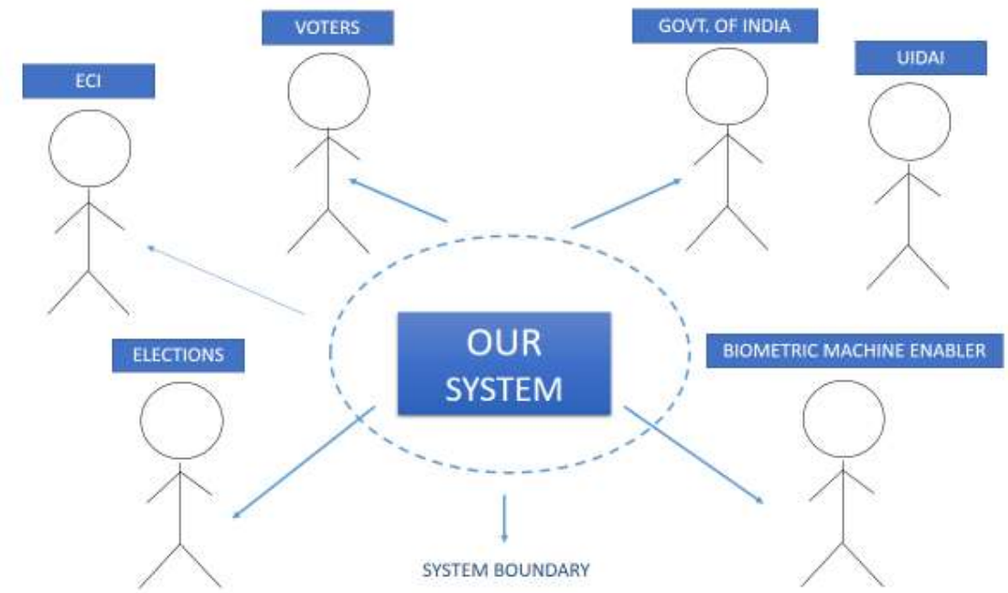
The remainder of this document is two sections, the first providing a full description of the project.

The final chapter concerns details of each of the system functions.

2.0 OVERALL DESCRIPTION

The **BIOAOV** encompasses numerous files and information from the **ECI Database**, as well as files on the secure server system. An Internet connection is necessary to access the servers.

2.1 SYSTEM ENVIRONMENT



2.1 SYSTEM DESIGN

The BIOAOV system will be handled by the ECI.

The ECI will work in tandem with UIDAI to keep their databases updated.

The ECI servers will interact with the voter's biometric information and authenticate it.

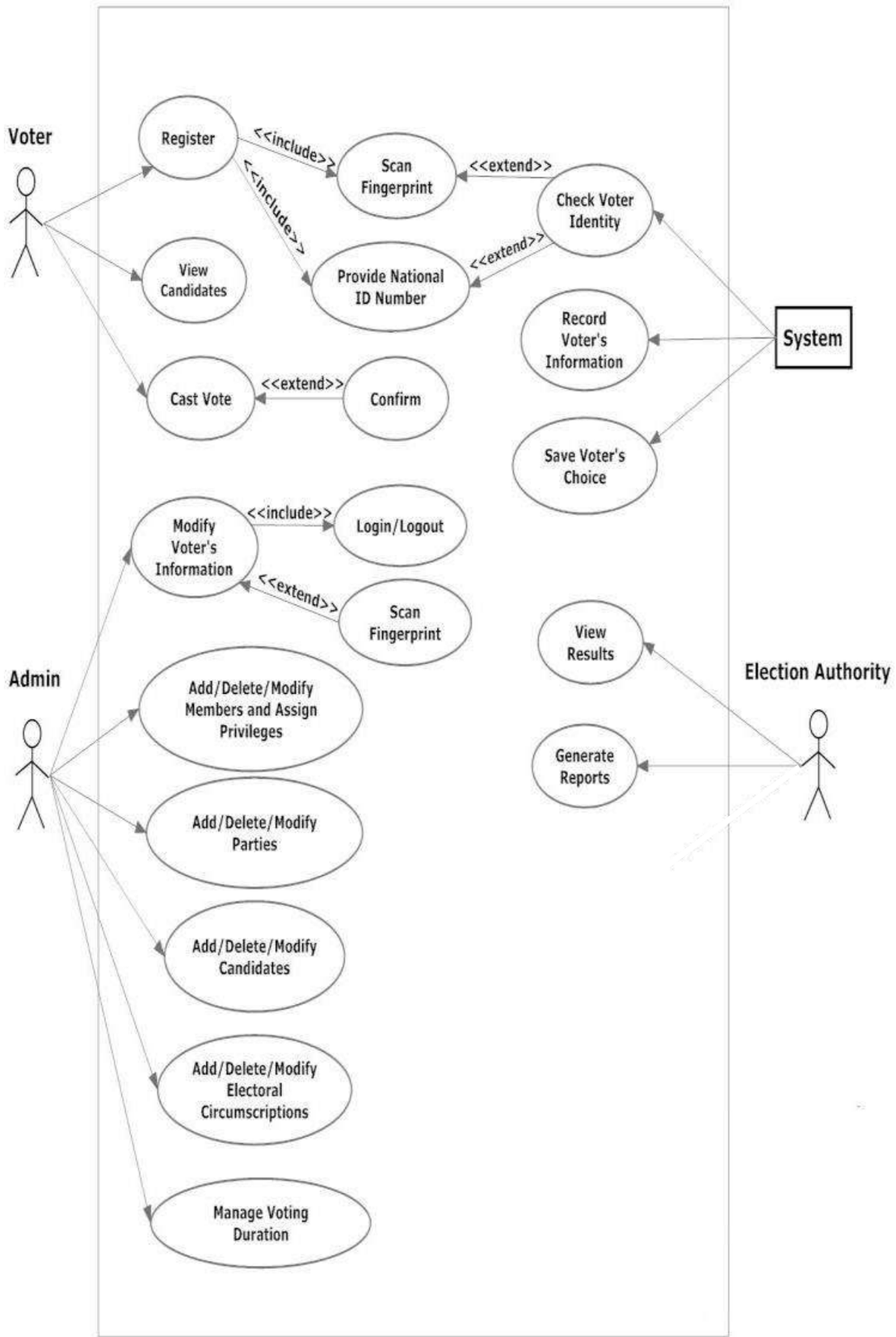
The system used to transfer the data uses Windows Operating System.

2.2 FUNCTIONAL REQUIRMENTS DEFINATIONS:

Functional Requirements are those that refer to the functionality of the system, i.e., what services it will provide to the user.

Non functional (supplementary) requirements pertain to other information needed to produce the correct system and are detailed separately.

2.3 USE CASE


Voter
Register
<<include>>
Scan Fingerprint
<<extend>>
Check Voter Identity
<<include>>
View Candidates
Provide National ID Number
<<extend>>
Record Voter's Information
System
Cast Vote
<<extend>>
Confirm
Save Voter's Choice
Modify Voter's Information
<<include>>
Login/Logout
<<extend>>
Scan Fingerprint
View Results
Admin
Election Authority
Add/Delete/Modify Members and Assign Privileges
Generate Reports
Add/Delete/Modify Parties
Add/Delete/Modify Candidates
Add/Delete/Modify Electoral Circumscriptions
Manage Voting Duration

USE CASE DESCRIPTION:

ECI:

- Generates voter information from UIDAI.
- Appoints Admins at voting centres.
- Gives Admin authority to authenticate voters based on information saved on ECI servers.
- Views the total voter turnout.

Admin:

- Logs into his/her system.
- Gets biometric of voter.
- Authenticates voter.
- Manages voting duration.

Voter:

- Scans fingerprint and iris.
- Checks identity.
- Upon authentication casts vote.
- Confirmation of vote.

3.0 REQUIREMENT SPECIFICATION:

3.1 EXTERNAL INTERFACE SPECIFICATION:

None

3.2 FUNCTIONAL REQUIREMENTS:

1. The BIOAOV system maintains information of voter database.
2. The system should generate its database using the UIDIA database.
3. The system should update its information whenever UIDIA database is updated.
4. The system should be able to get biometric information from a biometric scanner.
5. It should be able to check the entered information from the database and relay the result back to the admin.
6. The system should be able to correctly identify the age and the constituency to which the voter belongs.
7. It should display the authorised voter's information to the voter and the polling booth admin.
8. The system should also be able to confirm and record the casted vote at the time of voter's exit from the polling area.
9. The system should be able to send a message to the voters on their registered phone number.
10. The system should detect multiple trials of authentication by a voter and should not permit re-authorization i.e the system should allow a person to vote only once.

3.3 NON-FUNCTIONAL REQUIREMENTS:

1. Performance:
   It should be able to authenticate a user within 2 seconds.
2. Usability:
   It should have a simple and straight-forward user interface that can be used widely.
3. Reliability/Availability
   It should be available for the whole duration of elections.
4. Scalability:
   Should be able to handle growth of voter database.
5. Security:
   Only authorised personnel should be able to access it.

6. Integrity:
   It should keep information intact and not let it get hampered by anyone.
7. Reusability:
   It should apt to changes in election specifications over time.

3.4 SYSTEM EVOLUTION:

In the future the system should be able to provide feature of casting vote along with authorization of user.