**Digital Electoral System**

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**Class: BSCS-5th**

**Subject: Software Engineering**

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**User Requirements**

* Sign up to the system.
* Able to reset his password.
* Able to see his constituency.
* Able to see the candidate’s list of the constituency.
* Able to cast his vote one of them.
* Automatically sign out from the system after casting his vote.

**Functional Requirements**

**Functional Requirements- Voter Registration**

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| **FR01-01** | System should allow voter to enter his/her CNIC. |
| **FR01-02** | System shall show constituency of the voter verified by his/her CNIC. |
| **FR01-03** | System shall get Username from voter. |
| **FR01-04** | System shall get Mobile Phone Number from voter. |
| **FR01-05** | System shall send a password to the voter’s Mobile Phone Number for verification. |
| **FR01-06** | System shall authenticate voter when he / she submits CNIC, username and password on Sign Up button. |
| **FR01-07** | System shall allow voter to Reset his username and password when he / she clicks on the Reset button. |

**Functional Requirements- Voter’s Voting**

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| **FR02-01** | System should allow voter to enter his/her CNIC. |
| **FR02-02** | System shall show constituency of the voter verified by his/her CNIC. |
| **FR02-03** | System shall show the candidates of the constituency along with their Names & Electoral Symbols. |
| **FR02-04** | System shall allow the voter to tick only one of them. |
| **FR02-05** | System shall ask for Confirmation or Cancellation after ticking of the voter. |
| **FR02-06** | System shall ask for Password if voter confirms his/her vote otherwise repeat the process. |
| **FR02-07** | System shall mark the voter’s status as Casted & signed out automatically. |

**Functional Requirements- Returning Officer Registration**

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| **FR03-01** | System should allow R.O to enter his/her CNIC. |
| **FR03-02** | System shall show constituency of the voter verified by his/her CNIC. |
| **FR03-03** | System shall get Username from R.O. |
| **FR03-04** | System shall get Mobile Phone Number from R.O. |
| **FR03-05** | System shall send a password to the R.O.’s Mobile Phone Number for verification. |
| **FR03-06** | System shall authenticate voter when he / she submits CNIC, username and password on Sign Up button. |
| **FR03-07** | System shall allow voter to Reset his username and password when he / she clicks on the Reset button. |

**Functional Requirements- Returning Officer Registration**

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| **FR04-01** | System should allow R.O to enter his/her CNIC. |
| **FR04-02** | System shall show constituency of the R.O verified by his/her CNIC. |
| **FR04-03** | System shall show the voter list & candidates of the constituency along with their Names & Electoral Symbols. |
| **FR04-04** | System shall allow the R.O to Sign out immediately after the Election time ending. |

**Non-Functional Requirements**

**Non-Functional Requirements- Voter Registration**

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| **NFR01-01** | Voter shall Sign Up or Register themselves before Elections by using their CNIC. |
| **NFR01-02** | System shall show constituency of the voter verified by his/her CNIC. |
| **NFR01-03** | System shall allow the voter to cast his/her vote. |
| **NFR01-04** | System shall be available on Polling Both on Election Day under the authorization of Returning Officer. |
| **NFR01-05** | System shall allow the R.O to enter his/her CNIC for registration. |
| **NFR01-06** | System shall allow the R.O to enter his/her CNIC for Sign-In on the Election Day. |
| **NFR01-07** | System shall keep all record of Election. |

**Actors**

**Primary:** Returning Officer, Election Commission

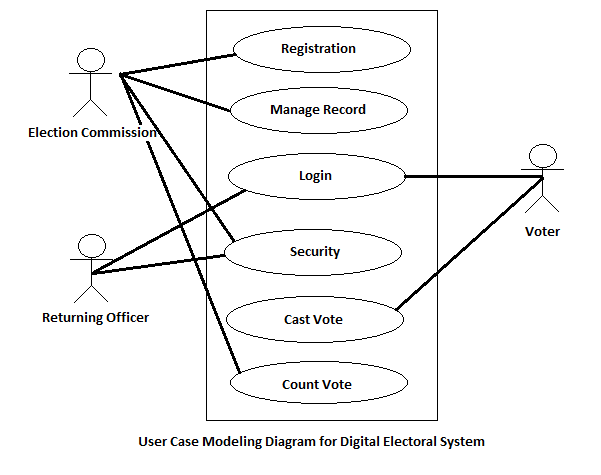
**Secondary:** Voter

**Descriptive**

This project is about to the transformation of traditional electoral system into a fully digital environment. There will be an electoral software, controlled & managed by Election Commission which provide a platform to voters to get all information about their vote & make them easy to cast their vote. This software will allow the voters to cast their vote by logging into their account on DES software installed on Polling Booths on Election Day under the supervision of Returning Officer. There are many problems which a voter face on the Election Day. Like, he often finds that he doesn’t have his vote registered. Moreover, there are many problems to hold elections like there are complaints of rigging or tempering in election record. So, to resolve all of these problems, this application software is enough. This project will help the voters. The project will reduce the election cost.The system will provide full assistance to voters under the supervision of Election Commission.The system will allow the voter to register his vote on Polling Booths by a deadlinebefore the election.The system will allow the voter to check his constituency on the election day by entering his CNIC.The system will allow the user to cast his vote by logging into his account on the election day. The system will keep all record of casted or non-casted votes & all the data sent to Election Commission.

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| Use Case Name | Sign Up or Sign In |
| Participating Actors | Voter |
| Goal | Register or cast vote |
| Trigger | Voter selects New Registration or Registered Voter option. |
| Precondition | There are voter’s & candidate’s data stored in database. |
| Post-condition | Information are displayed according to additional criteria. |
| Basic Flow | 1. Voter selects a voter list. 2. System returns a view with asking for CNIC & password.  3. User chooses time interval, number of results, and order and selects Sign In.  4. System returns list of candidate’s in his/her constituency. |
| Exceptions | 4. No data of the voter found.  4.1. System returns no results. |
| Constraints | Security of the system compromised |
| Includes | NADRA |

**Use Case Modeling**

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