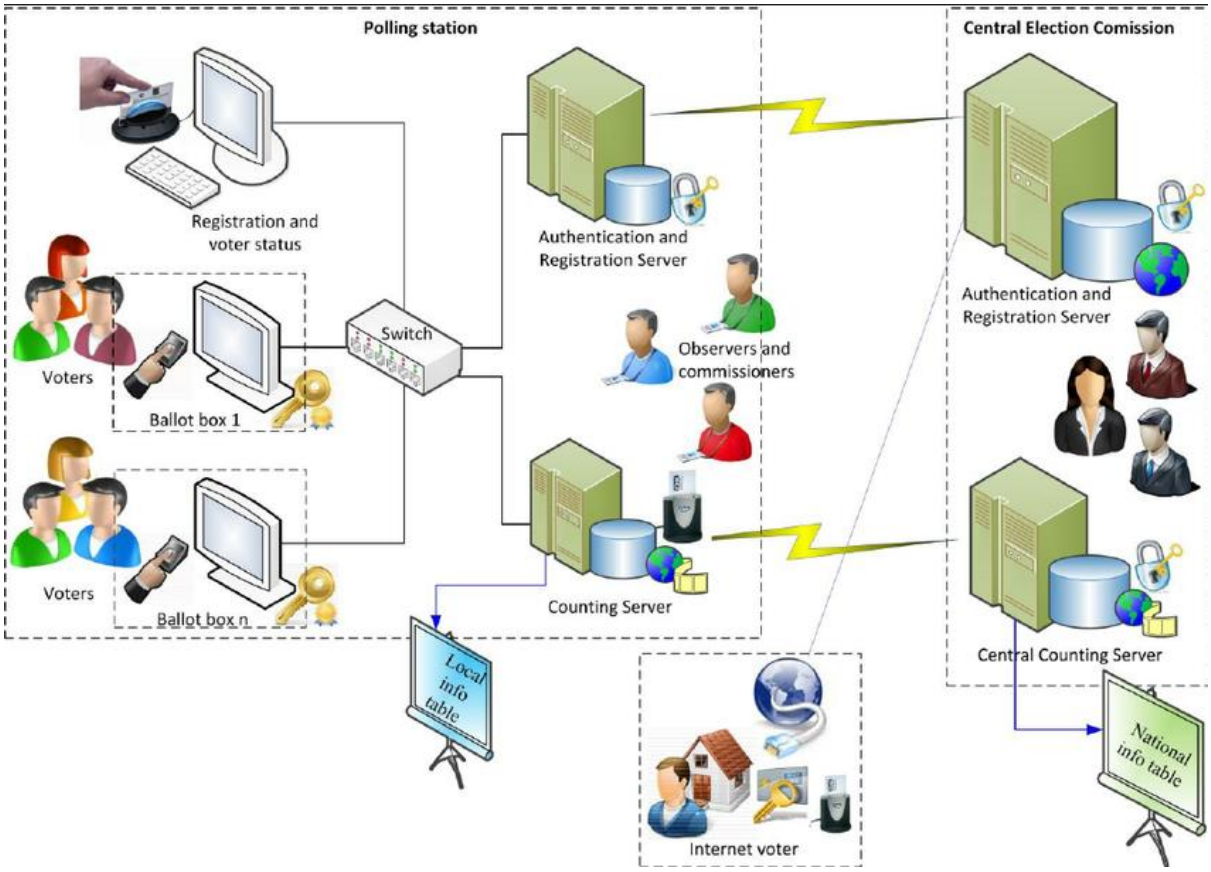
Project Design Phase - Part 2

Technical Architecture

TEAM ID	NM2023TMID04400
PROJECT NAME	BIOMETRIC SECURITY SYSTEM FOR VOTING PLATFORM

Biometric Voting System Architecture :



- To accommodate these requirements, an architecture, presented in Figure , for the e-Voting system has been developed. The main elements of this architecture include;

- **The databases:** two databases have been developed for the e-Voting system, namely the election and Meta databases. The election database keeps track of campaigns, candidates and voters. The Meta database, on the other hand contains information about the structure and format of the different type of election campaigns as well as the applicable voting rules;

- **The database management system (DBMS):** the DBMS [2] manages the election and Meta databases;

- **The web server:** the web sever interfaces the e-Voting system to web voters. In addition, it stores the different web pages containing the code required to interact with the user as well as the database system;

- **The SMS (Short Message Service) server:** the SMS sever, as shown in Figure interacts with voters that use their mobile telephone set and the SMS messaging service to access the e-Voting system.

    - At the lowest level, the SMS server interfaces to a number of GSM (Global System for Mobile Communications) modems that receive voters' SMS messages through an SMS service provider (mobile operator).
    - Once an SMS message is received by a modem, the SMS server grap this message, perform, on its content, the required checks and then respond to the voter accordingly, by either placing a vote in the database or informing the voter about the occurrence of an error (e.g. invalid user name and/or password or multiple voting).
    - After the voting campaign is completed, the SMS server sends all registered mobile voters (whether they have actually cast a vote or not) a message with the election results.

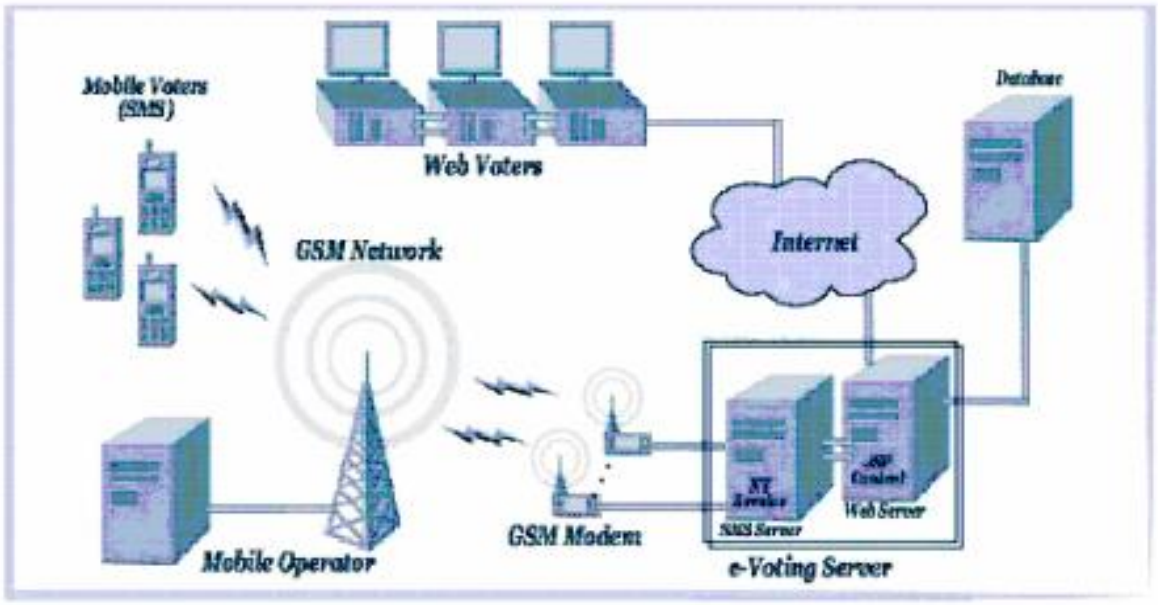


Figure . An architecture for the e-Voting system.