NAME:- TEJAS AGRAWAL.
REGISTRATION NUMBER:-25BSA10178

Here is a report describing the simple online voting system Python code provided:

Report on Simple Online Voting System Code

Problem Addressed:

The system addresses the need for a simple, digital method to conduct voting, allowing voters to register, vote once for their preferred candidate, and view results without physical ballots or complicated infrastructure.

Core Features:

• Voter Registration: Ensures only registered voters participate.

• Single Vote Enforcement: Prevents voters from voting multiple times.

• Candidate Vote Counting: Keeps track of votes for each candidate.

• Result Display: Shows the vote count for all candidates at any time.

Design Approach:

• Uses dictionaries for storing voters (registered_voters) and candidates with vote counts (candidates).

• Functions modularize key operations: register_voter , cast_vote , and show_results .

• Command-line menu provides a basic interface for interaction.

Algorithm and Workflow:

1. Register a user by storing their unique voter ID and setting their voting status as False.

2. When a vote is cast, check if the voter exists and hasn't voted yet; then increment the candidate's vote count.

3. Mark the voter as having voted to prevent repeat votes.

4. Results display tallies votes for each candidate.

Error Handling:

• Prevents double registration.

• Prevents unregistered users from voting.

• Checks validity of candidate names.

• Prevents multiple votes by the same voter.

Limitations and Extensibility:

• No database or persistent storage; data lost when program ends.

• No authentication of voters beyond ID input.

• User interface is basic text input, can be extended to GUI or web.

• Security features and vote encryption not implemented.

Educational Value:

This code demonstrates fundamental programming concepts such as conditionals, loops, data structures, and modular function design. It serves as a foundation for understanding voting systems and can be adapted or expanded to more complex applications.
The voting system provided is a minimal and effective demonstration of the core logic required for an online voting tool without AI involvement, suitable for learning or prototyping purposes