KALASALINGAM
ACADEMY OF RESEARCH & EDUCATION
(DEEMED TO BE UNIVERSITY)
Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A" Grade
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Student Assessment Record

Group Report

Section Name :A-12

Group No : 5

Group Leader :M.MARUTHI NAVADEEP

Members of the Team :

S.No	Name of the Student	Register Number	Signature of the Student
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Title of the Project :VOTING SYSTEM

Signature of the Examiner with Date

Department of Computer Science Engineering

School of Freshman Engineering

Kalasalingam Academy of Research and Education

I. INTRODUCTION

Generally, the voting system consists of ballot boxes and uses paper voting.But,it is usually not efficient and a very time consuming process.Many times in this voting system, there are many invalid votes present due to the paper folding or making two of options mistakenly…..etc.,

This voting system project aims to develop an application that facilitates the voting process by allowing registered voters to cast their votes for a list of candidates.

The project focuses on creating a user-friendly interface that verifies voter identity, prevents multiple voting, records and counts votes, and determines the winner based on the highest vote count.

By implementing this project, it becomes easier to manage and organize elections, enabling a democratic and efficient voting system.
This project also plans to read the data from the dataset.

II. OBJECTIVE OF THE PROJECT

The objectives of this project are to simplify the voting system by using software.

The objectives of the voting system project can include:

- Implementing a user-friendly interface: The project aims to provide a user-friendly interface for voters to input their voter ID, password, and vote. This involves using input prompts and displaying clear instructions and information about the candidates and their platforms.
- Verifying voter identity: The project verifies the voter's identity by matching the entered voter ID and password against a predefined list of voters and passwords. This ensures that only registered voters can cast their votes.
- Preventing multiple voting: The project includes functionality to prevent a voter from casting multiple votes. It checks if the voter has already voted by keeping track of the voter IDs of those who have already cast their votes.
- Recording and counting votes: The project records each voter's valid vote and maintains a vote count for each candidate using a dictionary. This allows for accurate counting and tracking of votes.

- Determining the winner: The project determines the winner based on the highest vote count using the max function and the key argument. In the case of a tie, it handles the tie appropriately.
- Displaying the vote count and winner: The project displays the vote count for each candidate and announces the winner by displaying their name, vote count, and indicating if there is a tie. This provides transparency and allows voters to see the outcome of the voting process.
- Overall, the objectives of the project are to create a functional and reliable voting system that ensures the integrity of the voting process, accurately counts the votes, and determines the winner based on the recorded votes.

III. SYSTEM SPECIFICATION/ FUNCTION MODULES

System specifications:-

Display size 15.60-inch.

Display resolution 1920x1080 pixels.

Touchscreen Yes.

Processor Core i7.

RAM 8GB.

OS Windows 10.

Functions/ modules:-

1.Built - in functions

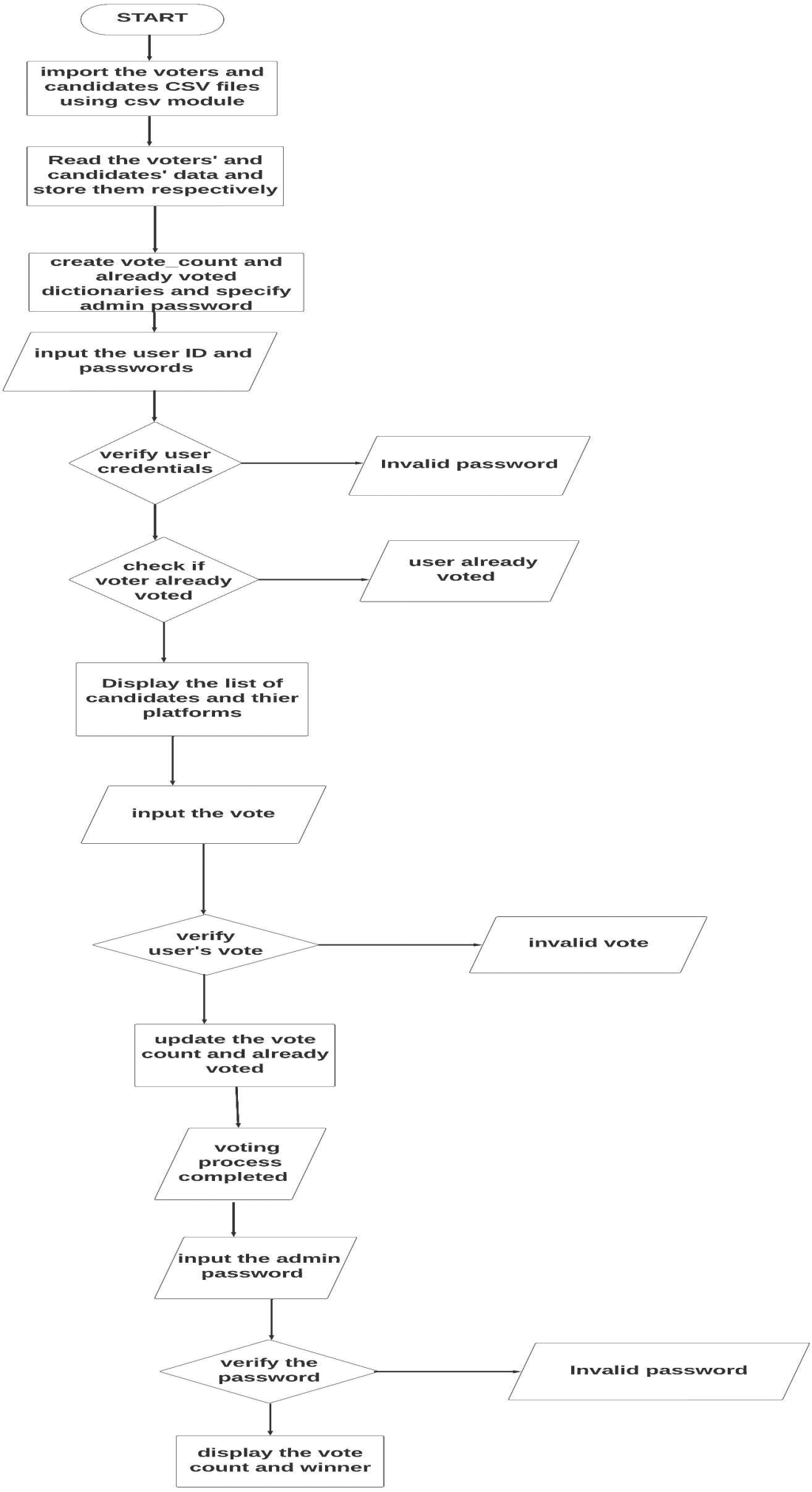
2.CSV

3.pandas…etc.,

Operations/Features:-

1. Voter's ID Verification
2. Multiple Voting Identification
3. Preventing Duplicate Votes
4. Recording and counting votes
5. Determining the winner

These are the various Operations and features in this project.


START
import the voters and candidates CSV files using csv module
Read the voters' and candidates' data and store them respectively
create vote_count and already voted dictionaries and specify admin password
input the user ID and passwords
verify user credentials
Invalid password
check if voter already voted
user already voted
Display the list of candidates and thier platforms
input the vote
verify user's vote
invalid vote
update the vote count and already voted
voting process completed
input the admin password
verify the password
Invalid password
display the vote count and winner

IV. Implementation

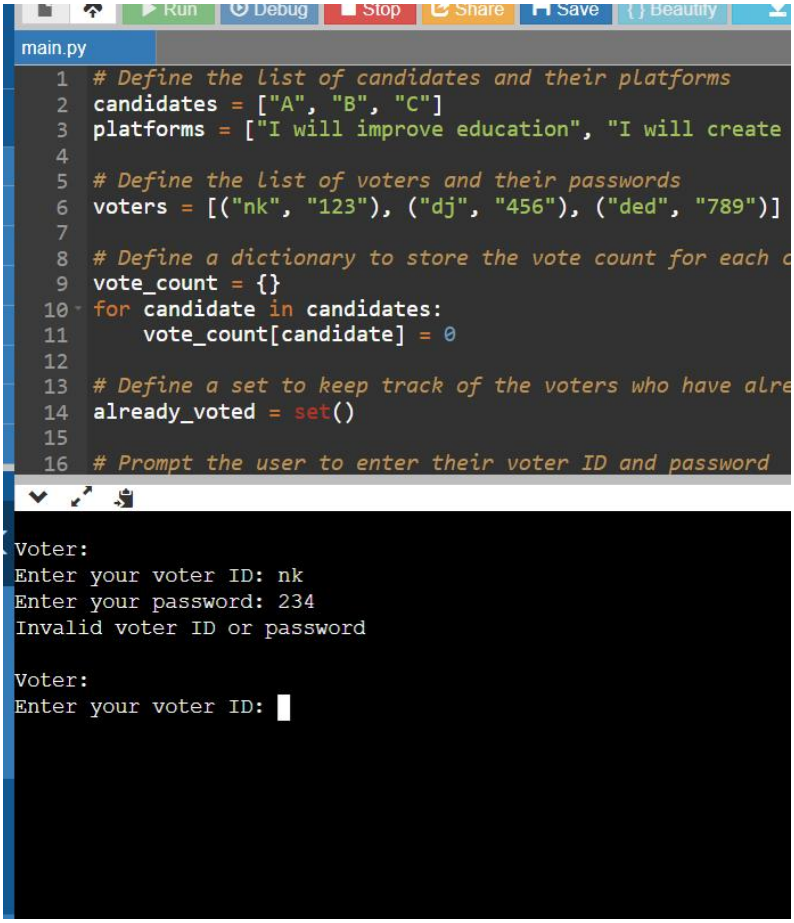
```
import csv

# Specify the path of the voters CSV file
voters_file = "/content/Voters.csv"

# Specify the path of the candidates CSV file
candidates_file = "/content/Candidates.csv"

# Read the voters' data from the CSV file
voters = []
with open(voters_file, "r") as file:
    reader = csv.reader(file)
    for row in reader:
        voter_id, password = row
        voters.append((voter_id, password))

# Read the candidates' data from the CSV file
candidates = []
platforms = []
with open(candidates_file, "r") as file:
    reader = csv.reader(file)
    for row in reader:
        candidate, platform = row
        candidates.append(candidate)
        platforms.append(platform)

# Define a dictionary to store the vote count for each candidate
vote_count = {}
for candidate in candidates:
    vote_count[candidate] = 0

# Define a set to keep track of the voters who have already voted
already_voted = set()

# FIX the admin to enter their password
admin_password ="nk@2004"

# Prompt the user to enter their voter ID and password
for i in range(len(voters)):
    print("\nVoter:")
    voter_id = input("Enter your voter ID: ")
    password = input("Enter your password: ")

    # Verify the voter ID and password
    voter_found = None
```

```
 for voter in voters:
  if voter[0] == voter_id and voter[1] == password:
            voter_found = voter[0]
            break

    if voter_found is None:
        print("Invalid voter ID or password")
    else:
        # Check if the user has already voted
        if voter_id in already_voted:
            print("You have already voted.")
        else:
            # Display the list of candidates and their platforms
            print("Candidates:")
            for i in range(len(candidates)):
                print(str(i+1) + ". " + candidates[i] + ": " + platforms[i])

            # Prompt the user to enter their vote
            vote = input("Enter your vote: ")

            # Verify the user's vote
            vote_found = False
            for candidate in candidates:
                if vote == candidate:
                    vote_found = True
                    break
            if not vote_found:
                print("Invalid vote")
            else:
                # Record the user's vote
                vote_count[vote] += 1
                print("Thank you for voting")

                # Add the voter to the already voted set
                already_voted.add(voter_id)
print("\nThe Voting is now completed")
if True:
    print("To check the results:\n")

# Prompt the admin to enter their password to view the voting results
admin_password_input = input("Enter the admin password to view the voting
results: ")
if admin_password_input == admin_password:
    # Display the vote count for each candidate
    print("Counting the Votes... \nVote count:")
    for candidate in candidates:
        print(candidate + ": " + str(vote_count[candidate]))
```

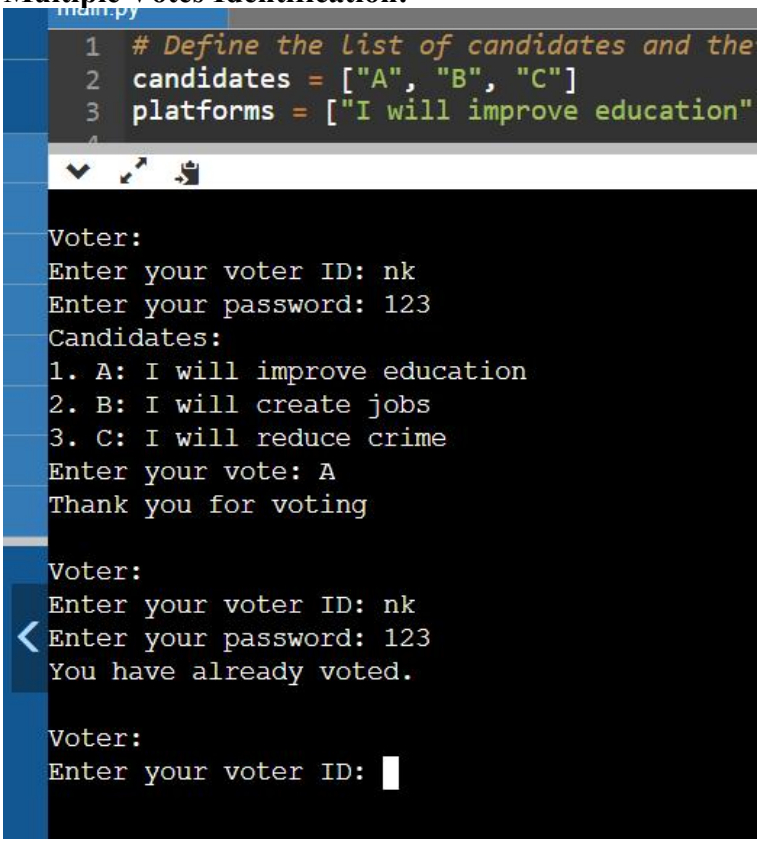
```
    # Find the winner
    winner = None
    max_votes = 0
    tie = False
    for candidate, votes in vote_count.items():
        if votes > max_votes:
            winner = candidate
            max_votes = votes
            tie = False
        elif votes == max_votes and winner is not None:
            tie = True
    if tie :
      print("It's a tie among the candidates.")
    else:
      print("The winner is " + winner + " with " + str(vote_count[winner]) + " votes")
else:
    print("Invalid admin password. Access denied.")
```

V. Implementation Screenshots

❖ Verify user Credentials:



❖ **Multiple Votes Identification:-**



✧ **Admin verification:-**

```
The Voting is now completed
To check the results
Enter the admin password to view the voting results: nk@2004
Counting the Votes:
Vote count:
A: 1
B: 1
C: 1
It's a tie among the candidates.
```

Winner Identification and Declaration:-

```
Voter:
Enter your voter ID: nk
Enter your password: 123
Candidates:
1. A: I will improve education
2. B: I will create jobs
3. C: I will reduce crime
Enter your vote: A
Thank you for voting

Voter:
Enter your voter ID: dj
Enter your password: 456
Candidates:
1. A: I will improve education
2. B: I will create jobs
3. C: I will reduce crime
Enter your vote: A
Thank you for voting

Voter:
Enter your voter ID: ded
Enter your password: 789
Candidates:
1. A: I will improve education
2. B: I will create jobs
3. C: I will reduce crime
Enter your vote: C
Thank you for voting

Vote count:
A: 2
B: 0
C: 1
The winner is A with 2 votes
```