
# COMPUTER SCIENCE

## PROJECT FILE

## SESSION: 2023 – '24

## SUBJECT CODE: 083

NAME: YUHANTH P

CLASS: XI JEE

ROLL NO.:11724

TITLE: PYTHON VOTING POLL

# CHENNAI PUBLIC SCHOOL

THIRUMAZHISAI, CHENNAI - 600124

## BONAFIDE CERTIFICATE

This is to certify that this project done by **YUHANTH P** of class **XI** sec **JEE** Roll no. 11724 is submitted for Computer Science Practical Examination for the year 2023 - '24.

Date:

Signature of Teacher in-Charge

# ACKNOWLEDGEMENT

I wish to express my sincere thanks to our founder and Chairman, SHRI N DEVARAJAN, for his endeavour to educate us in his premiere institution.

I would like to express my gratitude to our Correspondent SHRI. BALAJI DAGUPATHI for his kind words and enthusiastic motivation which inspired us a lot in completing this project.

I wish to express my sincere thanks to our director SHRI. SUMAN BABU YARLAGGADA, for providing us with the necessary facilities for the completion of this project.

I would like to express my thanks and gratitude to our Principal Mrs. CHITRAKALA RAMACHANDRAN for her encouragement and her sincere guidance.

I also extend my thanks to our senior Vice Principal Mrs. SUCHITRA SANTHOSH for providing us with ample time and encouragement to complete this Project.

I also extend my sincere thanks and gratitude

Mrs JULIYA JEYAMANOHARI, HOD, and Mrs JEBA KERSHIAL J R, our Computer Science teacher and all the computer science department staff for their valuable support.

# INDEX

## SYSTEM REQUIREMENTS

1. HARDWARE

- Processor
- Keyboard
- Minimum Memory – 2GB

2. SOFTWARE

- Operating System
- Python IDLE

## PROBLEM DEFINITION

This Python program simulates a voting poll for easier decision-making among a group of people.

## ADVANTAGES

- **Question and Option Entry:**

  Users can enter a question and multiple options for the poll. They can confirm or edit the question and options before proceeding.

- **Voter Registration:**

  Users can enter their names to register as voters. The code assigns them a random voter ID.

- **Polling:**

  Registered voters can cast their votes using their voter ID.
  The code verifies the voter ID and ensures that it is valid and they haven't voted already.

  They choose an option by entering its corresponding number.

  The code does not store the voting information. The votes are anonymous.

- **Results:**

  The code calculates the winner(s) based on the number of votes for each option.

  It handles ties and displays the winners and the number of votes for each option.

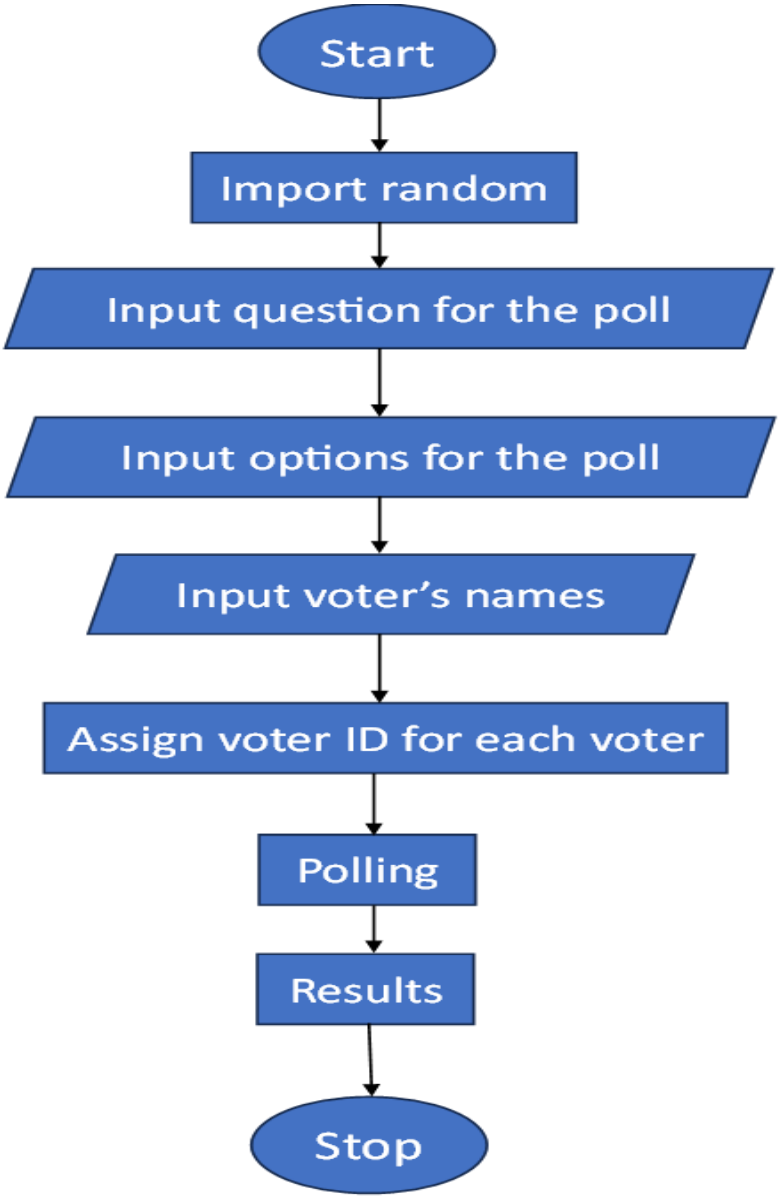
# SCOPE OF IMPROVEMENT

- **User interface and experience:** Making changes to the UI.
- **Help messages:** Provide help messages or a help menu to explain how to use the program and answer common questions.

# MODULES USED

- **Random module:** To generate voter IDs.

# FLOWCHART



# CODE

```
import random
print('Welcome to the Voting Poll!\n')
#Question Entering
while True:
    que = input('\nEnter the question for the poll: ')
    if len(que)==0 or que.isspace():
        print('**Field can\'t be empty**\n')
    else:
        print('Question: ',que)
        q_confirmation=input('Please confirm the question (y/n):')
        if q_confirmation.lower()=='y':
            break
def option_entering():
    while True:
        option = input("Enter an option (or 'done' to finish): ")
        if option.lower() == 'done':
            print('\nOptions entered successfully!')
            qno_lis()
            confirmation=input('Please confirm the options (y/n):')
            if confirmation.lower()=='y':
                break
            else:
                edit_options()
                break
        elif len(option)==0 or option.isspace():
            print('**Field can\'t be empty**\n')
        elif option not in options_lis:
            options_lis.append(option)
        else:
            print('**Option already entered**\n')
def edit_options():
    while True:
        edit_ops=['Remove an option','Add options','Exit menu']
        print('\nEdit menu')
        for i in range(len(edit_ops)):
            print(i+1,edit_ops[i])
        while True:
            try:
                eo=int(input('Enter the number corresponding to option: '))
                if eo<=len(edit_ops) and eo>0:
                    break
                else:
                    print('**Invalid option**')
            except:
                print('**Invalid option**')
        if eo==1:
            while True:
```

```
                try:
                    qno_lis()
                    rem=int(input('Enter the number corresponding to the option to remove: '))
                    if rem<=len(options_lis) and rem>0:
                        break
                    else:
                        print('\n**Invalid option**')
                except:
                    print('\n**Invalid option**')
            del options_lis[rem-1]
        elif eo==2:
                option_entering()
        elif eo==3:
            pass
        qno_lis()
        confirmation=input('Please confirm the options (y/n):')
        if confirmation.lower()=='y':
            break
def qno_lis():
    print('\nQuestion: ',que,'\n\nOptions:')
    for i in range(len(options_lis)):
        print(i+1,options_lis[i])
options_lis = []
option_entering()
#Voters Registration
input('\nPress enter to continue to Voters Registration')
print('\nVoters registration\n')
voters_lis=[]
voterid_lis=[]
voters_dict={}
while True:
    voter = input("Enter voter\'s name (or 'done' to finish): ")
    if voter.lower() == 'done':
        break
    while True:
        voter_id=random.randrange(1000,10000)
        if voter_id not in voterid_lis:
            voterid_lis.append(voter_id)
            break
    voters_lis.append(voter)
    print(voter,' your voter ID is: ',voter_id,'\nPLEASE REMEMBER\n')
    voters_dict[voter_id]=voter
#Polling
input('\nPress enter to start polling')
vote_dict={}
for i in options_lis:
    vote_dict[i]=0
print("\nVoting has started!\n")
```

```
while len(voterid_lis)>0:
    while True:
        try:
            id_ver=int(input('\nEnter voter ID to continue: '))
            break
        except:
            print('**Invalid Voter ID**')
    if id_ver in voterid_lis:
        print('\n',voters_dict[id_ver],'Please vote')
        qno_lis()
        try:
            vote=int(input('Enter the number corresponding to the option to vote: '))
        except:
            print('\n**Invalid vote**')
        if vote<=(len(options_lis)) and vote>0:
            vote_dict[options_lis[vote-1]]+=1
            voterid_lis.remove(id_ver)
            print(voters_dict[id_ver],'(',id_ver,') vote recorded.')
        else:
            print('\n**Invalid vote**')
    elif id_ver in voters_dict:
        print('\n',voters_dict[id_ver],' (',id_ver,') has already voted')
    else:
        print('\n**Invalid voter ID.**')
input('\n\nPolling completed!\tPress enter to continue')
#Results
input('\n\nPress enter to continue to the results')
vote_nos_lis=list(vote_dict.values())
max_vote=max(vote_dict.values())
t=vote_nos_lis.count(max_vote)
input('Press enter to publish the results')
if t>1:                                          #Checking for TIE in results
    winners=[]
    for i in vote_dict:
        if vote_dict[i]==max_vote:
            winners.append(i)
    print('\n\nIt is a tie.\nWinners are:')
    for i in winners:
        print(i)
else:
    for i in vote_dict:
        if vote_dict[i]==max_vote:
            print('\n\nThe winner is ',i)
input('\nPress enter to see the number of votes')
print('\nNumber of votes\n')
for i in vote_dict:
    print(i,' : ',vote_dict[i])
input('\nPress enter to quit')
```

# OUTPUT

```
Welcome to the Voting Poll!


Enter the question for the poll:
**Field can't be empty**


Enter the question for the poll: bset fo0d
Question:  bset fo0d
Please confirm the question (y/n):n

Enter the question for the poll: What is the best food?
Question: What is the What is the best food?
Please confirm the question (y/n):y
Enter an option (or 'done' to finish): Pizza
Enter an option (or 'done' to finish):
**Field can't be empty**

Enter an option (or 'done' to finish): Burger
Enter an option (or 'done' to finish): Pizza
**Option already entered**

Enter an option (or 'done' to finish): Biryani
Enter an option (or 'done' to finish): piza
Enter an option (or 'done' to finish): doNE

Options entered successfully!

Question:  What is the best food?

Options:
1 Pizza
2 Burger
```

```
3 Biryani
4 piza
Please confirm the options (y/n):n

Edit menu
1 Remove an option
2 Add options
3 Exit menu
Enter the number corresponding to option: 7
**Invalid option**
Enter the number corresponding to option: y
**Invalid option**
Enter the number corresponding to option: 1

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 piza
Enter the number corresponding to the option to remove: 7

**Invalid option**

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 piza
Enter the number corresponding to the option to remove: 4

Question:  What is the best food?
```

```
Options:
1 Pizza
2 Burger
3 Biryani
Please confirm the options (y/n):n

Edit menu
1 Remove an option
2 Add options
3 Exit menu
Enter the number corresponding to option: 2
Enter an option (or 'done' to finish): Ice Cream
Enter an option (or 'done' to finish): dONe

Options entered successfully!

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Please confirm the options (y/n):y

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Please confirm the options (y/n):y
```

```
Press enter to continue to Voters Registration

Voters registration

Enter voter's name (or 'done' to finish): Voter1
Voter1  your voter ID is:  9123
PLEASE REMEMBER

Enter voter's name (or 'done' to finish): Voter2
Voter2  your voter ID is:  8291
PLEASE REMEMBER

Enter voter's name (or 'done' to finish): Vot3
Vot3  your voter ID is:  5675
PLEASE REMEMBER

Enter voter's name (or 'done' to finish): vot4
vot4  your voter ID is:  8718
PLEASE REMEMBER

Enter voter's name (or 'done' to finish): Vo5
Vo5  your voter ID is:  7581
PLEASE REMEMBER

Enter voter's name (or 'done' to finish): v6
v6  your voter ID is:  6333
PLEASE REMEMBER

Enter voter's name (or 'done' to finish): DonE

Press enter to start polling

Voting has started!
```

```
Enter voter ID to continue: 9123

 Voter1 Please vote

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Enter the number corresponding to the option to vote: 1
Voter1 ( 9123 ) vote recorded.

Enter voter ID to continue: abcd
**Invalid Voter ID**

Enter voter ID to continue: 9514

**Invalid voter ID.**

Enter voter ID to continue: 8291

 Voter2 Please vote

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Enter the number corresponding to the option to vote: 7

**Invalid vote**
```

```
Enter voter ID to continue: 8291

 Voter2 Please vote

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Enter the number corresponding to the option to vote: 3
Voter2 ( 8291 ) vote recorded.

Enter voter ID to continue: 5675

 Vot3 Please vote

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Enter the number corresponding to the option to vote: 3
Vot3 ( 5675 ) vote recorded.

Enter voter ID to continue: 6333

 v6 Please vote

Question:  What is the best food?
```

```
Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Enter the number corresponding to the option to vote: 4
v6 ( 6333 ) vote recorded.

Enter voter ID to continue: 9123

 Voter1  ( 9123 ) has already voted

Enter voter ID to continue: 7581

 Vo5 Please vote

Question:  What is the best food?

Options:
1 Pizza
2 Burger
3 Biryani
4 Ice Cream
Enter the number corresponding to the option to vote: 1
Vo5 ( 7581 ) vote recorded.

Enter voter ID to continue: 8718

 vot4 Please vote

Question:  What is the best food?

Options:
1 Pizza
2 Burger
```

```
3 Biryani
4 Ice Cream
Enter the number corresponding to the option to vote: 2
vot4 ( 8718 ) vote recorded.


Polling completed!   Press enter to continue


Press enter to continue to the results
Press enter to publish the results


It is a tie.
Winners are:
Pizza
Biryani

Press enter to see the number of votes

Number of votes

Pizza   :  2
Burger   :  1
Biryani   :  2
Ice Cream   :  1

Press enter to quit
```

# BIBLIOGRAPHY


- **Computer Science with Python Class XI** by **Preeti Arora**