# Pseudo Code

Main:

While exit = false:

option = menu()

if option == createFile:

openCreateFile()

elif option == startPolling:

openPolling()

elif option == collateData:

openCollateData()

elif option == pollingStats:

openPollingStats()

else:

“Thank you for using the system”

Exit = true

stop loop

Exit program

Menu:

If currentFile exists:

Print(“ Electoral system

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1. Setup polling station votes file

2. Enter polling booth

3. Collate data from other polling stations

4. Review statistics

5. Exit”)

Else:

Print(“ Electoral system

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1. Setup polling station votes file
2. Exit”)

Print(“Enter Choice:”)

choice = user input

While choice not in range:

If choice is not in range:

Get input from user

Else:

End loop

Return choice

CreateFile:

Print(“What is the name of the polling booth?”)

fileName = user input

Create File Called “Belfast\_” + filename + getCurrentDate() + “.txt”

currentFile = “Belfast\_” + filename + getCurrentDate() + “.txt”

names = []

add currentFile to names

if pollingBooth file does not exist:

create pollingBooth.txt

else:

open pollingBooths file

for booth in file:

add booth to names

for name in names:

write names[name] to file

for 1 to 7:

Write “0” to currentFile

Print(currentFile + “ has been created”)

Polling:

While True:

Male = 0

Female = 0

Choices = []

Print(“Electoral Polling Booth

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What gender are you?(M/F)”)

Gender = user input

If Gender == “secret password”

End loop

Elif Gender !== “m” or “f” or “male” or “female”:

Print(“Invalid Input”)

Else:

If Gender == “m” or “male”:

Male = Male + 1

Else:

Female = Female + 1

While True:

If length of choices < 1:

Print(“Black Party – Joan Jet:”)

Track = user input

Choices = TestVotes(Choices, Track)

Elif length of choice == 1:

Print(“Blue Party – Bert Navy:”)

Track = user input

Choices = TestVotes(Choices, Track)

Elif length of choice == 2:

Print(“Green Party – Luke Lime:”)

Track = user input

Choices = TestVotes(Choices, Track)

Elif length of choice == 3:

Print(“Red Party – Rose Burgundy:”)

Track = user input

Choices = TestVotes(Choices, Track)

Elif length of choice == 4:

Print(“Yellow Party – Egbert Yoke:”)

Track = user input

Choices = TestVotes(Choices, Track)

Else:

For item 1-5:

For check 1-5:

If choices[item] != choices[check] and item != check and choices[check] != 0:

Print(“Cannot have multiple of the same vote”)

Clear choices

End for loops

For number 1-5:

If choices[number] == 1:

Choices[number] = 1

Elif choices[number] == 2:

Choices[number] = 0.5

Elif choices[number] == 3:

Choices[number] = 0.33

Elif choices[number] == 4:

Choices[number] = 0.25

Elif choices[number] == 5:

Choices[number] = 0.2

Elif choices[number] == 0:

Choices[number] = 0

Else:

Print(“Error”)

End Loop

Open file name currentFile()

Choice = 0

For votes in file:

If choice == 5:

Add vote to choices

Choices[choice] = choices[choice] + Male

Elif choice == 6:

Add vote to choices

Choices[choice] = choices[choice] +Female

Else:

Choices[choice] = Choices[choice] + vote

Choice = choice + 1

For element 1-7:

Write to currentFile(choices[element])

Close file

End loop

testVotes(choices, track):

if track = int:

if track > 5 or < 0:

print(“Outside range”)

else:

add track to choices

else:

if track == “”:

add 0 to choices

else:

print(“Not a number”)

return choices

CollateData:

While check == “y” or “yes”:

Totals = []

Votes = []

Files = []

Track = 0

Open pollingBooths.txt

For file in pollingBooth:

Add file to files

Track = track + 1

Print(Track, “. “, file)

Close file

Print(“Which polling file would you like to add to a total votes file?”)

fileChoice = user input

while fileChoice > length of files or fileChoice <= 0:

print(“Invalid option”)

Print(“Which polling file would you like to add to a total votes file?”)

fileChoice = user input

if fileChoice < length of files or fileChoice > 0:

end loop

fileChoice = files[fileChoice]

open fileChoice

for vote in file

add vote to votes

close file

if totalVotes.txt exists

open totalVotes.txt

for total in file

add total to totals

for vote 1-7

votes[vote] = votes[vote] + totals[vote]

else:

Create totalVotes.txt

For vote 1-7

Write votes[vote] to file

Print(“Total Votes:

Black Party – Joan Jet:”, votes[0],”

Blue Party – Bert Navy:”, votes[1],”

Green Party – Luke Lime:”, votes[2],”

Red Party – Rose Burgundy:”, votes[3],”

Yellow Party – Egbert Yoke:”, votes[4],”

Male:”, votes[5], “

Female:”, votes[6])

Close file

Print(“Do you want to add another file? (Y/N)”

Check = user input

While check != “y” or “yes” or “n” or “no”:

Print(“Invalid input”)

Print(“Do you want to add another file? (Y/N)”)

Check = user input

PollingStats:

Total = 0

Tally = -1

totalVotes = [0, 0, 0, 0, 0, 0, 0]

if totalVotes.txt exists:

open totalVotes.txt

else:

create totalVotes.txt

for vote in file:

tally += 1

totalVotes[tally] = totalVotes + vote

total = total + vote

tally = -1

maleFemaleTotal = totalVotes[5] + totalVotes[6]

total = total = maleFemaleTotal

for vote 1-7:

tally = tally + 1

if tally == 5:

totalVotes[5] = (totalVotes[5]/maleFemaleTotal) \* 100

elif tally == 6:

totalVotes[6] = (totalVotes[6]/maleFemaleTotal) \* 100

else:

totalVotes[tally] = (totalVotes[tally] / total) \* 100

close file

print(“Total Votes:

Black Party – Joan Jet:”, totalVotes[0],”%

Blue Party – Bert Navy:”, totalVotes[1],”%

Green Party – Luke Lime:”, totalVotes[2],”%

Red Party – Rose Burgundy:”, totalVotes[3],”%

Yellow Party – Egbert Yoke:”, totalVotes[4],”%

Male:”, totalVotes[5], “%

Female:”, totalVotes[6], “%“)

Print(“Press any button to return to menu”)

Continue when button pressed

Main()

# Text File Design

## (pollingFile).txt

Simply displaying seven zeros which will be edited to add the votes inputted by users. (Note the number of votes is not stored it is specifically the converted values. However, umber of males and females is stored.)

When created:

0  
0  
0  
0  
0  
0  
0

After being updated:

3.0  
1.5  
1.32  
1.0  
0.8  
2.0  
2.0

## pollingBooths.txt

Displaying the name of each polling booth file stored for easy access

Belfast\_East\_2022-12-14.txt  
  
Belfast\_North\_2022-12-15.txt  
  
Belfast\_West\_2022-12-15.txt

## totalVotes.txt

Another list beginning with seven zeros which will later be updated to include the vote values after the user chooses to collate files into this file. (Note the number of votes is not stored it is specifically the converted values. However, umber of males and females is stored.)

When created:

0  
0  
0  
0  
0  
0  
0

After being updated:

15.0  
7.5  
6.6000000000000005  
5.0  
4.0  
10.0  
10.0