Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: Keypress -- main function System: Driver

Test Date: 4-1-20

Test Case ID#: SU1

Name(s) of Testers: Adam Wall

Test Description: Test getting character from user: The function will ask the user for the input and the console displays it back to them. This input is run with the "cout" feature on a while loop so that the _getche function is continuously running.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.
SU1.cpp for main function used

Automated: yes___ no _x_

Results: Pass __X__ Fail________

Preconditions for Test:
User enters EVERY key on the keyboard

Step #	**Test Step Description**	**Test Data**	**Expected Result**	**Actual Result**	**Notes**
1	User inputs keyboard key	N/A			
2	Test input read by user	input on keyboard	"True" is displayed on console after key is input		
3	Repeat step 2 for every key on keyboard	All keys of keyboard input manually	"True" displayed with each key entered		
4					

Post condition(s) for Test:
the _getche function can take a user input from the keyboard and output the value displayed on the console for each button.

Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: StartUp Function -- main function
System: Driver

Test Date: 4-1-20

Test Case ID#: SU2
Test Description: Test the main menu screen by moving to the help screen or moving to start an election if the "h" (help screen) or "enter" (start election) key is pressed.

Name(s) of Testers: Adam Wall

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes___ no _x_

SU2.cpp for main function used

Results: Pass __X__ Fail________

Preconditions for Test:
User enters EVERY key on the keyboard

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	User inputs all keyboard inputs -- after each input -- only the key that was pressed will be show	every key input but h and enter	Only the keys that were input will be displayed	Only the keys that were input will be displayed	
2	Enter has been pressed and election has begun	input on keyboard "Enter" is pressed	"Election has been pressed" is displayed on the console	"Election has been pressed" is displayed on the console	The enter key on the number pad and the regular enter key works
3	"h" has been pressed and the help window shows	input on keyboard "h" is pressed and "H" is pressed	"hHelp has been pressed" is displayed on the console	"hHelp has been pressed" is displayed on the console	Works with uppercase and lowercase

Post condition(s) for Test:
If the "h" button is pressed, starts the help screen. If the backspace is pressed, send the user back to the main menu. If enter is pressed, an election is started (DisplayTestType function is kicked off)

Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: DisplayTestType Function System:
Driver **Test Date: 4-1-20**

Test Case ID#: DTT1 **Name(s) of Testers: Adam Wall**

Test Description: Test algorithm for selecting which test to go with. This is done with a cin call, if the cin value is equal to “STV”, then the test variable will be changed. If “Plurality” is typed, the test type variable is changed to plurality. If neither of these strings are typed, the test stage will have the user retype in the method.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.
DTT1.cpp for main function used

Automated: yes___ no _x_

Results: Pass __X__ Fail________

Preconditions for Test:
The User has decided to start an election and press enter

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Nothing is Typed in	“Enter” is pressed right away	“Test Type not found” displayed on console	Enter key is pressed - nothing is done	Should be fine for this iteration of the software. Might change around in the future where “cin” function reads the enter key.
2	Incorrect values are typed in	Input 10 randomly created strings into test	“Test Type not found” displayed on console	“Test Type not found” displayed on console	
3	Capitalization is tested	“sTv” is typed into console “pluRalIty” is typed into console	“Test Type not found: displayed on console	“Test Type not found” displayed on console	
4	Correct “STV” is typed in	“STV” is typed into console	“STV detected” shown on console	“STV detected” shown on console	
5	Correct “Plurality” is typed in	“Plurality is typed into console	“Plurality detected” shown on console	“Plurality detected” shown on console	

Post condition(s) for Test:
The system correctly identifies if the user wants to run a STV election or Plurality election by a key input.

Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: SetTestType Function System: Driver **Test Date: 4-1-20**

Test Case ID#: STT1 **Name(s) of Testers: Adam Wall**

Test Description: Test algorithm for setting the test type for our system. This test has two tests - making sure the proper private and public settings for the driver class, and testing the if statement within the function to make sure the proper test is set to the proper value. A test class is created with an integer private variable and a public function that sets the test variable equal to the input. The if statement is tested in the main function. A temporary integer is created in the main to use as the input from the SetTestType. This value is changed manually for each step to test different if statement possibilities. The result shows the value of the private variable in the main using a simple show function in the test class.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.
STT1.cpp for main function used

Automated: yes___ no _x_

Results: Pass __X__ Fail________

Preconditions for Test:
The User input a test type.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Validate Showing Private Variable	Test variable is initialized at 0 and the showtest function is used in main	0 is displayed on console	is displayed on console	This show function will be used in multiple different areas in the software to get a private variable in a different class or in the main.
2	Validate setTestType changes private variable	Private variable is initalized at 0 - use settest to change variable to 1 and then use	1 is displayed on console	1 is displayed on console	

		showtest to display on console.			
3	Validate changing private and showing private variable in main is not allowed	Use the main to create a temporary test class and try and set and show variable in int main	Will not compile due to inaccessibility	Will not compile due to inaccessibility	
4	Test if statement that private variable is changed to 1	if statement in place and changes private variable to 1	1 is displayed on console	1 is displayed on console	
5	Test if statement that private variable is changed to 2	if statement in place and changes private variable to 1	2 is displayed on console	2 is displayed on console	

Post condition(s) for Test:

The system correctly changes our test type variable used in the RunElection function to what the user input. Showing and changing private variables in the Driver class is also validated using the simple set function and show function.

Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: Cin Filesize System: Driver - GetFolderAddress

Test Date: 4-1-20

Test Case ID#: GFA1

Name(s) of Testers: Adam Wall

Test Description: Test algorithm confirms that a user can input a size of the number of files they would like to run and the file address of all the files. A whole positive number is the only variable that will work.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.
GFA1.cpp for main function used

Automated: yes___ no _x_

Results: Pass __X__ Fail________

Preconditions for Test:
The User has set the number of seats and test type and is now looking to input file locations

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	String with no numbers is entered	Cin 10 random strings with no numbers in it	No data is output	No data is output	.
2	Decimal is entered	Cin 5 random positive decimals into main	No data is output	will display the rounded down integer	This will work for our system -- all decimal numbers input will result in a rounded down number of files
3	negative number is entered zero is entered	3 random negative numbers are entered -- zero is entered	Number is output	Number is output	
4	Whole number is entered	5 whole numbers are entered	Number is output	Number is output	

Post condition(s) for Test:
For the input of the Cin in the GetFolderAddress function -- decimals will be rounded down and all strings without numbers in them will not be accepted. The function will take the right number of files to be uploaded

Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: Dynamic Array System: Driver - GetFolderAddress

Test Date: 4-1-20

Test Case ID#: GFA2

Name(s) of Testers: Adam Wall

Test Description: Test algorithm confirms when a file size has been received -- an array will be created with that number of spots that the user can enter.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.
GFA2.cpp for main function used

Automated: yes___ no _x_

Results: Pass __X__ Fail________

Preconditions for Test:
User input a file size for a array to be created

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Use a Filesize of 4 and 5	filesize is set to 4 and 5 -- the strings used will just be random strings	4 to 5 randoms strings entered displayed and size afterwards on console	4 to 5 randoms strings entered displayed and size afterwards on console	.The user will be prompt one by one the proper amount of files to call
2	Use a filesize of a negative number	filesize is set to negative numbers -- the strings used will just be random strings	"Error: Memory could not be allocated" will be shown	"Error: Memory could not be allocated" will be shown	This error will show and in the system the user will be sent back to the main menu
3	Use Filesize of 0	filesize is set to 0 -- the strings used will just be random strings	"Error: Memory could not be allocated" will be shown	"Error: Memory could not be allocated" will be shown	If statement in place to prevent this and make 0 the same as a negative number
4	Use Filesize of decimals	filesize is set to decimal values -- the strings used will just be random strings	The rounded down number of random stings will be displayed and the size afterwards on the console	The rounded down number of random stings will be displayed and the size afterwards on the console	.The user will be prompt one by one the proper(rounded down) amount of files to call

Post condition(s) for Test:
The proper number of file locations will be prompt to the user and the memory will be allocated and create the string array for use in

the election class.

Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: FileExists Function System: Driver - GetFolderAddress

Test Date: 4-1-20

Test Case ID#: GFA3

Name(s) of Testers: Adam Wall

Test Description: Test algorithm confirms the finding file function works. When a string is presented to it - it will determine if that file is located in the location.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.
GFA3.cpp for main function used

Automated: yes___ no _x_

Results: Pass __X__ Fail________

Preconditions for Test:
User input a string of the file address for this function (Just used a new Cin to put what file locations I wanted in for testing)

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Create Files in multiple locations on computer	Test.txt	Test.txt placed in documents and c: drive	Test.txt placed in documents and c: drive	This is just a blank test file but works for all different files -- a Test.csv is also completed in this test
2	Test each file run through the function	Input to locations of known files and input a random string	Two true values are displayed and one false value displayed	Two Trues and a false displayed	This was done for .txt and .csv files -- same result for both

Post condition(s) for Test:

The proper number of file locations will be prompt to the user and the memory will be allocated and create the string array for use in the election class.

Project Name: Project 1: Voting System **Team# 16**

Test Stage: Unit: GetSeats Function System: Driver - GetFolderAddress

Test Date: 4-1-20

Test Case ID#: GS1

Name(s) of Testers: Adam Wall

Test Description: Test algorithm confirms the number of seats input by the user is correctly logged into the Seats private

Indicate where are you storing the tests (what file) and the name of the method/functions being used.
GS1.cpp for main function used

Automated: yes___ no _x_

Results: Pass __X__ Fail________

Preconditions for Test:
User is looking to add an input into the system for the number of seats available in an election.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Input a string of Seats (letters)	10 random strings	No input is read	No input is read	if the string has the look “X/XXXXX” and the first X is a number then it will
2	Input a decimal of seats	5 decimal values of seats	No input is read	No input is read	This was done for .txt and .csv files -- same result for both
3	Input negative amount of seats	3 random negative integers input	The positive integer value of the seats entered	The positive integer value of the seats entered	
4	Input positive amount of seats	3 random positive integers	The positive integer value of the seats entered	The positive integer value of the seats entered	

Post condition(s) for Test:
The proper number of seats availability will be noted from a user input.