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Project 1 Pseudocode

Test cases:
1. Draw a horizontal line and count if it has drawn the right amount of characters
2. Draw a vertical line to see if accommodating for '\n' is really needed (test to see if I should seek write position by 50 or 51)
3. See how the program reacts when it moves out of bounds northward
4. Draw over a bold character with a non-bold character to see if it will overwrite it
5. Use invalid characters for direction, bold, and/or print and see how the program reacts
6. Use a number other than 1 and 2 for the status in a command
7. Enter a command with commas only
8. Enter a command with more than 4 commas
9. Enter a command with less than 2 commas
10. Enter a blank line as a command

```
void read commands function (file name)
	Open commands file

	Read each line until the end of the file is reached

		Create 5 variables for arguments for the draw function
			Integer status, String direction, Integer distance, Boolean bold, Boolean print
		Create a count variable to track how many arguments have been read
			Integer count = 0
		Create a string variable to temporarily store an argument

		While the length of the line is greater than zero (If the line still contains content)
			Find index of the comma
			Add 1 to the count

			If index of the comma has no position hen
				Set argument to the remaining line
				Set line to an empty string ("")
			Else
				Get the argument only as a string
				Break off the rest of the line for the next argument to be read
			end

			switch (count)
				Case 1
					Convert argument to integer
					Set argument as status
				Case 2
					Convert direction to char
					Set argument as direction
				Case 3
					Convert argument to integer
					Set argument as distance
				Case 4
					If argument is "B"
						Set bold to true
				Case 5
					If argument is "P"
						Set print to true
			end
		end

		If the count/number of arguments is (greater than or equal to 3) and (less than or equal to 5) then
			If the count less than 4 then
				Set bold to false
			If the count is less than 5 then
				Set print to false

			Call the draw function with the 5 arguments
		end

		Reset the count to zero
	end
end
```

```
void draw function (status, direction, distance, bold, print)
	Open "paint.txt" file
	Append to the end of the file

	Create integer variables for current position
	Calculate xCurrent and yCurrent by using the current write position
	Create integer variables for target position
	xTarget = xCurrent and yTarget = yCurrent

	switch (direction)
		Case 'E'
			Set xTarget equal to xCurrent + distance
		Case 'W'
			Set xTarget equal to xCurrent - distance
		Case 'S'
			Set yTarget equal to yCurrent + distance
		Case 'N'
			Set yTarget equal to yCurrent - distance
	end
	If xTarget is (less than or equal to zero) or (greater than 50) or
		yTarget is (less than or equal to zero) or (greater than 50) then

		Command is out of bounds, terminate function
	end

	Create boolean variable called penDown
	If status is 1 then
		Set penDown to false
	Else if status is 2 then
		Set penDown to true
	end

	Create char variable called outputChar
	If bold is true then
		Set outputChar to '#'
	Else if bold is false then
		Set outputChar to '*'
	end

	If xTarget is not equal to xCurrent then
		If direction is West then make the distance negative
		For i = 1 until distance
			Seek write position by one
			If penDown is true and character in that position is not '#' then
				Put outputChar in that position
			end
		end
	end
	If yTarget is not equal to yCurrent then
		If direction is North then make the distance negative
		For i = 1 until distance
			Seek write position by 51 to get to the next column (50+1 to accommodate for '\n')
			If penDown is true and character in that position is not '#' then
				Put outputChar in that position
			end
		end
	end

	If print is true then
		Print the current canvas
	end
end


int main function
	Print "Enter file name"
	Get file name

	Call read commands function with the inputted file name
end
```