

Name: _____ CM: _____ Grade: _____

This quiz is due after you have finished watching the **FileConcepts**, **OutAndInAgain**, **CalculateAverage** and **Separate Compilation** videos. Feel free to complete the quiz as you watch.

Video: FileConcepts

1. What is the first thing that must be done to a file before data can be read from it or written to it?
2. What are the three modes for opening a file?
 - a) _____.
 - b) _____.
 - c) _____.
3. Given the code below that opens a file for reading, write code that checks whether the file is successfully opened. If it fails to open successfully, your code should print an error message to the console and exit the program.

```
FILE *inputFile;  
inputFile = fopen("my_file.txt", "r");
```

4. Good programming practice requires that you _____ a file when you are finished accessing it.
5. What's the difference between `getc()` and `getchar()`?
6. Which file-handling function reads the next line of text from a file as a *string*?

Answer: _____.

7. `fscanf()` differs from `scanf()` in the following respect:

The first argument of `fscanf()` is a/n _____.

8. List two file-handling functions that copy a string to a file.

a) _____.

b) _____.

Video: OutAndInAgain:

9. Write an expression using `fscanf` that is true if and only if `fscanf` successfully reads a value into a string called **line**. (This expression is often used as the condition in a file reading loop.)

Video: CalculateAverage

10. Two limitations of arrays are that their size is _____ and that they can't be returned by _____ because the array is stored on the _____ in memory, which goes away when the function ends.

11. What standard library function do we use in C to dynamically allocate memory for data structures like arrays?

12. What does `p = realloc(p, newSize)` do?

13. When our program no longer needs memory that it dynamically allocates, it should free that memory using the standard library function `free()`. It takes a pointer as its parameter, but what memory is it actually freeing?

14. If we dynamically allocated memory to store an array called `diameters` containing `size floats`, what would the declaration of the variable to reference that memory look like?

Video: Separate Compilation

15. What is the purpose of a `.h` file? What about a `.c` file?

16. After watching this set of videos, what questions, if any, do you have? If none, please write "None".