

***** Explanation_2*****

File Recursion:

- This problem is solve using recursion The code lists the list of file and dir in the folder check the base case i.e whether the extension is .c or not if yes appends it to the file list.
- Secondly the code list all the directories and recursively calls itself and perform the above mentioned step.

Time Complexity:

The Method used number of directories and number of File, so if the number of files is F and the depth of directory is D (worst case) time complexity is $O(F \times D)$

Space Complexity:

The Method uses array to store list of directory list of files so space complexity is $O(D+F)$