# ICSI 311 – Scheme Directory Walk

Given a directory structure in Scheme, print the sum of the file sizes.

A directory is a list of three items - "D", a name and a list of contents.

There can only be one top-level directory, but there can be any number of nested subdirectories.

A file is a list of three items - "F", a name and a file size.

Note - there is a Scheme built-in that you will need for this - the string compare function of eq?

> (eq? "A" "B")

#

f> (eq? "C" "C")

#t

Attached, please find an example directory structure and the function "skeleton" that I used for my solution.

You DO NOT HAVE TO use my function names or skeleton. Please be sure that ANY directory structure can be parsed with your code - DO NOT CODE TO THIS EXAMPLE. Your solution MUST BE recursive.

Download Dr Racket here: <https://download.racket-lang.org/>

**Make sure that you set your language to R5RS.**

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| --- | --- | --- | --- | --- |
| Rubric | Poor | OK | Good | Great |
| Comments | None/Excessive (0) | “What” not “Why”, few (5) | Some “what” comments or missing some (7) | Anything not obvious has reasoning (10) |
| Variable/Function naming | Single letters everywhere (0) | Lots of abbreviations (5) | Full words most of the time (8) | Full words, descriptive (10) |
| Directory Processing | None (0) | Attempted (10) |  | Correct(30) |
| File Processing | None (0) | Attempted (10) |  | Correct(30) |
| Testing – own test cases | None (0) | Simple (10) | Complex (15) | Serious Stress Test (20) |