

Exercises, Week 2, Day 3

1. What names are defined in each of three files A, B and C given that:
 - A defines `searchdb`, `_calcCache`
 - B defines `_calcCache`, `find`
 - C defines `taylorSeries`, `__initTable__`
 - A has `import B`
 - B has `from C import *`
 - C has `import urlparse`
2. What if the import statements were instead:
 - A has `import B, C`
 - B has `import C` and `from C import taylorSeries`
3. What does the list comprehension `[(x,y) for x in range(3) for y in range(3)]` produce? Why?
4. `[(x,y) for x in range(3) for y in range(3) if (x < y)]`?
5. `[(x,y) for x in range(3) if (x < y) for y in range(3)]`?
6. Write a recursive function that sorts a list. Hint: find the lowest number, then the second lowest and so on.
7. Write a function that accepts a string (`times`, `divide`, `plus` or `minus`) and returns a function that calculates that operation over two arguments. For example, `times` should return a function of the form `f(a,b)` that calculates `a*b`.
8. Write a function that accepts strings of the form `x op y` where `x` and `y` are integers and `op` is one of `times`, `divide`, `plus`, `minus`. The function should return the result of the calculation. For example, `12 times 13` will return 156.