

COP 2930 - Introduction to Computing Sets - Suggested Exercises

Objective:

1. Practice writing programs that use sets.

1) Write a program that asks the first user to enter the number of CDs they have. Then, read in those CDs. Then, as the second user to enter the number of CDs they have. Then, read in those CDs. Calculate the number of CDs they have in common and print out this number.

2) Write a function that takes in a set of integers and returns a list containing each item in the set in sorted order. Do NOT modify the set in any way, but do create a new list and add to it in your function. Use the function prototype below:

```
def makeSortedList(myset) :
```

3) Write a function that takes in a single integer, n , and runs a simulation of repeatedly randomly selecting an integer from 1 to n , inclusive until all n integers are selected at least once. The function should return the number of selections it took to get all the integers. Use a set in your implementation and add print statements to prove to yourself that your function is working. This is similar to the simulation done in class for collecting all of the baseball cards in a set. With a set, this simulation is easier to write than when we wrote it in class.

```
def turnsToCompleteSet(n) :
```