You will find a private GitHub repo called `<github-username>-hw` where you will submit all your homework assignments. Clone this repo and create a `hw4` directory inside. Add this directory to the repo using `$ git add hw4`. All your code should appear in a file called `hw4.py` that lives inside the `hw4` directory. Make sure to add `hw4.py` to the repo and commit your changes with `$ git commit -a -m "good log message"`.

Question 1 (5 points)**.** *Using no other electronic resources besides the `dict` documentation, what does the following print?*

```
d = {k:[2**k] for k in range(10)}
d.setdefault(10,[]).append(2**10)
d[11] = d.get(11,[-1])
print(sum(v[0] for k,v in d.items()) == (2**11)-2)
```

Question 2 (5 points)**.** *Two words are anagrams of each other if one word can be rearrange to form the other. Thus, anagrams are permutations of one word into another. Write a function called `anagram(word,file)` that finds all the anagrams of `word` from the set of words in `file`. You may assume that `file` has one word per line. Use `/usr/share/dict/words` as a source of English words. Here is some sample output:*

```
>>> anagrams("army",'/usr/share/dict/words')
army
mary
yarm
```

Question 3 (5 points)**.** *Pick any Project Euler problem (`https://projecteuler.net/archives`) that we haven't considered in class and write a solution to solve it. Include your problem number, code, and solution.*