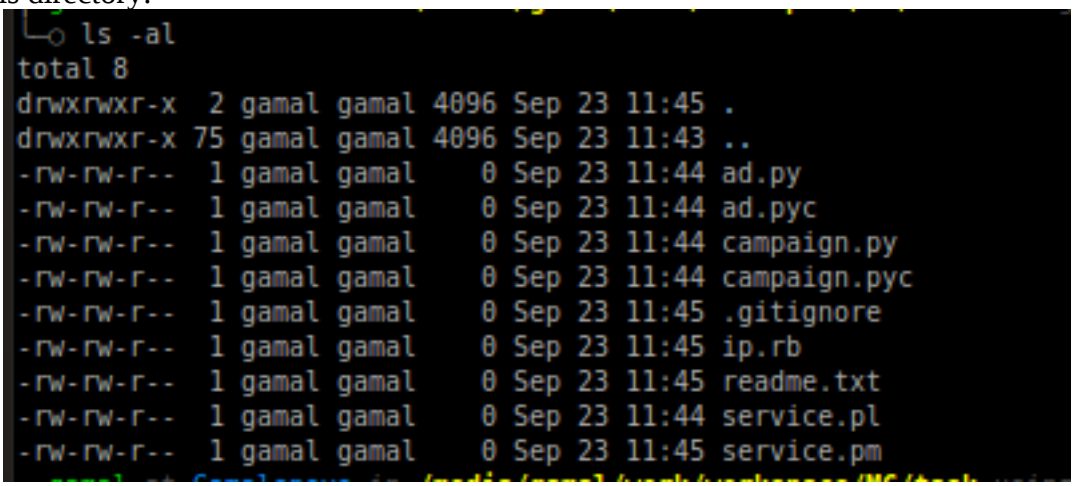
Task 1

Description

Write a python script (solution.py) that takes a list of file extensions and prints all the files from the passed directory or current directory matching the extensions given.
The following extensions should be supported:

1. c should find and print all .c and .h file names
2. py should find and print all .py and .pyc file names
3. pl should find and print all .pl and .pm file names

Example:
given this directory:



Usage

```
python solution.py c,py,pl /path/to/dir
```

Output:

```
py: ad.py, ad.pyc, campaign.py, campaign.pyc
pl: service.pl, service.pm
```

Bonus: You should be able to read extensions from configuration file.

Task 2

Description

Please, optimize the function below:

```
def fib(n):
    if n <= 2:
        return 1
    else:
        return fib(n-1) + fib(n-2)
```

Hint: Memoization

Task 3

Description

Provided test file `test_stack.py`. Write the module required to make the test pass:

```
import unittest
from lib import mystack

class TestMyStack(unittest.TestCase):
    def setUp(self):
        mystack.add_item(10);
        mystack.add_item(20);
        mystack.add_item(22, 33);

    def test_flow(self):
        self.assertEqual(mystack.pop_item(), 33)
        self.assertEqual(mystack.pop_item(), 22)
        self.assertEqual(mystack.count_items(), 2)
        while mystack.pop_item(): pass

        self.assertEqual(mystack.count_items(), 0)
```